NUCLEAR ENERGY INSTITUTE

Andrew N. Mauer
SENIOR PROJECT MANAGER
FUEL & MATERIALS SAFETY
NUCLEAR GENERATION DIVISION

3/13/2012
77 FR 14837
(5)

May 11, 2012

Ms. Cindy K. Bladey
Chief, Rules, Announcements and Directives Branch
Office of Administration
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: Industry Comments on Draft Regulatory Guide, DG-8051, "Bioassay at Uranium Mills," Docket ID NRC-2012-0057

Project Number: 689

Dear Ms. Bladey:

On behalf of the nuclear industry, the Nuclear Energy Institute (NEI)[1], appreciates the opportunity to provide comments on draft regulatory guide DG-8051, "Bioassay at Uranium Mills," which was published in the *Federal Register* on March 13, 2012 (77 FR 14837). This guide describes a method that the Nuclear Regulatory Commission (NRC) staff considers acceptable for bioassay programs at uranium mills and applicable portions of uranium conversion facilities where there is a possibility of exposure to dust of uranium compounds. It also provides guidance on the conditions under which bioassay should be performed, minimum quantifiable values for direct and indirect bioassay measurements, and protective guidelines and objectives.

Enclosed are the nuclear industry comments on the subject draft regulatory guide which we trust will be useful as the staff finalizes the update to Regulatory Guide 8.22. Thank you for the opportunity to comment on the document, and we look forward to reviewing the final version.

[1] NEI is the organization responsible for establishing unified nuclear industry policy on matters affecting the nuclear energy industry, including the regulatory aspects of generic operational and technical issues. NEI's members include all utilities licensed to operate commercial nuclear power plants in the United States, nuclear plant designers, major architect/engineering firms, fuel fabrication facilities, materials licensees, and other organizations and individuals involved in the nuclear energy industry.

SUNSI Review Complete

E-RIDS = ADM-03

1776 I Street, NW | Suite 400 | Washington, DC | 20006-3708 | P: 202.739.8018 | F: 202.533.0157 | anm@nei.org | www.nei.org

Template = ADM-013

Add = R.A. Jarvey (raj)
M. Case (mjc)

If you have any questions concerning these comments, please contact me at 202-739-8018; anm@nei.org.

Sincerely,

Andrew N. Mauer

Andrew N. Mauer

Enclosure

c: Mr. Richard A. Jervey, RES/DE/RGDB, NRC

ENCLOSURE

Comments on DG-8051

Section C. Staff Regulatory Guidance

Section 1: Conditions Under Which Bioassay Is Necessary

This section states that, "All workers who handle and work with uranium substances, or are sufficiently close to the process so that intake is possible (e.g., within a few meters and in the same room as the worker handling the material), should participate in the bioassay programs described below." This statement places further restriction on the necessity of internal exposure monitoring. 10 CFR 20.1502(b) requires monitoring if a radiation worker is "likely" to exceed the applicable annual limit on intake or committed effective dose equivalents. The statement within the regulatory guide removes the evaluation of the likelihood of intake and states that workers with only a possibility of exposure should be monitored, regardless of the magnitude of the intake, and should be reconsidered within the context of the regulations.

Section 2: Types of Bioassay That Should Be Performed

Part e of this section states, "Following use of respiratory protection devices. Bioassay specimens should be collected and evaluated after a respiratory protection device is used to reduce intake of radionuclides." As stated elsewhere in the regulatory guide, bioassay programs are confirmatory in nature. Collection of bioassay samples following the use of respiratory protection in no way reduces the intake of radionuclides. Furthermore, at some facilities, respiratory protection is donned on a near daily basis by many workers. Sampling at this frequency would negate the necessity for routine and special bioassay sampling in addition to resulting in an unsustainable quantity of bioassay sample analysis being performed. This increase in sampling does little to benefit the safety of the worker as history has demonstrated that an adequate routine sampling program remains sufficient to determine the occupational radiation exposure.

Section 4: Action-Levels and Corresponding Actions

Part e of this section states, "When short-lived components are anticipated in urinalysis. Licensees should use the recommendation in NUREG/CR-2268 (Ref. 8) to use two action-levels: at 1 µg/L Monday morning urinary excretion rate and an exposure associated urinary output of 100 µg/L during the first 24 hours after the exposure." This is the only mention of a "Monday morning urinary excretion rate". There is no further description that defines this type of sampling protocol. Due to the dependence of the urinary excretion rate of soluble uranium on the time following the intake, it is unclear what type of action level is desired.

Section 7: Quality Control

This section describes a recommended quality control program. Part a states, "The uranium urinalyses sensitivity and detection shall be achieved at a minimum quantifiable concentration (MQC) of less than 15 µg/L." Although a specific value is defined for an MQC, no references or definitions are provided for the calculation of this value. Appendix A and Appendix B on pages A-1 and A-2 refer to a "quarterly limit of intake." Current regulations are defined in reference to an annual limit on intake (ALI). It is recognized that this may be in reference to historic regulation. However, if a quarterly limit is intended, definition and reference to this limit is necessary.