

## DEFENSE NUCLEAR FACILITIES SAFETY BOARD

September 10, 1993

**MEMORANDUM FOR:** G. W. Cunningham  
**COPIES:** Board Members  
**FROM:** J. T. Arcano, Jr.  
**SUBJECT:** Rocky Flats Plant, Trip Report for July 26-28, 1993, Review of Quality Assurance

1. **Purpose:** This memorandum describes the observations of Defense Nuclear Facilities Safety Board (DNFSB) technical staff (J. T. Arcano, Jr.) and Outside Experts (J. D. Porter, and J. D. Stevenson) during a quality assurance review from July 26-28, 1993 which focused on Rocky Flats Plant (RFP) Building 771.
2. **Summary:** The EG&G Rocky Flats (RF) site-wide quality assurance program is well on its way to implementing and embracing the tenets of DOE Order 5700.6C. However, Department of Energy-Rocky Flats Office (DOE-RFO) has concentrated on providing guidance to the contractor and has not adequately planned for and executed the implementation of DOE Order 5700.6C, *Quality Assurance*, within its own organization; Recent increased DOE-RFO management attention to its quality assurance program may provide the impetus needed for improvement.

In the past, increased management attention and priority was given to "resumption" buildings (for example, Buildings 559 and 707). As a result, DOE-RFO and EG&G-RF have not given priority to Building 771, a "non-resumption" facility, which, according to the Building Operations Manager, lacks adequate resources to fully implement the Order. Highlights of specific areas of concern to the DNFSB staff review team are described below:

- a. DOE-RFO:
  1. DOE-RFO lacks an adequate plan for its implementation of DOE Order 5700.6C and, therefore, has no suitable benchmark against which its progress towards coming into compliance can be measured and tracked.
  2. DOE-RFO's management assessment program is barely implemented and, as such, fails to meet DOE Order 5700.6C, Criterion 9.

b. EG&G-RF: Building 771:

1. A quality assurance plan, which integrates and implements the site quality assurance program within Building 771, has not been developed.
  2. A formal management assessment program within Building 771 does not exist as required by DOE Order 5700.6C, Criterion 9.
  3. The Building Operations Manager stated his belief that all critical Measuring and Test Equipment (M&TE) items have not been included in the calibration list. Therefore, it appears that all M&TE items are not adequately controlled as required by DOE Order 5700.6C, Criterion 8.
3. **Background:** This review consisted of briefings by DOE-RFO and EG&G-RF; a review of quality assurance policy directives; a review of design, procurement and work documents; and personnel interviews. The focus of the review was to assess the status of implementation of DOE Order 5700.6C in Building 771. However, a cursory review of DOE-RFO and EG&G-RF at the site level was conducted as well. This was the first DNFSB Staff assessment of quality assurance in Building 771. This review was conducted concurrently with a DNFSB Staff review of Training and Qualification.

4. **Discussion:**

a. DOE-RFO:

1. *Rocky Flats Office Implementation Plan for DOE Order 5700.6C - Quality Assurance* purports to contain the activities and schedules for DOE-RFO's implementation of DOE Order 5700.6C. However, it fails to provide any detail and, therefore, lacks a suitable benchmark against which DOE-RFO's progress towards coming into compliance can be measured and tracked. The lack of an adequate implementation plan leaves DOE-RFO's intentions unclear with regard to implementing the Order.
2. DOE-RFO's management assessment program is barely implemented. DOE-RFO Instruction (RFI) 7300 describes a comprehensive self-assessment program for DOE-RFO. However, two DOE-RFO managers stated that the major thrust of their effort is to provide guidance to the contractor, and therefore, management assessment within DOE-RFO has taken a "back seat." Discussion with three DOE-RFO Assistant Managers (and a representative for a fourth Assistant Manager) indicated that only one of them had implemented a management assessment program. This

particular program was reviewed and found to only partially meet the requirements of RFI 7300.

b. EG&G-RF:Building 771:

1. A quality assurance plan, which integrates and implements the site quality assurance program within Building 771, has not been developed as was done for Buildings 559 and 707. To date, no commitment has been made to develop a stand-alone quality assurance plan or implementing procedures for Building 771 baseline operations. A quality assurance plan for the Building 771 Stabilization Program has been developed, however, it does not appear to encompass all building (that is, facility) activities. A quality assurance plan for the facility would ensure that all aspects of quality assurance are adequately integrated among all of its activities.

