



DEPARTMENT OF THE ARMY
UNITED STATES ARMY GARRISON-ROCK ISLAND ARSENAL
1 ROCK ISLAND ARSENAL
ROCK ISLAND, ILLINOIS 61299-5000

REPLY TO
ATTENTION OF

14 DEC 2004

Office of the Garrison Manager

Dr. Tom McLaughlin, Decommissioning Branch
Division of Waste Management
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Dr. McLaughlin:

Reference letter from the Nuclear Regulatory Commission (NRC) dated May 20, 2004, subject: Request for Additional Information to Support NRC's Evaluation of the Proposed Changes to the Environmental Radiation Monitoring Program Plan for Jefferson Proving Ground (License No. SUB-1435) and the Army response dated November 1, 2004. Subsequent to our submission of the response to the referenced Request for Additional Information (RAI), an error in the calculation of the corrosion rate provided on page 39 was identified and corrected by the Army. An errata sheet is provided as enclosure for insertion in the response package reflecting the recalculation and correction.

In addition, the Army responses to the RAI identified some areas in the current Environmental Monitoring Plan (ERM) that will need to be addressed in a revision to the ERM submitted to support our request for the 5-year renewable license requested in September 2003. We are currently evaluating the details of off-site transport modeling requirements and any additional data that will need to be included in our revision to the plan and expect to present an implementation plan to the NRC with our response to additional questions posed concerning the sampling parameters that cannot be collected because of the presence of unexploded ordnance.

I am forwarding a copy of this letter to AMC Safety Office, Safety Office (AMCPE-SF), US Army Materiel Command, 9301 Chapek Road, Fort Belvoir, Virginia 22060-5527.

Ms. Joyce Kuykendall, JPG License Radiation Safety Officer, may be contacted for additional information at (410) 436-7118, facsimile (410) 612-5377 or by E-mail at joyce.kuykendall@us.army.mil.

Sincerely,

A handwritten signature in black ink, appearing to read 'Alan G. Wilson', with a stylized flourish at the end.

Alan G. Wilson
Garrison Manager

Enclosure

ERRATA SHEET CORRECTION TO CORROSION RATE

NRC requested verification of the corrosion rate cited in Table 5-1 (U.S. Army 2004) for DU-Ti-soil (0.015 – 0.030 mg/m²/day) as referenced by AEPI 1995.

RESPONSE

The conversion of dissolution rates from 0.05 and 0.1 cm/year to units in mg/m² · day is provided below.

$$\text{Diss. Rate}_1 = \frac{0.05 \frac{\text{cm}}{\text{year}} \times 18.9 \frac{\text{g DU}}{\text{cm}^3} \times 1,000 \frac{\text{mg DU}}{\text{g DU}}}{365 \frac{\text{days}}{\text{year}} \times 0.0001 \frac{\text{m}^2}{\text{cm}^2}} = 25,890 \frac{\text{mg DU}}{\text{m}^2 \cdot \text{day}}$$

$$\text{Diss. Rate}_2 = \frac{0.1 \frac{\text{cm}}{\text{year}} \times 18.9 \frac{\text{g DU}}{\text{cm}^3} \times 1,000 \frac{\text{mg DU}}{\text{g DU}}}{365 \frac{\text{days}}{\text{year}} \times 0.0001 \frac{\text{m}^2}{\text{cm}^2}} = 51,780 \frac{\text{mg DU}}{\text{m}^2 \cdot \text{day}}$$

REFERENCES

AEPI (Army Environmental Policy Institute). 1995. *Health and Environmental Consequences of Depleted Uranium in the U.S.: Technical Report*. June.

U.S. Army. 2004. *Responses To The Nuclear Regulatory Commission May 20, 2004, Request For Additional Information Regarding The Environmental Monitoring Program Plan*. Submitted to the U.S. Department of Army Installation Support Management Agency, Aberdeen Proving Ground, Maryland. Prepared by Science Applications International Corporation, Reston, Virginia. November.