



MEMO

DATE: July 10, 2015
TO: Rocky Flats Plant Work Group
FROM: Ron Buchanan, SC&A
SUBJECT: SC&A's Current Status of Evaluating the RFP Potential Data Falsification, Handling Bioassays, and Document Destruction Issues

1.0 Introduction

SC&A was tasked by the Rocky Flats Plant (RFP) Work Group (WG) with reviewing documents and NIOSH white papers that might shed further light on the allegation of falsification of records, improper handling of bioassay samples, and document destruction in the 1989 timeframe. SC&A provided the RFP WG a summary report on this issue in December 2013 (SC&A 2013). Since that time, NIOSH and SC&A have conducted numerous interviews with former RFP employees and others that were associated with the RFP. NIOSH has recently issued a white paper titled, *Evaluation of Petitioner Concerns about Data Falsification and Data Invalidation in RFP Building 123 Based on Worker Allegations and Issues Relating to the FBI Raid*, Rev. 3 (NIOSH 2015). The white paper also addressed the potential destruction of documents when applicable. This present report is a summary of SC&A's current status concerning the evaluation of this most recent NIOSH white paper (NIOSH 2015).

The following is a brief summary of the events relevant to this review that took place concerning the raid at the RFP during 1989 (DOE 1989, PDF page 8):

- June 6, 1989 – Call to FBI Hotline concerning environmental issues at the RFP. DOJ and EPA served warrant to search RFP.
- June 6, 1989 – DOE initiated an internal environmental review at the RFP.
- June 6–July 21, 1989 – The Special Assignment Team performed an evaluation of RFP environmental practices.
- August 1989 – DOE issued the report, *Assessment of Environmental Conditions at the Rocky Flats Plant* (DOE 1989).
- October 24, 1989 – EPA conducted an interview with an RFP employee concerning issues of concern at the RFP (EPA 1989).

2.0 NIOSH's 2015 Evaluation Report

After conducting numerous interviews, performing further document searches, and considering additional petitioners' inputs, NIOSH issued a recent report (June 24, 2015) concerning alleged data falsification, improper bioassay processing, and potential document destruction (NIOSH 2015). The report contained the following major sections:

- 1.0 Additional Topics Requiring NIOSH Review and Response**
 - 1.1 Interviews related to the FBI raid investigation
 - 1.2 Review of: an insider's view of Rocky Flats: Urban Myths Debunked
 - 1.3 Follow-up research: availability and accessibility of relevant documents

- 2.0 Additional Issues Related to the Expanded Post-1983 Scope**
 - 2.1 Additional Colorado visit for data capture and interviews
 - 2.2 Additional post-Colorado site visit/data capture interviews
 - 2.2.1 Data falsification interviewee
 - 2.2.2 FBI raid interview and follow-up information reviews
 - 2.3 Review of petitioner-identified RFP technical safety appraisal issues
 - 2.4 Review of petitioner-identified data falsification issues/report
 - 2.5 Additional information from RFP manager personal notebook/logbook

- 3.0 Assessment of Available Personnel Radiological Monitoring Data**

- 4.0 General Summary and Conclusions**

3.0 SC&A's Current Evaluation of NIOSH's White Paper

Interviews

SC&A participated in most of the RFP interviews and provided summary notes. The interviews provided some relevant information and identified some potential issues to be considered. There were approximately 13 interviews conducted during the last 1½ years that concentrated on data falsification, bioassay data, and destruction of RFP documents. NIOSH analyzed the results of these interviews in their recent white paper (NIOSH 2015). In the white paper, NIOSH summarized each interview and responded to the issues raised. NIOSH referenced approximately 140 documents in the SRDB in their responses. The NIOSH white paper consists of 4 sections in 32 pages, with the various interviews, related documents, and articles interlaced within those sections. To facilitate evaluating the interviews, SC&A has summarized the most pertinent information in the following table.

