

White Paper:
**Evaluation of Petitioner Concerns About Data Falsification and/or
Data Invalidation in RFP Building 123 Based on Worker Allegations**

By
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This is a technical assessment of the allegations made by a former Rocky Flats Plant worker in interviews conducted on October 24-25, 1989 by the U.S. Environmental Protection Agency N.E.I.C. Office of Criminal Investigations and the Federal Bureau of Investigation. These interviews resulted from a phone call by the interviewee to the FBI Rocky Flats Hotline on June 16, 1989 alleging safety violations and manipulation of laboratory samples at RFP. ORAUT was provided a transcript of the interviews by the EPA Office of Criminal Investigations (SRDB 122614).

In response to a NIOSH request, ORAUT reviewed the transcript of the EPA/FBI interviews to technically assess the allegations and their relevance to potential data falsification and/or data invalidation in Building 123 as it might affect the technical basis for dose reconstructions, and specifically, tritium dose reconstructions under EEOICPA. Building 123 was the Analytical Health Physics Laboratory, and as such, was the location where RFP health physicists generated the site-wide data used by ORAUT for its evaluations. After reviewing the transcript, ORAUT noted the following:

Interviewee's RFP Job History

The interviewee worked several entry-level positions at RFP before accepting employment as a [[redacted for privacy]] in the Analytical Health Physics Laboratory in Building [redacted for privacy]. He began this assignment after entering and completing a [redacted for privacy] Technician Program ([redacted for privacy]) sponsored by [redacted for privacy]. The program incorporated chemistry and physics classes and included on-the-job training and work in the laboratory. After [redacted for privacy] years serving in this position, he left his employment with [redacted for privacy] over concern for his own health and safety.

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Interviewee Allegations Relevant to Data Falsification and/or Data Invalidation in Building 123

1. During the interviewee's time as a [redacted for privacy] in Building [redacted for privacy], he indicates that the fume hoods were inadequate. He states that a piece of pH paper he taped outside the fume hood turned bright red immediately.

ORAUT Response: There could have been a chemical hazard issue; however, the amount of radioactive material involved in this work should be small and there is no indication that personal monitoring was not in place. [Note: The interviewee's name and dates of employment are redacted in the FBI interview transcript.]

2. During the interviewee's time as a [redacted for privacy] in Building [redacted for privacy], he states that environmental and bioassay samples were routinely left on the shelf too long and not refrigerated or preserved properly.

ORAUT Response: From a radiological perspective, there is no scientific basis for concluding that sample counting performed weeks after collection would compromise the results for the target radionuclides. The half-lives of these target radionuclides are too long for the intervening time period to impact the results.

During an ORAUT interview with a former Mound [redacted for privacy] (SRDB 123763), the interviewee corroborated the view that concern about sample-counting delays are not specifically applicable to bioassay samples and that there should be no impact on the validity of the radiological data as it applies to the EEOICPA dose reconstruction program. [See "Further Follow-up Efforts" later in this white paper.]

3. During the interviewee's time as a [redacted for privacy] in Building [redacted for privacy], he indicates that fecal coliform samples were diluted in order to get the count rate low enough to be counted. The sample was then recorded in the logbook as a count relative to the amount of dilution. He states that the amount of dilution was sheer guesswork. The samples could only be analyzed once based on the amount of sample collected. If an incorrect guess was made on the amount of dilution, and the sample was over-diluted, the count could or would be zero.

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ORAUT Response: Any issue with coliform dilution has no relevance to radio bioassay results.

4. During the interviewee's time as a [redacted for privacy] in Building [redacted for privacy], he recalls that occasionally there would be a release of plutonium in a production building. When stack filters were analyzed, they were divided in half, and if the first half was found "unacceptably high" then the second half was counted.

ORAUT Response: Stack sample results are not used to support reconstructing dose for RFP personnel because stack samples are considered a measure of environmental releases and not representative of workplace exposure conditions. Nevertheless, as discussed in ORAUT's Item 2 response in regard to sample-counting delays, a vial sitting for weeks, if properly processed during analysis, should not compromise the radiological count results. It is common lab protocol to divide a sample into aliquots to preclude a sample being lost or compromised in process. The interviewee did not indicate that the analytical process for the other aliquots was different.

