INSPECTION ADMINISTRATIVE PROCEDURE

A-111

PRICE-ANDERSON AMENDMENTS ACT (PAAA) REVIEW AND CLOSURE OF NTS REPORT PACKAGES

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1.0 PURPOSE

This procedure provides guidance to the Office of River Protection (ORP) Environment, Safety, and Quality (ESQ) personnel who perform closure verification of PAAA-related corrective actions reported in the Noncompliance Tracking System (NTS). Closure verification of NTS-reported corrective actions is the responsibility of ORP ESQ.

2.0 POLICY

The goal of the U.S. Department of Energy's (DOE) enforcement policy is to enhance and protect the radiological health and safety of the public and workers at DOE facilities through a process that encourages timely identification, open and prompt reporting, and comprehensive correction of noncompliance conditions. The cornerstone of DOE's enforcement policy is voluntary compliance through Contractor initiatives to effectively understand and implement nuclear safety requirements, critically self-assess activities, and promptly identify, report, and correct noncompliance conditions.

DOE's Office of Price Anderson Enforcement (OE), in conjunction with appropriate DOE field elements, will review noncompliances reported to the NTS. When appropriate, OE staff will make an entry to an NTS report to indicate the report has been reviewed and is being closed without any further enforcement action.

This inspection activity provides the basis for the ORP PAAA Coordinator recommending closure to the OE for events/issues on NTS.

3.0 GENERAL REQUIREMENTS

3.1 Selection of Evaluator

The PAAA Coordinator should perform the following activities:

- Select a PAAA Evaluator to receive, review, and evaluate corrective action plans (CAPs) for NTS reportable closure packages

- Provide the PAAA Evaluator with the information necessary to perform the review.

3.2 Receipt and Review of CAP

The PAAA Evaluator should perform the following activities:

- Receive the closure package with objective evidence from the PAAA Coordinator

- Review the NTS report to become familiar with the reported condition and corrective actions [Note: Exhibit A, NTS Report Review Guidance, may be used to assist in the review.]

- Review any Contractor meeting notes associated with the occurrence or NTS report

- Review the NTS report against the associated occurrence report to verify consistency between the occurrence report and the NTS report

- Verify the occurrence report has been closed and there are no open issues [Note: This can be done through discussions with the facility representative.]

- Verify the NTS was correctly reported by concurring:

  1. It violated one of the following Nuclear Safety Rules:

     - 10 CFR Part 820, Procedural Rules for DOE Nuclear Activities
     - 10 CFR Part 830, Nuclear Safety Management
     - 10 CFR Part 835, Occupational Radiation Protection
     - 10 CFR Part 708, Contractor Employee Protection

  AND

  2. It violated one of the following reporting criteria:

     - <u>It was repetitive or recurring</u> (i.e., the same non-NTS reportable noncompliance or a closely similar noncompliance continues to occur, indicating the corrective action, including root cause determination, has not been effective)

     - <u>It was a programmatic breakdown</u> (i.e., several non-NTS reportable noncompliances have occurred that are related but not identical, indicating a common breakdown in a program or program area)

     - <u>It was an intentional violation or misrepresentation</u> (i.e., most intentional violations involve the failure to perform substantive activities required by nuclear safety requirements coupled with the alteration, concealment, or destruction of documents pertaining to those activities).

- Verifies self-identification and reporting was timely (i.e., within 20 days after occurrence or deficiency report)

- Confirms the existing process meets the commitments in the NTS database

3.3 Verification of Objective Evidence

The PAAA Evaluator should perform the following activities:

- Review the Root Cause Analysis (RCA) to determine if it is reasonable, complete, and thorough in identifying the cause of the problem (see Exhibit B, Definitions of Root Cause Techniques)

- Review the Corrective Action Plan (CAP) to verify it addresses each of the causes, and determines whether the corrective actions identified will eliminate the problem and prevent recurrence

- Verify the corrective action were completed in a timely manner (i.e., within 45 days from reporting of the noncompliance), and the occurrence report has been closed

- Verify the corrective actions were completed by one or more of the following methods:

  - Review the NTS closure package (if provided) to assure sufficient objective evidence (i.e., documentation) exists to demonstrate corrective actions have been completed (see Exhibit C, Examples of Objective Evidence)

  - Locate within the Contractor's records system the necessary objective evidence to verify there is documentation the corrective actions were completed

  - Observe sufficient in-process work activities to ensure the corrective actions were performed and documented.

