

NRC INSPECTION MANUAL

NMSS

draft 11/4/05

INSPECTION PROCEDURE 880AA

EVENT FOLLOWUP

PROGRAM APPLICABILITY: 2600

880AA-01 INSPECTION OBJECTIVE

- 01.01 Evaluate licensee events and degraded conditions to provide input in determining the need for an Incident Investigation Team (IIT), Augmented Inspection Team (AIT), Special Inspection (SI), or other reactive inspection.
- 01.02 Review written and telephonic licensee event reports (LERs).

71153-02 INSPECTION REQUIREMENTS

- 02.01 Event Follow Up This procedure is for initial followup to events to make initial decisions on the safety significance of an event to determine the NRC response. If an inspector is on site, work with regional management to determine the following by observation and discussions. If there is no inspector on site, determine the following through discussions with licensee or certificate holder representatives. For information gathering related to security, material control and accountability (MC&A), or nuclear criticality safety (NCS) issues, involve appropriate staff from those organizations in communications with licensee or certificate holder representatives.
 - a. Observe plant parameters and status, including IROFS and other relevant safety control availability. Determine alarms/conditions preceding or indicating the event.
 - b. Determine the initial risk-significance of the event considering the information in the ISA Summary, if any, and the level of safety controls or IROFS lost or degraded and remaining.
 - c. Determine whether controls remaining were sufficient to assure that the performance requirements of 10 CFR 70.61 continued to be met.
 - d. Evaluate performance of mitigating systems and licensee actions.

- e. Determine whether the licensee or certificate holder properly classified the event in accordance with emergency plan implementing procedures and made timely notifications to NRC and state/county governments, as required (10 CFR Parts 20, 26, 40.60, 70.50, 70.52, Part 70, Appendix A, 76.120, license or certificate requirements).
- f. Communicate details regarding the event to management, others in the Region and Headquarters, as input to their determining the need for an IIT, AIT, SI, or other reactive inspection.
- g. Document the results of the review on the Form attached as Appendix B.
- h. For events that do not result in an immediate inspection, provide a paragraph to the project or resident inspector concerning the inspector's review of the event to be included in the inspection report documenting the on site review of the event.

02.02 Event Report Review

Review Licensee Event Reports (LERs) and related documents regarding the accuracy of the LER (e.g., based on independent NRC observations), appropriateness of corrective actions, violations of requirements, and generic issues.

71153-03 INSPECTION GUIDANCE

General

This procedure applies to the various fuel cycle events reportable per NRC regulations. This procedure also applies to events that are reported to the NRC Operations Center that are subsequently retracted. Such events include (but are not limited to) criticality safety events reportable under [Bulletin 91-01](#) and [supplements](#) thereto, and the various types of events reportable under 10 CFR Sections 40.60 (source material), [70.50](#) (mainly radiological events), [70.52](#) (criticality and safeguards events); [71.95](#) (transportation events), [73.71](#) (safeguards events), 76.120 (GDP) and [20.2201](#), [20.2202](#), and [20.2203](#) (radiological and environmental events). It should be noted that those events requiring immediate notification would likely result in activation of the NRC Incident Response Plan. In those cases, this procedure would not apply. It should also be noted that responses to transportation accidents addressed by MC 1330 are not considered events covered by this procedure. This procedure does not apply to events outside of NRC jurisdiction. For example, chemical events that do not impact or are not directly related to licensed material activities do not apply to this procedure. OSHA events that do not effect the safety of licensed material do no apply either.

Management Directive (MD) 8.3, "NRC Incident Investigation Program", defines a significant operational event as a radiological, safeguards, or other safety-related operational event at an NRC-licensed facility that poses an actual or potential hazard to public health and safety, property, or the environment. At fuel cycle facilities, these events include significant unplanned degraded conditions identified by the licensee or NRC.

Upon receipt of licensee notifications (required or courtesy), on-site inspectors provide details regarding plant status and performance of equipment and operators to regional and headquarters staff and management. The details are used to determine the level of investigatory response if any, i.e., IIT, AIT, or SI.

Appendix A provides guidance for limiting NRC's impact on licensees during an event.

Time expended on the below tasks should be charged to the **TAC code for Event Evaluation - V24493**:

- Reviewing Daily Event Reports issued by HQ Operations Center
- Calling licensee to followup on an event
- Initial evaluation of the event
- Preparing PNs or MRs
- Briefing Regional/HQ Management about the event
- Responding to questions concerning NMED entries
- Responding to questions from NMSS about an event
- Arranging for a medical consultant

IPE Codes BD2, RESP TO EVENT/ICDT (NMSS); APR, REACTIVE PREP/DOC; RR, REACTIVE PROGRAM, and ER, EVENT RESPONSE, **SHOULD NOT** be used to record time spent on any of the tasks listed above.