The absence of a stand-alone quality assurance plan does not preclude implementation of various aspects of quality assurance in Building 771 where site-wide procedures have been implemented. Programs such as Integrated Work Control (IWCP) and Configuration Change Control (CCCP) have been implemented. However, programs such as Conduct of Operations (COOP), and Procedures, Records Management and Document Control have only been partially implemented.

Building 771 personnel who were interviewed were well versed in their "stop work" responsibilities, but had little understanding that each of them was personally responsible for quality. In general, those interviewed felt that quality was the responsibility of the quality assurance organization. Several personnel interviewed were not knowledgeable of what quality assurance is.

2. No internal management surveillances are conducted within Building 771 other than those conducted by the Mentor Program, which has only recently been implemented in the building. Independent Assessments are conducted under the auspices of the RFP site-wide quality assurance program. However, the Building 771 Operations Manager indicated that he did not have the resources to conduct a formal Management Assessment Program.
  3. Calibration of equipment is governed by site-wide procedures. However, the Building Operations Manager stated his belief that not all critical M&TE items are included on the calibration list and that a formal review is needed to identify critical equipment which should be on the list.
- c. Additional information on the DOE-RFO and EG&G-RF quality assurance programs is presented in Appendix A.



Additional Information on Quality Assurance at  
Rocky Flats Plant

**DOE Rocky Flats Office (DOE-RFO):** No DOE-RFO quality assurance manual exists, *per se*. However, RFI 5700.6, *Quality Assurance* and the DOE-RFO *Quality Assurance Program Description (QAPD)* appear to serve in this capacity. RFI 5700.6 supplements DOE Order 5700.6C, and provides Rocky Flats plant-specific guidance to the requirements of the Rocky Flats Quality Assurance Program. It incorporates requirements from DOE/AL *Quality Criteria* (QC-1) and (QC-2), EPA *Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans* (EPA QAMS-005/80), and the Rocky Flats Interagency Agreement.

**EG&G-RF:**

1. A major reorganization in July 1992 consolidated Performance Assurance and Quality Assurance into one organization, thus integrating all site-wide self-assessment activities. The Assessment Organization presently consists of the following branches: Program and Operations Assessment, Independent Verification and Sampling, Quality Assurance Surveillance, Technical and Safety Assessments, Environmental and Waste Assessments/Audits, Quality Assurance Audits, and Waste Surveillance.

The self-assessment program is formally established and manned by skilled personnel with a broad experience base. However, the entire program is new and not fully staffed, and its training program is incomplete. There is a shortage of some critical skills, primarily in the environmental assessment area.

2. EG&G-RF has indicated that all actions to implement RFI 5700.6 will be complete by September 30, 1994, however, it was not clear how the date for implementation of DOE Order 5700.6C would be affected. (*Rocky Flats Office Implementation Plan for DOE Order 5700.6C - Quality Assurance* of March 3, 1992 stated that "...all organizations at Rocky Flats will have DOE Order 5700.6C implemented by 9/30/93.")
3. Performance indicators are in use at the site, but appear to be so broadly based that they require extensive analysis to identify the root cause of problems. The Building Operations Manager for Building 771 uses performance indicators to prioritize resources and believes that their use is essential in day-to-day management of his facility, particularly in the area of waste generation, which must be minimized and kept beneath a ceiling.
4. In the areas of Procurement and Design, the line organizations at Rocky Flats seem to be quite cognizant of their quality assurance responsibilities although written quality

assurance procedures at their levels in many instances have not as yet been changed to reflect DOE Order 5700.6C requirements. Engineering personnel who were interviewed had a good general awareness of the responsibilities of design document originator, checker, and approver. However, there does not appear to be any formalized training being given to Engineering personnel on the content and application of the *Conduct of Engineering Manual*.

5. No design basis exists for Building 771. However, design control is implemented in Building 771 through the use of the site-wide Configuration Change Control Program and Conduct of Engineering Manual (COEM).
6. The EG&G-RF General Manager has instituted "Walk-about Wednesdays" in which managers are required to spend the day "walking the floors," focusing on occupational safety and health (OSH) "hot" issues. This action is commendable, however, it does not appear to meet the requirements of DOE Order 5700.6C, Criteria 9, for management assessment.
7. The Associate General Manager for Standards, Audits, and Assurance has arranged for an external contractor to conduct an independent assessment of the effectiveness of the site Standards, Audits and Assurance Branch in complying with DOE Order 5700.6C.