

Vermont Department of Health

Radioactive Materials Program

Procedure 3.4, Revision 0



Nuclear Material Events Database (NMED) Input

Prepared By: _____ **Date:** _____

Reviewed By: _____ **Date:** _____

Approved By: _____ **Date:** _____

Effective Date: _____

Revision	Date	Description of Changes
0		

Radioactive Materials Program Procedure 3.4, Revision 0

Nuclear Material Events Database (NMED) Input

Table of Contents

- 1.0 Purpose**
- 2.0 Background**
- 3.0 Reporting Events Requiring Notification Within 24 Hours**
 - 3.1 NMED Record for Events Reported within 24 Hours
 - 3.2 5 to 60-Day Event Reporting
 - 3.3 Reporting Follow-up Event Information
 - 3.4 Radiological Emergency Response Assistance Available to the States
 - 3.5 Voluntary Reporting of Lost, Stolen and Abandoned Sources
 - 3.6 Reporting Theft or Terrorist Activity
- 4.0 Closing and Completing Events**
 - 4.1 Events Closed in NMED
 - 4.2 Record Completed in NMED
- 5.0 Agreement State Safety Reviews of Material Event Reports**
 - 5.1 Agreement State Review of Material Events for Safety Significance and Generic Assessment
 - 5.2 Actions Agreement States May Take after Review of Significant Events
- 6.0 Abnormal Occurrence Guidelines and Criteria**

Nuclear Materials Event Database (NMED) Input

1.0 PURPOSE

To provide guidance for Department of Health (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 BACKGROUND

From SA-300 "At the request of the Conference of Radiation Control Program Directors (CRCPD), the Nuclear Material Events Database (NMED)...captures voluntary reports on lost and stolen events, for any type of nuclear material, as well as situations that cannot be specifically tied to a reporting requirement (such as "found" sources that were not reported as lost, materials contaminated with radioactive material, and landfill alarm trips). The reported information aids in understanding why the events occurred and in identifying actions to help ensure public and occupational safety and security, and improves the overall effectiveness of the NRC and Agreement State regulatory programs."

Guidance is provided on:

- (1) Reporting events requiring notification within 24 hours to the NRC Operations Center;
- (2) Providing 5 to 60-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 **Abnormal Occurrence (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 ~~more~~ severe impact ~~on public health or safety~~ 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.

Commented [SJ1]: Edited to better track definition of AO in SA-300 (page 15).

3.0 REPORTING EVENTS REQUIRING NOTIFICATION WITHIN 24 HOURS

The Department shall report 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.

3.1 NMED Record for Events Reported Within 24 Hours

The NMED contractor uses the initial event notification (EN) information, which was provided to the NRC Operations Center from an Agreement State 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.

Commented [SJ2]: Added from SA-300 (page 5).

3.2 5 to 60-Day Event Reporting

The Department shall report events that require reporting within 5 to 60 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.

(a) 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 (VT), 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 Radioactive Materials Program Manager will keep a log of event reports up to date.

(b) 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.

(c) 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.

(d) 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.

(e) Written Event Reports

Written event reports should be sent to the Branch Chief, RMSB at the address listed in Appendix C of SA-300. Reports should be provided in an optical character recognition (OCR) 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 sensitive (e.g., personal privacy, proprietary, or security related information (e.g., 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.

3.3 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:

- (a) On a monthly basis, follow up reports through the closeout of the event should be provided in writing to the RMSS 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.
- (b) ~~When providing~~ follow-up event information, ~~provide and the~~ 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.

Commented [SJ3]: Edited to track SA-300 (page 7)

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

3.4 Radiological Emergency Response Assistance Available to the States

The Department may request radiological emergency response assistance by contacting the 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, NRC is the coordinating agency for domestic incident management for incidents involving nuclear materials or facilities licensed by the NRC or Agreement States

3.5 Voluntary Reporting of Lost, Stolen and Abandoned Sources

~~Agreement and Non-Agreement States~~ The Department should follow the guidance provided above in section 1.2 "5 to 60-Day Reporting" to report any lost, stolen, and abandoned non-Atomic Energy Act ~~and/or~~ unlicensed material.

3.6 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 quantities of concern of radioactive material as indicated in Appendix G of SA-300. 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 ~~both~~ suspicious activity involving the possibility of theft, sabotage, or diversion, ~~and/or~~ the actual or attempted theft, sabotage, or diversion of Category 1 or Category 2 licensed 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

Commented [SJ4]: Added to track SA-300.

Formatted: Font: Italic

Commented [SJ5]: The "both" here is confusing because it makes it seem like the event must involve suspicious activity involving the *possibility* of theft as well as actual or attempted theft. Suggest deleting the word "both."

~~(301) 816-5100, after contacting the appropriate local law enforcement authority, the licensee shall notify the local law enforcement authority (LLEA) after determining that an unauthorized entry resulted in an actual or attempted theft, sabotage, or diversion. As soon as possible after initiating a response, but not at the expense of causing delay or interfering with the LLEA response to the event, the licensee shall notify the Department at (800) 439-8550 within 4 hours after the discovery.~~

~~The Department shall promptly notify the NRC's Operation Center within 4 hours of the event notification (301) 816-5100, after contacting the appropriate Local Law Enforcement Agency (LLEA) in cases involving actual or attempted theft, sabotage, or diversion of radioactive material as indicated in Appendix A of 10 CFR 37 and the reporting requirements of 10 CFR 37.57(a), (b) and (c). The licensee shall also assess any suspicious activity related to possible theft, sabotage, or diversion of radioactive materials and notify LLEA as appropriate. As soon as possible, but not later than 4 hours after notifying the LLEA, the licensee shall notify the Department at (800) 439-8550. The Department must notify the NRC no later than 4 hours after it was first notified. A written report to the Department and NRC must be made within 30 days and include sufficient information for analysis and evaluation.~~

Commented [OF6]: NRC comment 102

Commented [SJ7R6]: This section is repetitive and unclear. The focus of these paragraphs seems to be a licensee's reporting requirements under 37.57, but this document was geared towards the *Department's* procedures. In other words, this section should focus on what the Department must do—i.e., notify the NRC within 4 hours. See suggested edits to clarify.

4.0 CLOSING AND COMPLETING EVENTS

4.1 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.

4.2 **Record Completed** 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." ~~The A~~ "complete" record still remains open in NMED until the Department has indicated the record should be closed.

Commented [SJ8]: Edited to track SA-300 (page 10)

5.0 AGREEMENT STATE SAFETY REVIEWS OF MATERIAL EVENT REPORTS

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

The Department should review events occurring in Vermont, or related to products registered or licensed in Vermont, 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:

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

5.2 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. ~~Agreement States~~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, ~~states-the Department~~ may take actions to reduce potential risks identified as a result of issuing safety-related notifications to licensees. ~~States are~~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.

6.0 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 ~~identifies~~ 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 ~~Radioactive Materials Program~~ 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.

Commented [OF9]: NRC comment 103

Commented [SJ10R9]: Okay