Specific Guidance

03.01 Event Follow Up

- a. No specific guidance.
- b. Fuel facilities generally do not represent a significant risk to the public. However, some risk to the public is possible when materials reach offsite locations. Events that would most likely pose some risk to the public include theft of SNM (safeguards events), certain transportation events and radiological events due to a large fire or explosion not contained by facility structures and systems.

Significant risks mostly impact workers at the fuel facilities rather than the public. Credible events that can cause serious injury or death to the most workers are considered the most risk significant. Such events (in order of highest risk) would include large fires or explosions, large toxic chemical releases, and criticality accidents. Further discussion of risk significance at fuel facilities is presented in Appendix C.

- b-d. Use ISA Summary, Safety Analysis Report, or license application to determine the potential consequences and remaining controls.

Manual Chapter 1301 and Regional Office Instruction 1501 indicate that events that do not require activation of the NRC Incident Response Plan are to be evaluated for determination of safety significance in order to determine further NRC actions. A quick review of certain events are needed in order to determine if an immediate NRC response is necessary. Events that are reportable in writing within 30 days do not need to be reviewed for immediate NRC response, but an evaluation may be needed so that appropriate disposition of the event by the licensee can be confirmed and documented in a future inspection. The following steps describe the specific actions to be taken by staff.

1. Events Required to be Reported Immediately or in One Hour

- (a) Ensure that events required to be reported have been properly reported to the Headquarters Operations Center (HOO).
- (b) Screen events upon receipt to determine the potential need for immediate NRC action and who has lead responsibility.
 - i. Actual Safety Significance - Conduct an informal, qualitative analysis of as-found conditions. The analysis should consider the resulting consequences of the event, and should not give credit to any fortuitous mitigation of the event due to items not identified as controls;
 - ii. Potential Safety Significance - Determine the potential safety significance of the event by considering credible failures of structures, systems, equipment, and controls that could occur concurrently with the actual event. Such potential scenarios should be discussed based on the likelihood and associated consequences of concurrent failures; and
 - iii. Regulatory Significance - Determine the potential regulatory significance of the event by comparing the event circumstances with examples in the current [NRC Enforcement Policy](#). State the appropriate apparent severity level for any violation that may be associated with the event. If this results in a potential escalated enforcement issue, it should be identified to the licensee during the event follow-up inspection.

The need for medical consultants, assistance from other Federal or State agencies, and/or a special NRC inspection team are to be considered.

- (c) Issue a Preliminary Notification (PN) and/or Morning Report (MR), as appropriate.
- (d) Complete documentation as outlined below.

2. Events Required to be Reported within 24 hours.

- (a) Ensure that events required to be reported within 24 hours or less have been properly reported to the Headquarters Operations Center (HOO).
- (b) Screen events upon receipt to determine the potential need for immediate NRC action and who has lead responsibility. The need for medical consultants, assistance from other Federal or State agencies, and/or a special NRC inspection team are to be considered.
- (c) Issue a Preliminary Notification (PN) and/or Morning Report (MR), as appropriate.

- (d) For events that have been determined initially not to be of high safety, safeguards, or regulatory significance, within five working days of the event notification, complete a preliminary evaluation of the event. The evaluation should include the following information when available:
- i. Background/Causes/Precursors - Include a brief description of the process involved and any pertinent process history, an event summary that includes the event sequence, and any precursor and background information of process conditions leading to the event;
 - ii. Actual Safety Significance - Conduct an informal, qualitative analysis of as-found conditions. The analysis should consider the resulting consequences of the event, and should not give credit to any fortuitous mitigation of the event due to items not identified as controls;
 - iii. Potential Safety Significance - Determine the potential safety significance of the event by considering credible failures of structures, systems, equipment, and controls that could occur concurrently with the actual event. Such potential scenarios should be discussed based on the likelihood and associated consequences of concurrent failures;
 - iv. Regulatory Significance - Determine the potential regulatory significance of the event by comparing the event circumstances with examples in the current [NRC Enforcement Policy](#). State the appropriate apparent severity level for any violation that may be associated with the event. If this results in a potential escalated enforcement issue, it should be identified to the licensee during the event follow-up inspection;
 - v. Licensee's Actions - Review the adequacy of the licensee's response to the event, including characterization of the event, and immediate and proposed long term corrective actions. Verify that the licensee reported the event in accordance with applicable regulations and license conditions;
 - vi. Document NRC Decisions and Actions - Record any decisions or actions taken as a result of the preliminary evaluation of the event; and
 - vii. Document Issues for Inspection Follow-up - Document items to be investigated at the next inspection pertaining to the event (causes, precursors, corrective actions, etc.). Include these event follow-up items in the Inspection Plan.
- (e) Complete an entry into the Region II Plant Issues Matrix (PIM) to document the event for future inspection follow-up. Use verbiage from the preliminary evaluation to provide details of the event to the PIM comments section;

