NIOSH Response to SC&A Review of Grand Junction Evaluation Report Addendum

July 20, 2016

NIOSH has reviewed SC&A's May 2016 report A Focused Review of the NIOSH SEC Evaluation Report for Grand Junction Operations Office, Addendum to Petition SEC-00175. The report contained one Finding, which is copied below along with a response from NIOSH.

Finding 1: *Workplace air monitoring data do not support the assumption that unmonitored radiation workers would not have exceeded 200 DAC-hours or that non-radiation workers would not have exceeded 40 DAC-hours in a given year.*

NIOSH Response: NIOSH has found no database or documents from Grand Junction that contain annual DAC-hour totals based on tracking air concentration and time exposed, although NIOSH has documents from the 1990s that describe certain tasks, associated DAC-hours and requests for bioassay. Although NIOSH has no comprehensive database of annual DAC-hour tracking there are documents and data that demonstrate the site implemented a robust monitoring program by 1991 to implement requirements of DOE Order 5480.11. That program ensured monitoring was performed in areas with potential to exceed 10% DAC (derived air concentration), the annual equivalent of 200 DAC-hours, as well as the collection of bioassay samples to assess dose at much lower levels. SRDB Ref ID 97791 contains a copy of the 1991 site Technical Basis Document for Internal Dosimetry; it indicates air sampling was required in any occupied area that had the potential to exceed 10% of the DAC. Ref ID 97811 contains a procedure issued in 1990 specifying requirements for Radiation Work Permits (RWPs). Ref ID 97763 contains a compilation of dose assessment for 1991. That file includes annual effective dose equivalents for two cases assessed in 1990 (UMTRA program off-site intakes) that required an annual dose assessment; a list of 156 workers who had pending bioassay results as of March 1992; and an August 1992 follow-up report indicating that the pending bioassay results were all below the trigger level for occupational exposure and dose assessment. Other documents are available in the SRDB that show various examples in the 1990s of requirements in RWPs, requirements for Rad Tech coverage, respiratory protection when breaching contaminated surfaces, and various documents of surface contamination and air concentration data. Some examples of monitoring include Ref IDs 89872, 89938, 90154, 90155, 90508, 93707, 93816. The available data indicate that by 1991 Grand Junction had a robust monitoring and dose assessment program that controlled exposures to well below 200 DAC-hours per year. NIOSH concludes that the 10% DAC air monitoring threshold in place in 1991 bounds intakes for individuals who may have been exposed occasionally without being assessed by bioassay sampling.