



**State of Connecticut Department of Energy and Environmental Protection
Radioactive Materials Program**

RCP-904.3

Nuclear Material Events Database (NMED) Input

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Revision	Date	Description of Changes
1	5/30/2024	Updated Section 6.3 to remove monthly updates and replace with updates as required and replaced reference to outdated Appendix G of SA-300 with reference to 10 CFR Part 37 Appendix A in section 6.7, acronyms spelled out at first use, and section 6.2.1.1. modified to allow SRCP flexibility to ensure a log is kept up to date.

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ATTACHMENTS

None

1.0 PURPOSE

To provide guidance for the Connecticut Department of Energy and Environmental Protection (Department) Radioactive Materials Program (RMP) licensing and inspection personnel on the proper reporting requirements for incidents involving lost, stolen, misplaced, orphan or damaged sources, medical events, and other incidents involving radioactive material to the NRC via the Nuclear Material Events Database (NMED).

All Department staff members involved with the reporting of events to NMED shall use the guidance of SA-300 “Handbook on Nuclear Material Events Reporting in the Agreement States.”

2.0 SCOPE

From Interim Procedure SA-300 ‘NMED only captures reportable events and events where the reportability is currently unknown that may develop into reportable events when further information is received. Situations that cannot be tied to any reporting requirement (i.e., materials contaminated with radioactive material) are not tracked in NMED. Voluntary reporting to the Headquarters Operations Officer (HOO) is still available for non-reportable events.

Guidance on reportable events is provided on:

- (1) Reporting events requiring notification within 24 hours to the NRC Operations Center;
- (2) Providing 5 to 30-day notification and follow-up event information;
- (3) A schedule for event reporting;
- (4) Reporting formats; and
- (5) Providing event information for events meeting the abnormal occurrence (AO) criteria.

An accident or event will be considered an AO if it involves a major reduction in the degree of protection of public health or safety, security, and/or the environment. This type of incident or event would have a moderate or severe impact and could include, but need not be limited to the following: 1. moderate exposure to, or release of, radioactive material licensed by or otherwise regulated by the Department; 2. major degradation of essential safety-related equipment; or 3. major deficiencies in design, construction, or use of management controls for facilities or radioactive material licensed by or otherwise regulated by the Department.

3.0 REFERENCES

- 3.1 NRC SA-300 - Handbook on Nuclear Material Event Reporting for the Agreement States.
- 3.2 Sections 22a-148 through 22a-165(h) of Chapter 446a – Radiation and Radioactive Materials of the Connecticut General Statutes.
- 3.3 Sections 22a-153-1 to 22a-153-150, inclusive, of the Regulations of Connecticut State Agencies.

4.0 DEFINITIONS AND ABBREVIATIONS

- 4.1 AO – Abnormal Occurrence
- 4.2 CRCPD – Conference of Radiation Control Program Directors
- 4.3 EN – Event Notification
- 4.4 FBI – Federal Bureau of Investigation
- 4.5 HOO - Headquarters Operations Officer
- 4.6 LLEA – Local Law Enforcement Agency
- 4.7 NERHC - New England Radiological Health Compact
- 4.8 NMED – Nuclear Material Events Database
- 4.9 NRC – Nuclear Regulatory Commission
- 4.10 SUNSI - Sensitive Unclassified Non-Safeguards Information

5.0 GENERAL

5.1. Responsibilities

5.1.1 Radiation Duty Officer

5.1.1.1. Follow the procedures contained in Section 6.0 of this procedure to report events into the Nuclear Material Events Database (NMED) within the required reporting timeframe.

5.1.1.2. If unavailable, designate a member of the Radioactive Materials Program staff to provide notice to the Nuclear Regulatory Commission in accordance with Section 6.0 of this procedure.

5.1.2 Supervising Radiation Control Physicist

Track and amend NMED entries for existing events, close events, and provide follow up information as requested by the NRC.

5.2. Records

Records shall be maintained in accordance with current Department Information Technology requirements.

5.3 Prerequisites

Reports of events shall be made to the NRC by a qualified radioactive materials inspector or license reviewer whenever possible. All qualified radioactive materials inspectors and license reviewers will have access to NMED.