- (f) Re-evaluate the event (and update the PIM entry) when significant new information is acquired that could change the conclusions reached in the preliminary evaluation;
 - (g) Upon issuance of an inspection report documenting and closing the event, the inspector is to complete a closeout evaluation (using the preliminary evaluation as a basis) that references the appropriate inspection report number and any additional findings or conclusions. The closeout evaluation should contain only new information and should be added to the existing preliminary and follow-up evaluations. Once the closeout report is complete, it should be input into ADAMS as the same document (overwriting the previous file).
- e. No specific guidance.
- f. MD 8.3 provides criteria which are applicable to fuel cycle facilities. Inspectors provide details which help determine whether the event meets the criteria. An IIT or AIT is considered for certain events or degraded conditions meeting deterministic criteria, e.g., exceed a safety limit of the licensee application, site area emergency, significant radiological release, significant occupational or public exposure, and safeguards concerns.

Other deterministic criteria related to events or degraded conditions are risk-informed, e.g., loss of a safety function or multiple failures in systems used to mitigate an event.

03.02 Event Report Review

Review verbal reports and written LERs. Final LER reviews are to be done as part of a routine on site inspection, generally by the technical specialist for the safety area involved. IMC 0610, "Materials Inspection Reports", provides guidance on documentation of LER reviews.

Because of potential errors resulting in inspection staff not receiving 30 day reports, inspectors, during operations inspections, should inquire about all 30 day reports issued since the last operations inspection.

Based on the evaluation of the 30-day events received by mail or through inspection efforts, the inspector will determine if further actions (PIM entries and follow-up/closeout evaluations) are required.

71153-04 RESOURCE ESTIMATE

Inspector effort may be minimal for events which do not meet the MD 8.3 deterministic criteria, up to 24 hours for significant operational events, and 1-8 hours for an LER.

71153-05 REFERENCES

Management Directive 8.3, "NRC Incident Investigation Program"

Inspection Procedure 93800, "Augmented Inspection Team"

Inspection Procedure 93812, "Special Inspection"

Inspection Manual Chapter 0610, "Materials Inspection Reports"

END

APPENDIX A

LIMITING NRC IMPACT DURING EVENTS

I. Inspector Conduct While in the Control Room

For plant events, inspectors must perform sufficient inspection to develop an independent assessment of plant conditions, which will be used in making decisions on NRC's responses to an event. Activities that form the basis for this assessment may include independent measurements, verifying the accuracy of information, control board walkdowns (to observe annunciators, process parameters, switch positions, and other instrumentation), or assessment of licensed operator performance during ongoing activities.

The NRC's goal is to monitor and assess with as little impact on the licensee or certificate holder as possible and at the same time ensure NRC evaluations are timely and accurate. During plant events, timely and independent inspector assessments are crucial; however, the degree of interaction with operators may be limited in light of ongoing control room activities. The inspector must use judgement in establishing a balance between obtaining necessary information and not being intrusive in licensee response activities. The appropriate balance involves numerous variables, including safety significance of the event, complexity of the event, time constraints, and available staff.

The following guidance is provided to establish consistency for inspector conduct in the control room. When the NRC activates its emergency response plan, inspectors should follow the guidance in the applicable emergency response procedure. This guidance is intended for use in situations where the NRC has not activated its emergency response plan; however an abnormal event has happened at the plant. Inspectors should note that some of the guidance, such as inspector location in the control room and not interrupting operators, apply to all emergency situations. While this guidance deals mainly with event responses, specific attributes are applicable to inspector interaction with operators during normal conditions both in and outside the control room.