Table 1. Summary of Interviews in NIOSH's White Paper

Interview No.	RFP Association	NIOSH Page #	Main SRBD Ref #
1	Employee	4-6	122614
2	Employee	7-8	123339
3	Employee	8	123338
4	Employee	8	126995
5	Employee	8	127272
6	Employee	13-14	129514
7	Employee	15-16	131488
8	Employee	17-18	130943
9	Gov. agent	18-20	131006
10	Employee	21	133401
11	Employee	21	132826
12	Gov. panel	21-22	132825
13	Employee	24	133888

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SC&A reviewed each of the interviews (and associated documentation) and analyzed NIOSH's response and some of the referenced documents to determine if any of the issues that were raised would impact the ability of NIOSH to perform dose reconstruction with sufficient accuracy. Issues concerned with area surveys, operational procedures, use/calibration of instruments, pocket dosimeters, air monitor alarms, etc. (or altering the results and/or destruction of the records of these types of items), may indicate that best practices might not have been followed, but would not impact the adequacy/accuracy of the recorded external and bioassay results used in dose reconstruction, unless they involved the actual records of the external doses and internal intakes of an RFP worker for which there were no duplicate form(s) of the necessary data available.

SC&A's Conclusion Concerning the RFP Interviews

Alteration of data, bioassay processing/data, and destruction of documents were discussed during the interviews. However, SC&A did not find any firm indications that essential individual personnel records needed for dose reconstruction were knowingly altered or destroyed, or that bioassay samples were improperly processed. SC&A found that, in general, the issues identified were not directly related to NIOSH's ability to perform radiation dose reconstruction. While some of the issues may indicate that operational and health physics practices could have been improved, and that as low reasonably achievable (ALARA) standards may not have always been implemented, these issues would not have a direct impact on the data needed to reconstruct dose for individual workers.

It should be clarified that SC&A did not have direct access to the examples of documents shredded by Interviewee #6 (listed in Table 1 above) and as discussed in SRDB Ref ID #132787 (NIOSH 2014). SC&A based its evaluation of this interview on the examples and summaries provided in NIOSH 2014.

SC&A did find that the NIOSH white paper (NIOSH 2015), page 14, referenced the SRDB interview document NIOSH 2014 for Interviewee #6. In NIOSH 2014, there appears to be an instance on page 1, Item 1, f. iii, where NIOSH may have incorrectly stated that the higher of the Hand or Forearm handwritten doses from the form on PDF page 52 [not page 53] of the DOE file in the NIOSH/OCAS Claims Tracking System (NOCTS) were carried forward to the later version of the printed form on PDF page 77 of the DOE file in NOCTS. However, this statement appears to be in error, because the Hand doses do not appear in the later version of the form on PDF page 77 of the DOE file in NOCTS. This would not impact the dose reconstruction, because the original handwritten record is also available to the dose reconstructor in the DOE file in NOCTS.

Related Articles

SC&A reviewed articles related to data falsification, bioassay processing/data, and document destruction as discussed in NIOSH's white paper. SC&A has summarized the most pertinent information in the following table.

Table 2. Summary of Articles in NIOSH’s White Paper

Article	Main Contents	NIOSH Page #	Main SRBD Ref #
A	An insider's view of Rocky Flats: Urban myths debunked – 2010	9	104858
B	DOE assessment of environmental conditions at the RFP – 1989	9–10	21359
C	Are you prepared to survive an FBI raid at your facility – 1995	10	122696
D	DOE initial agency decision case concerning reprisals – 1999	10	125051
E	Grand jury report from the 1989 FBI raid at the RFP – 1994	11	126910
F	RFP occupational radiological control program – Pre & Post-1989	11–13	126860
G	RFP Technical safety appraisal – 1988	22–24	131058
H	RFP manager notebook – mid 1980s	25	143317

SC&A’s Conclusion Concerning RFP-Related Articles

SC&A reviewed each of these articles and found that, in general, the documents were concerned with other aspects of RFP operations or environmental issues, rather than data falsification, record destruction, or bioassay data, that would potentially impact the ability to perform adequate dose reconstructions.