6.0 PROCEDURE

6.1. Reporting Events Requiring Notification Within 24 Hours

6.1.1 The Department shall report radioactive material related events requiring notification within 24 hours to the NRC Operations Center Headquarters Operations Officer (HOO). Information should be initially reported to the HOO by telephone at (301) 816-5100. Follow-up information for the event may also be provided to the HOO by fax at (301) 816-5151 or by email at HOO.HOC@nrc.gov.

6.1.2 The NMED contractor uses the initial event notification (EN) information, which was provided to the NRC Operations Center from the Department, to establish a record in the national NMED database. The NMED contractor will reference the Department event reporting

identification number in the record. The Department event report identification number will be reflected in the “Reference” field of the NMED record and will be used to ensure any subsequent updates are correctly associated with the initial event record. In addition, each event entered into NMED is assigned a unique NMED item number.

6.2 5 to 30-Day Event Reporting

6.2.1 The Department shall report events that require reporting within 5 to 30 days to the NRC. These reports may be provided in writing by mail or electronically. NRC staff encourages Agreement States to electronically report these events using the local NMED Agreement State software or the document “Upload” program on the NMED website.

6.2.1.1 Assign Event Report Identification Number - The Department event report identification number should appear on all reports, including preliminary, initial notification reports (e.g., EN's), and any follow-up reports. The event report identification number should consist of the two-letter state agency ID (CT), two-digit year corresponding to the reporting year, and a sequentially assigned four-digit ID number. The event report identification number should be referenced by the Department for all telephone, electronic, or written notifications involving each specific event. The Supervising Radiation Control Physicist will ensure a log of event reports is kept up to date.

6.2.1.2 Basic Event Information - Appendix E of SA-300 provides a listing of the minimum event information that should be provided. When submitting an initial event report, provide as much information as known at the time the report is prepared regarding the items listed in the Appendix.

6.2.1.3 Electronic Reporting to NMED - The Department may provide an electronic NMED report to the NMED contractor by using the NMED Agreement State software, which may be downloaded from the NMED website, or by using the document “Upload” function on the NMED website.

6.2.1.4 Access to NMED - A search of the nationally collected data is available on the NMED website with several drop-down, point-and-click menus available. To obtain access to NMED, contact the NRC NMED Project manager at NMEDNRC@nrc.gov.

6.2.1.5 Written Event Reports - Written event reports should be sent to the Branch Chief, Radioactive Materials Safety Branch at the address listed in Appendix C of SA-300. Reports should be provided in an optical character recognition format. Include an event report cover page for all written event information provided to the NRC.

Department personnel should refrain from providing information that is considered confidential (e.g., personal privacy, proprietary, or security related information, including sensitive unclassified non-safeguards information (SUNSI)). If such information is required to describe the event, the Department should provide a bracketed copy of the information that deletes such information.

6.3 Reporting Follow-up Event Information

Follow-up information for NMED reports (e.g., providing additional information regarding initial event reports) should provide the results of investigation as to what, where, when, and how the event or conditions occurred. The following items should be provided when reporting follow-up information:

- Follow up reports including appropriate updates, event completion and event closeout should be provided in writing to the NRC Radioactive Materials Safety Branch Chief at the address listed in Appendix C of SA-300 or electronically to the NMED contractor via the NMED website or the Department software. A complete event report should include all investigative information obtained through closeout of the event.
- When providing follow-up event information, provide document(s), or clear reference to documents on file that the

Department used to generate the NMED event report (e.g., a licensee inspection report dated mm/dd/yyyy), if applicable and appropriate.

- Provide any follow-up event information that revises earlier information or provides additional information on a given event to ensure a complete historical record.

6.4 Radiological Emergency Response Assistance Available to the States

The Department may request radiological emergency response assistance by contacting the New England Radiological Health Compact (NERHC), the Department of Energy Radiological Assistance Program (RAP), or NRC's Operation Center. The Federal Government, upon request, has the capability to provide assistance to states in responding to radiological emergencies. Under the National Response Framework, the NRC is the coordinating agency for domestic incident management for incidents involving nuclear materials or facilities licensed by the NRC or Agreement States.

6.5 Voluntary Reporting of Lost, Stolen and Abandoned Sources

The Department may contact the NRC HOO with voluntary reports of lost, stolen, or abandoned sources that do not meet the criteria for a reportable event. See SA-300 for guidance on reportable and non-reportable lost, stolen, and abandoned sources.