- a. During the initial response to events, the assigned senior resident inspector (SRI) or the inspector acting in this capacity is in charge of all other NRC inspectors. These inspectors will take their direction from the SRI.
- b. The number of inspectors in the control room at any given time should be the minimum number needed to accomplish the agency's work. Typically there should be only one inspector in the control room during an event, unless special circumstances warrant additional inspectors. If several inspectors or other NRC personnel are in the control room during an event, the SRI or resident inspector will be in charge of them and will determine and communicate to the other inspectors and personnel what, if any, assistance is needed.
- c. Inspectors will adhere to the licensee's established administrative policies regarding entry into the restricted or "at the controls" area of the control room. For example, the inspector may need to ask the control room SRO or RO for permission to enter the restricted area. Under no circumstances should the inspector demand entry into the restricted area. If such entry is denied, the inspector should escalate the request to the

licensee's management and inform NRC management of the problem. For general access to the control room, the licensee's policy should recognize that inspector access will be unannounced. Inspectors who do not routinely enter the control room should identify themselves to the operators when they enter the control room.

- d. While observing ongoing activities in the control room, the inspector should be in a location which is out of the way of operators and does not obstruct their view of the reactor controls and instrumentation, yet the location provides the inspector with a broad view of the control room. An acceptable location outside the restricted "at the controls" area is preferable. It is recognized that short amounts of time in the restricted area may be necessary at appropriate stable time periods to verify significant parameters.
- e. Operators should not be interrupted, questioned or otherwise distracted from performing their duties while responding to an event or while performing other duties where their attention must be focused on the task at hand. Also, inspectors should not interfere, interrupt, or otherwise disturb communications between operators and communications between operators and their supervision.
- f. If an inspector identifies a significant problem or question about plant or operator safety that needs to be addressed in an urgent manner, then the inspector should discuss it quickly and quietly at a time when it will not interrupt ongoing operator actions. This discussion should be held with the shift supervisor or emergency response manager. However, it may be appropriate to interrupt the operator if the inspector feels that an operator action may endanger plant personnel or the plant. Inspectors should hold their non-urgent questions for a more appropriate time.
- g. NRC personnel communicating with off-site organizations should generally do so from outside of the control room. Communication is possible from the NRC phone in the OSC or equivalent or other phones outside the control room that have been agreed to with the licensee. It is acceptable for the inspector to make a phone call from the control room provided the licensee agrees to the use of the phone and the phone conversation will not disrupt control room activities.
- h. Because of the authoritative role of the NRC, licensees listen carefully to inspectors and may interpret statements, side remarks, or observations as directives or requirements. Consequently, open, clear, and direct communications between inspectors and licensees are particularly important during events.

II. Conference Calls With Licensees During an Ongoing Event

When initially responding to an event, the NRC is dependent upon information provided by licensees and inspectors at the plant (typically resident inspectors). This information is used for initially assessing events and making decisions about how to respond to the event. The NRC typically gets this initial information from licensees through their notification to the NRC

Operations Center or from conference calls between the NRC staff and the licensee or certificate holder. The NRC values conference calls as an efficient method of obtaining accurate and timely information. Such calls promote a mutual understanding of the facts and any concerns.

Caution is needed in scheduling and conducting conference calls when the calls are held during an ongoing event or situations where heightened licensee attention is being directed to a plant evolution. While information obtained in a conference call is extremely valuable to the NRC's overall understanding of a plant event, the overriding goal is that the call will not interfere or detract from the licensee's ability to safely operate the plant. The following guidance should be used for conducting conference calls with licenses or certificate holders during abnormal plant conditions. Examples of abnormal plant conditions would be the declaration of an Alert or the use of an emergency operating procedure (EOP).

- a. NRC management should decide whether a conference call with the licensee is needed and if conducting a conference call is appropriate at that particular time. NRC management may want to discuss with senior licensee or certificate holder management the possibility of conducting a conference call. The stability of the plant is the primary factor in deciding on a conference call. Other factors to be considered in this decision include: the current level of NRC staff understanding and information available for the event; the safety significance of the event; the complexity of the event; and the current level of licensee or certificate holder activity in mitigating the event.
- b. Generally the licensee or certificate holder should be informed of the NRC's desire to have a conference call by the senior resident inspector or resident inspector if they are available. The licensee or certificate holder must be included in deciding the most appropriate time for the call so that the call does not interfere with plant response activities. Also the licensee or certificate holder should decide which individuals from their staff will participate in the call.

When requesting the conference call, the licensee or certificate holder must be clearly informed of the NRC's desire that the conference call not interfere with their response to plant conditions and that delaying the call is a valid option for them.

