



MEMO

TO: Rocky Flats Plant Work Group
FROM: Ron Buchanan, SC&A
DATE: October 9, 2013
SUBJECT: Update of SC&A's Review of RFP Documents for Data Falsification

As a result of actions stemming from the July 8 and September 12, 2013 Rocky Flats Plant (RFP) Work Group meetings, SC&A has reviewed documents that might shed further light on the allegation of falsification of bioassay records, or improper handling of bioassay sample/procedures in the 1989 timeframe; specifically health physics procedures before and after 1989, and the four 1989 DOE investigation reports that originated after the 1989 FBI raid. The following is an update concerning SC&A's progress in this area (a more complete analysis will be forwarded to the work group upon completion of our review):

(1) References provided by NIOSH on September 18, 2013 – NIOSH provided the following comments/references by e-mail on September 18, 2013. Following each comment is SC&A's evaluation of the referenced documents in bold/blue text.

NIOSH

Below is an excerpt from the draft revision to our white paper. The revision is currently in internal review. The SRDB numbers for procedures and other things reviewed are imbedded in this portion of the report.

*The complete Grand Jury report, dated January 24, 1994, on the allegations and evidence from the FBI's RPF [sic] raid (**SRDB 126910**). This report provides specific explanations of the RCRA and environmental violations associated with the FBI raid. No personnel monitoring violations or other occupational radiological monitoring program deficiencies are identified in the report.
[Emphasis added.]*

SC&A's review of this document indicates that the issues were concerned with environmental monitoring and not personnel monitoring.

NIOSH

*Copies of RFP occupational radiological control program procedures, including pre- and post-FBI raid versions for determining if the site revised its procedures as a result of the raid. A Building 771 laboratory sample handling procedure includes a series of procedure revisions spanning the pre- and post-raid period. The revisions support the notion that no procedural changes resulted from the raid (**SRDB 126860**).*

SC&A's review of this document indicates that, while these procedures did span the period of 1987–1998 and were similar for this time period, they were conducted in Building 771 and were mainly geared to sample analyses for production work. From the RFP TBD and the interviews, it is SC&A's understanding that the bioassay samples were analyzed by the

Health Physics group in a separate building, and the environmental sample analyzed by the environmental group in another building. Therefore, it may not be appropriate to apply Building 771 sample process history to bioassay or environmental samples.

NIOSH

Examples of post-raid air sampling, bioassay monitoring contamination monitoring, nasal swab, and instrument operations procedures and manuals (SRDB 126927; 126926; 126925; 126924; 126923; 126922; 126920; 126919; 126917; 126916; 126913; 126906; 126902; 126901; 126899; 126896; 126895; 126892; 126890; 126888; 126887; 126886; 126885; 126884; 126883; 126882; 126881; 126880; 126878; 126877; 126876; 126874; 126873; 126872; 126871; 126869; 126868; 126867; 126866; 126864; 126863; 126836; 126833; and 126831). According to one interviewee, the site did not commence archiving previous procedures until the late 1980s; prior to that, obsolete versions were destroyed when new versions were put in place. This previous policy may explain why the above archived procedures only go back to the early 1990s (SRDB 126995). [Emphasis added.]

SC&A scanned some of these documents and found them to be post-1989. The documents scanned did not indicate that they were modified as a result of events occurring in 1989, although this would not necessarily be expected.

(2) Environmental Issues – SC&A has not found conclusive evidence to date that would indicate that the RFP-recorded bioassay data was mishandled or falsified, or sample procedural changes were put into place as the result of the 1989 FBI raid. However, the 1989 FBI raid, and later DOE investigations, did raise questions concerning the validity of environmental sample handling and data recording. Therefore, since claimants' doses may be assigned using the data and recommendations in the RFP environmental TBD (ORAUT-TKBS-0011-4, Rev. 02, of April 23, 2007), SC&A reviewed this TBD to determine if issues with environmental samples/data could potentially impact dose reconstruction. This was not a complete technical review of the TBD, but only a review to determine if there are potential areas in the TBD that may rely on environmental data obtained during the timeframe in question; i.e., pre- and post-1989. The following is a brief summary of SC&A's review:

- Pages 10–16 discuss the source terms for two periods; Operational (pre-1993) and post-operational (post 1992). In this section, Table 4-3 presents the site-wide maximum annual median inhalation intake of Pu-239,240 and Am-241 (1965 to 2005), based on monitoring data.
- Attachment A, pages 33–54, discusses the estimation of plutonium air concentrations at the RFP for various time periods spanning 1964 through 2005. It contains the following relevant tables and figures:
 - Figure A-3, page 42 – Annual average Pu-239,240 concentrations in air as a function of time for particles <30- μ m AED in RFP industrial area (1953–1990).

- Figure A-4, page 43 – Annual average Pu-239,240 concentrations in air as a function of time for particles < 30- μm AED in the perimeter area surrounding RFP (1953–1990).
- Table A-1, page 47 – Monthly average concentrations (fCi/m^3) of total long-lived alpha activity in onsite air samples, October 1964 to December 1971.
- Table A-2, page 50 – Estimated annual average concentrations (fCi/m^3) of Pu-239,240 in onsite air samples between 1965 and 1994 based on measurement data provided in Table A-1, RFP annual environmental reports, RFETS monthly and quarterly monitoring reports, and CDPHE quarterly environmental surveillance reports.
- Table A-3, page 51 – Annual average concentrations (fCi/m^3) of plutonium in air for three location groups, RFP contractor monitoring (1971–1990).
- Table A-6, page 54 – Corrected annual average concentrations of Pu-239,240 in air at perimeter monitoring stations (1971–1990).

There are indications in the TBD that some of the data in the above listed figures and tables were derived from RFP environmental data (e.g., as underlined in the above list), in addition to data from outside contractors (e.g., Rope et al. 1999). SC&A is not aware of any evaluation that has been conducted to determine if the RFP and contractor data used to generate these radionuclide intakes was impacted by the environmental sampling/data issues that surfaced from the 1989 FBI raid, or the 1989 DOE investigation and the evaluation/reports that followed. Therefore, SC&A suggests that this be considered.

SC&A does not yet have access to the four reports generated by DOE from their 1989 investigation (inquiries have been made to both DOE and former DOE management). SC&A will review them for relevance to bioassay sample processing and data falsification when they become available.

References:

ORAUT-TKBS-0011-5. 2007. *Technical Basis Document for the Rocky Flats Plant – Occupational Environmental Dose*, Rev. 02, Oak Ridge Associated Universities Team, Cincinnati, Ohio. April 23, 2007.

Rope, S. K, K. R. Meyer, M. J. Case, H. A. Grogan, D. W. Schmidt, M. Dreicer, and T. F. Winsor, 1999. *Evaluation of Environmental Data for Historical Public Exposures Studies on Rocky Flats, Task 4: Evaluation of Environmental Data, Final Report, Revision 1*, RAC Report 1-CDPHE-RFP-1997-Final (Rev. 1), Radiological Assessments Corporation, Neeses, South Carolina. August 1999.