4.0 RFP Environmental TBD

Although not addressed in NIOSH’s white paper, SC&A has found that the RFP Occupational Environmental Dose technical basis document (TBD) ORAUT-TKBS-0011-4 (ORAUT 2007) could contain dose reconstruction recommendations that relied on the collection and handling of environmental data. The 1989 FBI raid, and concurrent DOE investigations, did raise questions concerning the validity of environmental sample analyses; therefore, because in certain situations some of the claimants’ doses may be assigned using the data and recommendations in ORAUT 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 ORAUT 2007, but only a review to determine if there are potential areas in this 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 of ORAUT 2007:

- 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 ^{239,240}Pu and ²⁴¹Am (1965 to 2005), based on monitoring data.
- Attachment A, pages 33–54, discuss 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 ^{239,240}Pu concentrations in air as a function of time for particles <30-µm AED in RFP industrial area (1953–1990).

- Figure A-4, page 43 – Annual average $^{239,240}\text{Pu}$ concentrations in air as a function of time for particles $<30\text{-}\mu\text{m}$ 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 $^{239,240}\text{Pu}$ 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 $^{239,240}\text{Pu}$ 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's Conclusion Concerning the RFP TBD-4

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 were impacted by the environmental sampling/data issues that surfaced from the 1989 FBI raid or the 1989 DOE investigation and the evaluation that followed. Therefore, SC&A suggests that the RFP Environmental Dose TBD be evaluated in view of the environmental issues related to the 1989 raid to determine if any of the environmental issues impact the data contained in the ORAUT 2007 when used for dose reconstruction purposes.

REFERENCES

DOE 1989. *Assessment of Environmental Conditions at the Rocky Flats Plant*, United States Department of Energy, Golden, CO, August 1989. SRBD Ref ID: #21359.

EPA 1989. *Report of Rocky Flats October 24, 1989 Interview*. United States Environmental Protection Agency, Office of Criminal Investigations, October 26, 1989. SRBD Ref ID: #122614.

NIOSH 2014. *Follow-up call with [interviewee] on Documents submitted for Rocky Flats Plant*, National Institute for Occupational Safety and Health, Division of Compensation Analysis and Support, Cincinnati, Ohio. May 14, 2014. SRBD Ref ID: #132787.

NIOSH 2015. *Evaluation of Petitioner Concerns About Data Falsification and Data Invalidation in RFP Building 123 Based on Worker Allegations and Issues Relating to the FBI Raid*, Rev. 3, National Institute for Occupational Safety and Health, Division of Compensation Analysis and Support, Cincinnati, Ohio. June 24, 2015

ORAUT 2007. *Technical Basis Document for the Rocky Flats Plant – Occupational Environmental Dose*, ORAUT-TBKS-0011-4, 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.

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SRBD Ref ID: #104858. *An Insider's View of Rocky Flats: Urban Myths Debunked* 2010.

SRBD Ref ID: #122696. *Are You Prepared To Survive An FBI Raid At Your Facility*, Kaiser-Hill Co., L.L.C. Nuclear Information and Records Management Association 19th Annual Symposium. Washington, DC. August 1995.

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SRBD Ref ID: #126860. *Sample Handling in 771 Labs [RFP]*, United States Department of Energy, Golden, CO, February 16, 1996.

SRBD Ref ID: #126910. Colorado Federal District Court Report of the Federal District Special Grand Jury 89-2. Denver, Colorado. January 24, 1992.

SRBD Ref ID: #131058. *Technical Safety Appraisal: Buildings 776/777 Rocky Flats Plant*, United States Department of Energy, Golden, CO, March 1988.

SRBD Ref ID: #143317. *RFP Manager's Notebook*, United States Department of Energy, Golden, CO, 1986.