- If considerable time has passed between the completion of the corrective actions and the closure of the NTS report, the PAAA Evaluator will:

  - Ensure the corrective action commitments are still in place

  - Ensure existing processes or activities still address the corrective action and improvements

  - Confirm the existing process continues to meet the commitments in the NTS report.

- If sufficient objective evidence is not provided by the Contractor, the PAAA Evaluator may do one of the following:

  - Request the Contractor to set up a meeting to discuss the PAAA Evaluator's concerns

- Discuss NTS condition with ORP staff familiar with the NTS reported condition (e.g., facility representatives)

- Provide the Contractor with comments on Review Comment Record (RCR) forms and request the Contractor to provide additional information to address the comments on the original corrective action commitment. [Note: If there are no comments, an RCR is not required.]

- Coordinates with the Contractor, if necessary, to obtain additional objective evidence required for closure.

3.4 Documentation of Review

When the PAAA Evaluator is satisfied the corrective actions are complete and suitable objective evidence of that fact exists, the PAAA Evaluator should perform the following activities:

- Notify the PAAA Coordinator by e-mail that the review is complete, and recommends approval and closure of the NTS closure package

- Ensure the e-mail contains any comments or conditions associated with the corrective action the PAAA Coordinator needs to understand about the objective evidence. [Note: For example, if the objective evidence was weak or unacceptable but the process in question has evolved through normal process improvement activities to a point that the process currently in place is better than what was committed to in the corrective actions, there would be no point in requiring the Contractor to do additional work in providing better objective evidence.]

- Return the NTS closure package to the PAAA Coordinator.

3.5 Closure

The PAAA Coordinator closes the NTS report within the NTS database.

Attachments:

Exhibit A: NTS Report Review Guidance
Exhibit B: Definitions of Root Cause Techniques
Exhibit C: Examples of Objective Evidence

Exhibit A

NTS REPORT REVIEW GUIDANCE

NTS Report Section	Review Guidance
Description of Problem	The description should provide a clear understanding of the issue and the potential effects it can have on safety, health, and the environment. The description should include the boundary or limitations of the problem and identification of noncompliance with any national codes and standards, internal program standards, or DOE Orders.
Event Summary (support to the Events and Causal Factors Chart)	The report should provide a timeline of the events and conditions, which led to the problem. A simple flowchart may provide assistance in this explanation. Include the dates for the major actions and conditions that led to the problem. Some problems may require the time to be placed on the timeline to better understand the conditions surrounding the event. The event line should display how the problem was discovered and what organization discovered the problem (i.e., Did the Contractor or ORP discover the problem during normal operations, audit, etc., or did an outside organization such as DOE-HQ or DNFSB discover the problem during a visit or audit?).
Problem Analysis	The report should include a statement of how the failed process or barrier is intended to function, and a statement of the impact of the noncompliance on internal and external codes and standards.
Extent of Condition	The report should provide an explanation of the extent of the condition (i.e., where else the problem might occur and do the same or similar symptoms exist?).
Safety Significance	The report should provide a description supporting the basis for the problems classification (e.g., significant condition). It should consider actual and potential safety consequences and impact, and address environmental and health in addition to nuclear safety.
Generic Implications	The report should explain the implication the event or condition, or correction of the event or condition has had or may have on other events, conditions, or systems, including consequences and programmatic impact.
Lessons Learned	The report should include any lessons that could be of importance to other organizations or that should be addressed in personnel training or procedures.

NTS Report Section	Review Guidance
Immediate Corrective Actions Taken	The report should state the immediate corrective actions taken at the time of discovery, the status of the actions, and effectiveness of the actions in mitigating the problem. The report should reference or contain objective evidence if the evidence provides any additional information or credibility.
Compensatory Measures	The report should state the compensatory measures put into place until corrective actions can be taken and it should provide objective evidence for each compensatory measure implemented, as applicable (e.g., management directive, temporary standard operating procedure).
Remedial Corrective Actions	The report should list the remedial corrective actions necessary to restore the condition and address the direct causes. These actions can usually be implemented independent of the root cause.
Causal Statement	The report should state the causal factors, and provide a summary of the root cause (RC), direct cause (DC), and contributing causes (CC). [Note: RC = The most basic reason for the event. Correction of this cause will preclude recurrence of this and similar conditions. DC = Other causes that are not the most basic that led to the event. Correction of any of these causes would have prevented the event. CC = The causes that if corrected would not have prevented the event but affected the severity of the event.] The report should provide objective evidence of how the causal factors were arrived at. The following types of objective evidence are acceptable: • Change Analysis Diagram • Barrier Analysis Diagram • Events and Causal Factors Diagram • Tree Diagram (including explanation of tree nodes) • Management Oversight and Risk Tree Analysis • Failure Modes and Effects Analysis Diagram.
Conclusions	The report should state any conclusions made from performance of this analysis.
Actions to Prevent Recurrence (ATPR)	The report should state the corrective actions designed to preclude recurrence of the adverse or similar condition or event. It should state how the actions address the root cause(s), will prevent recurrence, and will not create another undesirable condition. The report may include how the ATPRs are a cost-effective alternative and are within the capability of management to implement in a reasonable timeframe. The report should include the required objective evidence. The report should include a causal reconciliation matrix to display how corrective actions and actions to prevent recurrence address contributing and root causes.

