MEMO

DATE: March 2, 2015

TO: Rocky Flats Work Group

FROM: Ron Buchanan, SC&A

SUBJECT: SC&A's Evaluation of NIOSH's May 30, 2014, Response to the RFP ORISE Health Surveillance Document Review

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In May 2014, NIOSH provided a response to a petitioner's concern in the form of a white paper titled, *Response: Rocky Flats Plant Health Surveillance Document Review*. The petitioner alleged that Rocky Flats Plant (RFP) dosimetry records cannot be relied upon for dose reconstruction. The petitioner refers to a 2006 Oak Ridge Institute for Science and Education (ORISE) document, *Health Surveillance of Rocky Flats Radiation Workers*, and noted that the document 'Summary' indicates that approximately 10% of these former workers were found to have received internal exposures higher than reported in the Health Physics records.

SC&A evaluated NIOSH's response and found:

- Some Department of Energy (DOE) sites have periodically included in the energy employee's (EE's) file a list of projected doses to the major organs resulting from a bioassay performed at the site at that time.
- These projected doses were derived from local dose models/programs used at the site at that time.
- Sometimes the resulting projected doses were zero, because the result of the bioassay was at, or below, the minimum detectible activity (MDA). Potentially missed dose was not generally considered at that time.
- SC&A has found that NIOSH does not use these projected doses for dose reconstruction purposes; instead, to assign a dose to an specific organ, NIOSH has used the results of the recorded bioassays, or coworker intake data, to assign intakes and resulting doses, or missed doses based on the MDA values applicable at the time of the bioassays (which generally results in a greater dose assignment than using the lower detection level of recent detection methods).
- Neither the site-generated projected doses nor the ORISE Health Surveillance Report[1] results can be compared to the EEOICPA dose reconstruction doses, because the latter is more encompassing of the total potential dose in order to be claimant favorable.

[1] ORISE 2004. *Final Report – Former Radiation Worker Medical Surveillance Program at Rocky Flats.*, For Department of Energy Programs. Oak Ridge Institute for Science and Education (ORISE), Arvada, Colorado. Provided to DOE on November 8, 2004. SRDB Ref ID: 121677, PDF pp. 24–25.

- Incidents, such as the one mentioned in the ORISE Health Surveillance Document Review, "*The records in [the EE's] Rocky Flats health physics file and in [the EE's] medical file are mute regarding the plutonium contamination incident [the EE] described in [the EE's] interview*" (ORISE 2004), would need to be investigated and appropriately accounted for during dose reconstruction.

SC&A found that the DR process used by NIOSH under EEOICPA is more encompassing and uniform between sites than other methods (as evaluated above) and generally results in more claimant-favorable and consistent dose assignments.