- c. NRC technical staff and management with the right background should participate in the conference call to ensure proper questioning and understanding of the event and associated issues. The senior NRC manager on the call should identify his/her self and is responsible for ensuring that the conference call discussions are properly focused on important issues and that side issues are discussed at another time.
- d. If time allows, an agenda for the conference call should be developed to ensure the call remains properly focused. The licensee or certificate holder should be informed of the proposed discussion topics and planned NRC participants to allow the licensee to prepare for the call.
- e. Any follow-up actions resulting from the conference call should be summarized at the end of the call by an NRC manager to ensure the licensee clearly understands and agrees with the actions.

END

Appendix B

Fuel Facility Event Report

License No. _____ Docket No. _____ Event No. _____ NMED Event No. _____

Licensee: _____

Event Type _____

Event Date _____ Report Date _____ Inspection Report No. _____

1. REPORTING REQUIREMENT

- | | |
|---|---|
| <input type="checkbox"/> 10 CFR 20.2201 Theft or Loss | <input type="checkbox"/> 10 CFR 70.50 (SNM) |
| <input type="checkbox"/> 10 CFR 20.2202 Dose or release | <input type="checkbox"/> 10 CFR 70.52 (criticality) |
| <input type="checkbox"/> 10 CFR 20.2203 30 Day Report | <input type="checkbox"/> 10 CFR Part 70 Appendix A |
| <input type="checkbox"/> 10 CFR 40.60 (source material) | <input type="checkbox"/> 10 CFR 73.71 (safeguards) |
| <input type="checkbox"/> 10 CFR 71.95 (transportation) | <input type="checkbox"/> 10 CFR 76.120 (GDP) |
| <input type="checkbox"/> License Condition _____ | <input type="checkbox"/> 10 CFR 70.74 (IROFS) |
| <input type="checkbox"/> Other _____ | |

2. REPORT EVALUATION ☐ Preliminary ☐ Follow-up ☐ Closeout

- ☐ Description of Event Attached
- ☐ Timing of Notification: ☐ 1 hour ☐ 4 hours ☐ 24 hours ☐ 30 days
- ☐ Event reported in accordance with applicable regulations/license conditions: ☐ yes ☐ no
- ☐ Type/Quantity of RAM Involved _____
- ☐ Preliminary Occupational Dose ☐ Greater than Limit ☐ Less than Limit
- ☐ Preliminary Public Dose ☐ Greater than Limit ☐ Less than Limit
- ☐ Calculation: ☐ Adequate ☐ Not Adequate/Incomplete
- ☐ Excessive Radiation Levels or Concentrations ____ X Part 20 Concentrations
- ☐ Unrestricted Area Contamination
- ☐ Cause of Event _____
- ☐ Immediate Corrective Actions Adequate _____
- ☐ Potential Severity Level III, II, I
- ☐ Other _____

3. REGION II RESPONSE

- | | |
|--|---------------------------------------|
| <input type="checkbox"/> Discuss with Criticality Safety Team (if applicable) | Inspector/Date _____ |
| <input type="checkbox"/> Immediate Site Inspection | Inspector/Date _____ |
| <input type="checkbox"/> Special Inspection | Inspector/Date _____ |
| <input type="checkbox"/> Telephone Inquiry (with licensee) | Inspector/Date _____ |
| <input type="checkbox"/> Review at Next Routine Inspection | Inspector/Date _____ |
| <input type="checkbox"/> Preliminary Notification Number _____ | <input type="checkbox"/> Not Required |
| <input type="checkbox"/> Morning Report Number _____ | <input type="checkbox"/> Not Required |
| <input type="checkbox"/> Medical Consultant | <input type="checkbox"/> Not Required |
| <input type="checkbox"/> <u>ASSISTANCE</u> from other FEDERAL or STATE agencies requested <input type="checkbox"/> Not Required | |
| <input type="checkbox"/> Others Informed: <input type="checkbox"/> NMSS <input type="checkbox"/> STP <input type="checkbox"/> EDO Staff <input type="checkbox"/> State <input type="checkbox"/> Region ____ <input type="checkbox"/> Other _____ | |
| <input type="checkbox"/> Report Referred to _____ | |

4. SPECIAL INSTRUCTIONS OR COMMENTS

Completed By: _____ Date _____

Reviewed By _____ Date _____

Fuel Facility Event Report

Description of Event (All Preliminary Evaluations and others where needed)

Background/Causes/Precursors

Actual Safety Significance

Potential Safety Significance

Regulatory Significance

Licensee's Actions

DOCUMENT REGIONAL DECISIONS AND ACTIONS TAKEN

DOCUMENT ISSUES FOR INSPECTION FOLLOW-UP