Exhibit B

DEFINITIONS OF ROOT CAUSE TECHNIQUES

Root Cause Technique	Definition
Change Analysis (CA)	CA is an analytical technique that applies a systematic approach to problem solving by examining the effects of change. It may be performed in a reactive mode by analyzing unwanted events or problems, or in a proactive mode by identifying the potential effects of changes before they actually are implemented. CA is particularly useful for the following: • Trouble shooting • Finding obscure causes • Analysis of "keystone kop" type activity • Quick entry into problem solving.
Barrier Analysis (BA)	BA deals with the adequacy of safeguards or barriers designed to prevent problems and unwanted events or occurrences. It looks at potential sources of problems or hazards as well as how the harm or damage occurred. BA also examines any possible interaction(s) and determines the root cause of the problem or unwanted event by assessing the adequacy of any installed barriers or safeguards that should have prevented, or at least mitigated, its occurrence. The following four elements are considered in a BA of an event or problem: 1. The threat that does the harm 2. The people or thing (target) that is harmed 3. The barrier(s) that could have or should have prevented the threat from reaching the target 4. The path or trace by which the threat reached the target.
Events and Causal Factors Analysis (ECFA)	ECFA examines events and conditions (and how these conditions influenced the events) by constructing and then examining the chronology or sequence of events and related conditions. The analysis is based on the premise that accidents, incidents or problems can be studied as the outcome or result of one or more successive events. Each of the events in the series being considered may be influenced by conditions, termed *causal factors*. These conditions or causal factors may be directly contributory, causal, or systemic in terms of the events being analyzed. ECFA can be defined as a series of the following seven steps: 1. Collecting and arranging the events chronologically. 2. Defining the event of interest. 3. Selecting the scope of analysis. 4. Examining the event sequence for problems. 5. Defining and relating contributing conditions to each event. 6. Continuing to define causal factors and root level or systemic causes. 7. Determining the root cause.

Exhibit C

EXAMPLES OF OBJECTIVE EVIDENCE

Training

When corrective actions require training, the Contractor's Corrective Action Plan should be specific as to what the training will accomplish, which employees will receive the training, and how the training will be provided. Closure documentation to verify training should consider the following:

- A list of the specific individuals targeted to be trained;
- Training material, including course outline or course objectives;
- Documentation that allows verification the training committed to was actually performed;
- Attendance rosters to allow verification all targeted individuals received the training.

Roll-up or Trends of Repetitive or Recurring Noncompliance

On occasion, the Contractor will "roll-up" or combine several noncompliance instances to address a situation where a noncompliance or closely similar noncompliances continue to occur. These would indicate the corrective actions, including the root cause determination, have not been effective. Another trend or roll-up possibility would be several related noncompliances that are not identical, but could be an indication of a programmatic weakness.

Roll-ups or trends should not address the problem at the same level as the individual noncompliances. Corrective actions of the individual recurrences should be addressed by the latest individual noncompliance report. The roll-up should focus on the "bigger picture," and address the reasons for the recurrence. This means focusing on issues such as programmatic breakdowns, management deficiencies, or conduct of operations deficiencies.

For example, a problem with a motor continually burning out prior to its scheduled maintenance cycle might require a design change requiring a new, more powerful motor. If this were a recurring problem and was not properly fixed, the cause of the recurrence could be a lack of management attention, or a process deficiency that failed to engage the proper resources to correct the problem.

It would be inappropriate for the rolled up corrective action to be the same as the corrective action for each individual noncompliance. Nor would it be appropriate for the root cause to be determined by rolling together the root causes of each individual noncompliance.