

NRC INSPECTION MANUAL

FCOB

INSPECTION PROCEDURE 88066

AUDITS AND INSPECTION¹

PROGRAM APPLICABILITY: 2603

88066-01 INSPECTION OBJECTIVES

01.01 To determine whether Audits and Inspections (A&I) of the NCPSP elements have been scheduled, and are completed in accordance with that schedule.

01.02 To determine whether the skills and qualifications of those performing the audits of the NCPSP elements are sufficient.

01.03 To verify that written reports of the audit findings and recommendations have been issued to plant management, and to determine whether the recommendations are based on in-depth analyses of the NCPSP elements.

01.04 To determine whether audit findings are being resolved and /or scheduled for resolution in a timely manner.

01.05 To determine whether the licensee has established and implemented a tracking system for addressing the audit program findings.

01.06 To ensure that audit findings, recommendations, and implementation records are documented and disseminated to relevant personnel and are readily accessible.

88066-02 INSPECTION REQUIREMENTS

02.01 Review the licensee's A&I program to determine whether an adequate management system is provided to ensure that the procedures and practices developed under the NCPSP are being followed properly and maintained. As a minimum, the following items should be addressed: scope and frequency of audit, audit

¹NOTE: This element has been called "Audits and Inspection" and refers to the self-audit (i.e., inspection of the other 10 individual elements of the Nuclear Chemical Process Safety Program (NCPSP). The word "inspection" refers to the inspection (or audit) of the NCPSP elements. Throughout this inspection procedure, the terms audit and inspection are assumed to be synonymous.

team makeup, audit protocol, audit report (documentation), audit report tracking, and closure.

02.02 Review the licensee's A&I program to determine whether the licensee has in place a mechanism to update the facility's auditing program. This should incorporate management-approved recommendations coming out of other elements of

the NCPSP (e.g., incident investigation), pertaining to auditing elements of the NCPSP.

88066-03 INSPECTION GUIDANCE

General Guidance

The inspection should be directed at assessing the sufficiency of the facility's management system for the NCPSP elements and ensuring that they adequately address chemical hazards that can affect the safety of operations with Special Nuclear Material (SNM) at the facility.

Specific Guidance

Specific guidance is provided for each of the inspection requirements listed in Section 88066-02, to help the inspector determine whether the licensee's program for A&I is adequate.

03.01 The audit program should have at least the following features to adequately support the implementation of NCPSP:

- a. Each element of the NCPSP should be audited at least once every 3 years.
- b. The audit/inspection team makeup should ensure a thorough, independent audit of the NCPSP elements. At least one member should be experienced and knowledgeable in the processes involved. All team members should be knowledgeable in auditing techniques, practices, and procedures. No team member should have vested interests in the findings of the audit.
- c. Audit/inspection protocol should be established before the start of the audit. This should include information on staffing, scheduling, verification procedures, etc..

Adequate skills should be included in each audit/inspection team (e.g., production management, process engineering, control/automation engineering, chemistry, peer facility operations, maintenance engineering/supervision, material science (including metallurgy), production operators, and maintenance mechanics.)

NOTE: Not all of the above are necessarily required for a single process or site. The facility should select only those skills needed to audit/inspect an element.

The facility should have a schedule for auditing each of the NCPSP elements. The facility could either spread the audits over 3 years, or perform a concurrent audit of all elements of the NCPSP every 3 years:

1. The facility could divide the audits over the 3-year period and audit one element every 2 months or so, in

which case there should be a mechanism in place to integrate audit reports for related elements so that deficiencies are addressed globally. This way, all occurrences of a particular deficiency can be addressed, especially deficiencies in the NCPSP management system.

2. The facility could audit all the 11 elements of the NCPSP concurrently once every 3 years.

The inspector should verify that assignments of responsibility have been made and acknowledged for the audits.

- d. Audit reports should be available for each of the audit exercises completed. These should be based on actual implementation (field verification) and not on written documents (which might not exist in practice). The findings and recommendations should recognize and address the strengths and weaknesses of the management system for each element. Recommendations should be made to rectify shortcomings of the management system.
- e. Response by management for each audit finding and recommendation should be documented, even for those refuted by management. Corrective actions should be initiated for management-approved recommendations. If corrective actions are time-consuming, then a reasonable schedule, based on prioritization of actions, should be set for implementation.

The facility should have in place a tracking system to ensure adequate follow-up. The inspector should ask to see progress, status, or milestone reports generated by the tracking system at regular intervals, which verify that recommendations were implemented in a timely manner.

A sample form for tracking/follow-up of recommended action items has been included in Appendix A. Responsibilities and target dates should be assigned for each action item, and acknowledged by the responsible person in responsible charge. Appropriate managerial action should be initiated if completion dates are not met. The tracking system should verify that all deficiencies have been adequately addressed and implemented before an action item is brought to closure.

- f. Audit documentation (audit reports and associated documentation) should be readily available for the two most recent audits covering each element of the NCPSP. These should be written with sufficient clarity and in sufficient depth to ensure that they may be retrieved 3 years hence, without loss of understanding. Audit findings and recommendations should be disseminated to all affected plant personnel, including contractors and maintenance personnel.

03.02 The A&I program should include a mechanism for continuous improvement, which leads to the establishment of a dynamic, continuously evolving A&I program.

- a. The licensee should have a mechanism in place to ensure that management-approved recommendations from the Hazard Identification and Assessment (HIA) study pertaining to self-audits/inspection procedures are incorporated into the A&I program.
- b. The licensee should have a mechanism in place to ensure that management-approved recommendations from the Incident Investigation program pertaining to self-audits/inspection procedures are incorporated into the A&I program.
- c. The licensee should have a mechanism in place to identify deficiencies in the audit/inspection program and initiate revisions or updates to address the deficiencies identified.

88066-04 RESOURCE ESTIMATE

An inspection performed using this inspection procedure is estimated to require 8 hours of inspector resources. This estimate is only for the direct inspection effort and does not include preparation for and documentation of the inspection.

88066-05 REFERENCES

Center for Chemical Process Safety, *Guidelines for the Technical Management of Chemical Process Safety*, American Institute of Chemical Engineers, New York, 1989, Chapter 11 pp. 113 - 122.

OSHA, *Process Safety Management of Highly Hazardous Chemicals*, 29 CFR 1910.119 (o), "Compliance Audits."

Chemical Manufacturers Association, *Process Safety Code of Management Practices*, Washington, 1990, Practice 3.

END

Appendix

A. SAMPLE OF RECOMMENDATION TRACKING SYSTEM