6.6 Coordination with Connecticut Department of Public Health

Upon notice of a reportable medical event, the Department will coordinate to investigate with the Connecticut Department of Public Health, as required.

6.7 Reporting Theft or Terrorist Activity

The U.S. Federal Bureau of Investigation (FBI) notification should be considered if an event involves the possibility of *theft or terrorist activities*. The Department will promptly notify the NRC Operations Center (i.e., the HOO) after contacting the appropriate Local Law Enforcement Agency (LLEA) and/or the FBI in cases involving actual or attempted theft, sabotage, or diversion of radioactive material containing quantities greater than or equal to the Category 1 or 2 radioactive material

as defined in Appendix A of 10 CFR Part 37. The Department should consider notifying the FBI or LLEA in all cases of actual theft, sabotage, diversions and possible terrorism of radioactive material, regardless of the quantity of radioactive material involved. This includes intentional use of radioactive materials that could be used in an unauthorized malevolent manner that could lead to serious consequences. The Department should coordinate with the NRC, their communications with other local, Federal and State Agencies, to ensure that shared information is accurate and consistent. Based on health and safety significance the Department should also consider the issuance of a press release. If it is not clear whether an event should be categorized as a possible theft or terrorist activity, the Department should contact the NRC Headquarters Operations Center for assistance in determining if the event should be reported.

If an event involves suspicious activity involving the possibility of theft, sabotage, or diversion, or the actual or attempted theft, sabotage, or diversion of Category 1 or Category 2 radioactive material, as defined in as defined in Appendix A of 10 CFR 37, the Department shall promptly notify the NRC's Operation Center at (301) 816-5100 within 4 hours of the event notification at (301) 816-5100, after contacting the appropriate local law enforcement authority.

6.8 Closing and Completing Events

6.8.1. Events Closed in NMED

The Department should notify the NMED contractor when the event record has been officially closed (i.e., no further follow-up is planned and/or no additional information is expected). The Department should ensure that the record contains all pertinent technical information, including follow-up information before closing the record.

6.8.2 Record Complete in NMED

A “complete record” refers to an NMED record that contains a specified minimum set of information. This minimum set of information is defined in Appendix E of SA-300 and may also be found on the NMED website under “Help.” Once the minimum information is provided, the NRC/NMED contractor marks the

NMED record as “complete.” A “complete” record still remains open in NMED until the Department has indicated the record should be closed.

6.9 Agreement State Safety Reviews of Material Event Reports

6.9.1 Agreement State Review of Material Events for Safety Significance and Generic Assessment

The Department should review events occurring in Connecticut, or related to products registered or licensed in Connecticut, to identify any events that may involve generic concerns or issues or could have significant impact on public health and safety, security, and/or the environment. Events that warrant such a review include:

- Multiple occurrences of an event (e.g., medical events, overexposures, lost or stolen sources of concern), or
- A single occurrence of a significant or serious event (e.g., deaths, loss of organ function, significant release to the environment), or
- Events involving possible generic concerns or issues (e.g., equipment malfunctions, equipment failures, inadequate user procedures, software problems), or
- Consequences or causal factors not previously seen in the event assessment process.

6.9.2 Actions Agreement States May Take after Review of Significant Events

Events identified as having a significant potential risk to public health and safety, security, and/or the environment may receive additional Department or NRC management review. The Department should continue to follow-up and review material events through the closure of the event, which includes checking to see that the final report information has been entered into NMED. Based on potential risks identified as a result of event review and analyses, the Department may take actions to reduce potential risks identified as a result of issuing safety-related notifications to licensees. The Department is encouraged to share with the NRC and other states any findings, assessments, or trending studies. These can be forwarded to the NMED Project Manager for posting

on the NMED website, or distribution in the NMED newsletter and/or Agreement State Letter.

6.10 Abnormal Occurrence Guidelines and Criteria

Department staff should routinely screen events against the Abnormal Occurrence (AO) criteria as part of their routine program. Section 208 of the Energy Reorganization Act of 1974 defines an AO as an unscheduled incident or event that the NRC has determined to be significant from the standpoint of public health or safety. The Department will follow SA-300 Section 7 “Abnormal Occurrence Guidelines and Criteria” to routinely screen events against the AO criteria as part of the routine incident response. Any events identified as potential Abnormal Occurrences should be reported to the NRC in accordance with SA-300.