

August 13, 2012

Mr. Donald R. Metzler
Federal Project Director
U.S. Department of Energy
200 Grand Avenue
Grand Junction, CO 81501

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION STAFF REVIEW OF
COMPLETION REPORT AND INDEPENDENT VERIFICATION REPORT FOR
THE CLEANUP OF THE HIGHWAY 160 SITE, TUBA CITY, ARIZONA

Dear Mr. Metzler:

I am writing in response to your letter, dated February 21, 2012, that transmitted the Completion Report and Independent Verification Report for the cleanup of the Highway 160 site in Tuba City, Arizona. U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the reports and have concluded that, based on the information provided in the reports, and the conservative use of 2 picocurie per gram (2 pCi/gm) as the cleanup criteria, the 40 Code of Federal Regulations (CFR) 192 cleanup criteria of 5 pCi/gm are satisfied. However, the staff has several observations that I would like to share with you.

1. Page 2 of Appendix C includes a bar graph showing the distribution of soil activity during final radiological surveys (the graph is labeled as "Multi-Agency Radiological Survey and Site Investigation Manual (MARSSIM) Survey Results" and thus, it is assumed that the results are for a final radiological survey). It appears that, during the final radiological survey, approximately 25% of the sample locations at the site were in excess of the 2 pCi/gm negotiated site wide cleanup criteria and that additional cleanup of these sample locations was performed and verified by walkover gamma survey. NRC's general practice when encountering a similar situation at a licensed site would be to expect the licensee to perform an evaluation of why survey locations were in excess of cleanup criteria and why it was concluded that the site was ready for final radiological surveys. In addition, NRC staff would expect a licensee to determine if this had an adverse impact on conclusions concerning the radiological status of other survey units.
2. Page 26 of the Remediation Completion Report states that no residual contamination in excess of the 2 pCi/gm criteria is present at the site. However, the MARSSIM Survey Results data in Appendix C indicates that the cleanup criteria for the surveys is 2.83 pCi/gm, which is inconsistent with the stated cleanup criteria. In addition, some areas were remediated during final radiological surveys and evaluated using gamma walkover surveys. While useful indicators of the presence of radioactive material, the gamma walkover surveys are not typically used to evaluate the concentration of radioactive material in soil. In addition, the Test America data indicates that the cleanup criteria was exceeded at one sample location at the site, while no secondary remediation took place.

3. The sample results included in the Independent Verification Report, Appendix C, page C-2 do not include the Ra-226 results. In addition, it was difficult to determine how the samples from each of the survey areas were collected and to correlate the sample locations to the sample results using the figures included in the report.

If you have any questions concerning our comments on the report please contact Dominick Orlando at 301-415-6749, email Dominick.Orlando@nrc.gov.

Sincerely,

/RA/

Lydia Chang, Chief
Special Project Branch
Decommissioning and Uranium Recovery
Licensing Directorate
Division of Waste Management and
Environmental Protection
Office of Federal and State Materials and
Environmental Management Programs

D. Metzler

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OFC	DWMEP	DWMEP	DWMEP	DWMEP
NAME	NOrlando	SGiebel	TRowe	LChang
DATE	08/09/12	08/09/12	08/10/12	08/13 /12

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