5. During the interviewee's time as a [redacted for privacy] in Building [redacted for privacy], he indicates that there was improper collection of environmental water samples.

ORAUT Response: Even if improper collection of environmental water samples occurred, it has no relevance to the personal monitoring results used for dose reconstructions under EEOICPA.

Further Follow-up Efforts

Most of the information and incidents described by the FBI interviewee do not provide sufficient detail to support a follow-up investigation of the claims. Nevertheless, as part of its follow-up efforts, ORAUT located and interviewed three individuals who potentially had related knowledge or information that might corroborate or dispute the statements offered by the FBI interviewee. Two of the follow-up interviewees had relevant information to offer.

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- ORAUT interviewed a former Mound employee who started in [redacted for privacy] and worked over the next [redacted for privacy] years as a [redacted for privacy], [redacted for privacy], [redacted for privacy] (SRDB 123763). The interviewee read the FBI interview and made the following observations (summarized here).
 - He was aware of the FBI raid at RFP and generally aware of what was going on at that time. He considers it a valid assumption that Mound procedures would be representative of other DOE sites within the DOE Complex. He further stated that he did not think there was a significant difference between the 1991 protocols and the 1989 protocols in place in the FBI investigation timeframe.
 - At Mound, nothing was added to bioassay samples for bacterial concerns or preservation. He stated that urine is sterile. For tritium analysis, Mound used liquid scintillation vials that held 30 ml maximum, which were processed at room temperature. After counting, they were placed in a refrigerator in case a recount might be needed later. If no recount was needed, they were discarded. The sample was not in the container long enough for any plating to occur.
 - In general, in his DOE experience, there may be instances where mistakes are made by individuals; however, that does not mean there was a programmatic lack of sample control.
 - He stated there is no direct correlation between environmental samples and bioassay based on his experiences. Bioassay samples are not treated the same way. Environmental samples would have to be treated and preserved first; no preservation techniques were employed for bioassay.
- ORAUT interviewed a former Rocky Flats [redacted for privacy] who worked from [redacted for privacy] managing both [redacted for privacy] (SRDB 123339). He returned as a Rocky Flats employee from 1994 [redacted for privacy] in [redacted for privacy]. In [redacted for privacy], he also worked with the [redacted for privacy] as manager of their [redacted for privacy] Program. As such, his RFP experience was related to the time period directly after the FBI raid (he had no information or experience relating to the time period prior to the raid). During his interview, he made the following observations (summarized below). These

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observations have relevance if one assumes that the 1989 protocols in place in the FBI investigation timeframe were essentially the same as those in place when he began work in 1990.

- Environmental monitoring and personnel dosimetry were separate programs, although their respective samples were analyzed in the same low-level on-site lab. Around 1997-1998, the on-site lab was shut down and everything was contracted out. Turnaround times on samples were sometime a problem, especially for Pu, but not so much for tritium. While he was there, there was no routine tritium monitoring program; just some pre and post-job tritium analyses. There were no significant tritium intakes during his RFP employment.
- Based on his RFP experience, there is no specific link between environmental and bioassay results; the same numbers might have a different significance in environmental versus bioassay.
- RFP had a state-of-the-art program for dealing with compromised PPE. They had CAM alarms, nasal swipes, and bioassay. Bioassay would be done immediately if there was a suspected exposure (not necessarily at the end of the work shift). RFP also had a wound-counting program.
- In bioassay analysis, lab staff used hoods. There was a complete IH staff. He is sure the airflow was tested. He is not aware of any injuries or complaints regarding hoods. Strong acids were used in bioassay for fecal samples, but he recalls no incidents.
- After the FBI raid and shutdown, a lot of work was done to restart operations to get rid of the in-process material for D&D. Mountains of documents were being prepared for restart. Each successive site operator increased the emphasis on safety.

