

April 26, 2005

Mr. Robert Evans
U.S. Nuclear Regulatory Commission
Region IV: DNMS: NMLB
Suite 400
611 Ryan Plaza Drive
Arlington, TX 76011

**SUBJECT: REVISION TO ANALYTICAL RESULTS FOR ONE SOIL SAMPLE
COLLECTED FEBRUARY 8, 2005 FROM KAISER ALUMINUM, TULSA,
OKLAHOMA (INSPECTION REPORT #040-02377/05-02) [RFTA NO. 05-001]**

Dear Mr. Evans:

The Environmental Survey and Site Assessment Program (ESSAP) of the Oak Ridge Institute for Science and Education (ORISE) received one soil sample from Kaiser Aluminum, Tulsa, Oklahoma on February 10, 2005 that was collected February 8, 2005. At your request, the soil sample was analyzed as received (wet) for the thorium and uranium series by gamma spectroscopy (GS) (Procedure CP1, Revision 14). The soil sample was then dried and re-analyzed by GS. The percent moisture (Procedure SP3, Revision 3) was calculated for this sample.

The percent moisture for this sample was 16%. The comparison of wet to dry concentrations of GS data is presented in Table 1.

This revision to the letter report of March 4, 2005, was made to address errors in the reported values. The errors were due to incorrect entry of uncertainties in the calibration certificate files. The certificate files have been updated and all efficiency files have been revised and verified. Gamma spectroscopy analysis was performed again for the samples using the corrected calibration files and the corrected data are presented in "REVISED ORISE TABLE 1". We have initiated a non-conformance report to address this issue. We apologize for any inconvenience it may have caused.

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ESSAP's Quality Control (QC) requirements were met for these analyses. The QC files are available for your review upon request.

Please contact me at (865) 241-3242 or Wade Ivey at (865) 576-9184 with any questions or comments.

Sincerely,



Dale Condra
Laboratory Manager
Environmental Survey and
Site Assessment Program

RDC/WPI:ar

Enclosure

cc: T. McLaughlin, NRC/NMSS/TWFN 7F27
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File/1651

Distribution approval and concurrence:	Initials
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REVISED ORISE TABLE 1
CONCENTRATIONS OF SELECTED
GAMMA EMITTING RADIONUCLIDES
AND WET TO DRY CONCENTRATION RATIOS
IN A SOIL SAMPLE
BY GAMMA SPECTROSCOPY CPI, REVISION 14
AND SP3, REVISION 3
KAISER ALUMINUM
TULSA, OKLAHOMA

ESSAP Sample ID	NRC Region IV Sample ID	Radionuclide Concentrations (pCi/g wet (W) and dry (D) weight) ^a										
		U-238 by Th-234	Wet to Dry Ratio ^b	U-235	Total U ^c	Th-230	Wet to Dry Ratio ^b	Th-228 by Pb-212	Wet to Dry Ratio ^b	Th-232 by Ac-228	Wet to Dry Ratio ^b	Total Th ^d
1651S0001W ^e	NRC05-01-01	0.72 ± 0.47 ^f	0.72 ± 0.58	0.06 ± 0.07	1.50 ± 0.67	3.5 ± 3.4	5 ± 23	1.04 ± 0.08	0.85 ± 0.09	1.18 ± 0.16	0.98 ± 0.20	2.22 ± 0.18
1651S0001D ^e	NRC05-01-01	1.00 ± 0.49		0.08 ± 0.09	2.08 ± 0.70	0.7 ± 3.2		1.23 ± 0.09		1.21 ± 0.18		2.44 ± 0.20

^aThe average MDCs for these radionuclides range from 0.04 pCi/g for Th-228 by Pb-212 to 4.9 pCi/g for Th-230.

^bWet/Dry is the ratio of the concentration in the sample counted wet divided by the concentration in the sample counted dry.

^cTotal uranium is calculated using (2 · U-238) + U-235.

^dTotal thorium is the sum of Th-228 and Th-232.

^eW extension on sample ID is for the wet sample and D extension on sample ID is for the dry sample.