ORAUT also reviewed *An Insider's View of Rocky Flats: Urban Myths Debunked* by Farrel D. Hobbs (a former RFP worker) (SRDB Ref ID: 104858). The author implies (and most articles accessed via the Internet seem to agree) that the FBI raid on RFP found no issues with worker protection or the worker monitoring program. The only violation cited for RFP was an environmental release. This is not to imply that an environmental release is not an issue, but

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such a release does not indicate an issue with the monitoring program or the resulting data that ORAUT relies on to perform dose reconstruction under EEOICPA.

An audit was performed by a DOE Special Assessment Team that focused on environmental issues, finding 95 deficiencies of varying types. The following two deficiencies mentioned the Building 123 laboratory:

- Under *Radiation*: Quality Assurance (QA) and Quality Control (QC) practices for radiochemistry analyses in the Building 123 HS&E Laboratory do not conform to generally accepted practices.
- Under *Quality Assurance*: QA/QC practices at Building 123 HS&E laboratory for environmental analyses are not adequate to document validity of data.

Although these two deficiencies mention Building 123, they are in the context of an environmental release investigation and all other 93 deficiencies are related to environmental issues. Environmental monitoring deficiencies do not translate into deficiencies in the worker monitoring program, and no such formal allegations were made. Personal monitoring, not environmental monitoring, is the focus of dose reconstruction under EEOICPA.

Current Availability and Accessibility of Relevant Documents

It appears that many of the documents potentially relevant to the FBI's RFP raid are sealed in files associated with the litigation. ORAUT has obtained a limited number of documents related to the FBI raid and litigation. These include:

- A report from a DOE Environmental Special Assessment Team (one of four assessment teams that also included Management and Operations, Safety, and Legal Matters) (SRDB 21359). These teams were mobilized by the Secretary of Energy to perform a separate evaluation in parallel with the FBI investigation in order to provide the Department with an independent assessment of Rocky Flats at the time of the raid.

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- A 1995 symposium presentation titled, *Are You Prepared To Survive an FBI Raid At Your Facility?*, that specifically discusses aspects of the 1989 FBI raid as well as the legal charges resulting from the raid (SRDB 122696).
- A detailed published response from a manager in the Environmental Department who was apparently an individual of investigative interest during the FBI raid (*An Insider's View of Rocky Flats: Urban Myths Debunked*) (SRDB 104858).
- A petitioner representative provided the DOE's Initial Agency Decision for Case No. VWA-0031 dated August 6, 1999 (SRDB 125051). This case involves a complaint from a former RFP worker alleging management reprisals following disclosures of possible health and safety violations and site mismanagement. The scope of the allegations is outside the time frame and location under evaluation in this paper and do not impact NIOSH dose reconstructions for RFP.

Although it does have access to the above documents, ORAUT has not been able to obtain any other site documents that provide a response to the FBI allegations resulting in the raid.

General Observations and Conclusions

Based on its review of the limited number of documents that are available, ORAUT has arrived at the following general observations and conclusions:

1. While the information from the DOE's Environmental Report discusses data QA and validation issues with the Building 881 and Building 123 analytical laboratories, there were no identified situations where falsification of data was identified (as was the case with CEP data) (SRDB 21359, Sections 7 and 8).
2. As stated by the U.S. Attorney in the RFP sentencing memorandum, there were no identified situations that posed an imminent threat to RFP workers, the public, or the surrounding environment (SRDB 122696, pdf p. 13).

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3. Although the FBI investigation that led to the raid identified potential issues at RFP, the actual situations/issues were different from what seemed apparent based on the allegations and investigative characterizations that led to the raid (SRDB: 104858).
4. While Rockwell did plead guilty as a company to fine, five felony charges, and five misdemeanor charges, it appears that the decision to settle was based on the company's desire to close the long, drawn-out litigation. The end result was a settlement that included an agreement between parties eliminating further pursuit of individual indictments (SRDB 122696, pdf pp. 12-14).
5. The charges against Rockwell at RFP were specific to environmental RCRA and Clean Water Act laws and the impact to the environment and did not specifically call out a data falsification, data validity issues, or data quality violation (SRDB 122696, pdf p. 13-14).

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