
Handbook on Nuclear Material Event Reporting for the Agreement States

Procedure SA–300

December 17, 2024

**Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission**

Contact: Jennifer Fisher

ML24332A085

AVAILABILITY OF REFERENCE MATERIAL

NRC documents: Event Notifications, Inspection Manuals and Procedures, NUREG Series technical reports, Regulatory Guides, etc. are available at the NRC Public website under NRC Library at: <http://www.nrc.gov/reading-rm/doc-collections/>.

The Office of Nuclear Material Safety and Safeguards (NMSS) State Agreement procedures are available at: <https://www.nrc.gov/reading-rm/doc-collections/nmss-procedures/state-agreement.html>. This Handbook corresponds with NMSS Procedure SA-300, "Reporting Material Events."

This document can be obtained from the Agencywide Documents Access and Management System (ADAMS) using ADAMS Accession No. ML24332A085 at: <https://www.nrc.gov/reading-rm/adams.html>.

Paperwork Reduction Act Statement

This handbook provides voluntary guidance for implementing the mandatory collection of nuclear material event notifications that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et. seq.). The burden to the Agreement States is estimated to average 1.5 hours for events of routine significance and 3 hours for events of higher significance. These information collections were approved by the Office of Management and Budget (OMB), approval number 3150-0178. In addition, this handbook provides voluntary guidance for information collections contained in 10 CFR Parts 20, 30, 34, 35, 36, 37, 39, 40, and 70. These information collections were approved by OMB under control numbers 3150-0014, 3150-0017, 3150-0007, 3150-0010, 3150-0158, 3150-0214, 3150-0130, 3150-0020, and 3150-0009 respectively. Send comments regarding these information collections to the FOIA, Library, and Information Collections Branch (T6-A10M), U.S. Nuclear Regulatory Commission, Washington, DC 20555 0001, or by e mail to Infocollects.Resource@nrc.gov, and to the OMB reviewer at: OMB Office of Information and Regulatory Affairs (3150 0178), Attn: Desk Officer for the Nuclear Regulatory Commission, 725 17th Street, NW Washington, DC 20503.

Public Protection Notification

If a document does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

Abstract

The handbook provides instruction to the Agreement State staff responsible for reporting events involving the use of nuclear materials that occurred in their State. The handbook includes what events are required to be reported, the level of detail, and how to report. A distinction is made between reporting events to the U.S. Nuclear Regulatory Commission (NRC) Headquarters Operation Center (HOC) and to the Nuclear Material Events Database (NMED). Reporting of Agreement State nuclear material licensee events to the NRC is mandatory for purposes of compatibility.

The handbook provides context of the Events program to NRC staff and is used as a reference in the NRC HOC. The review and analysis of event information increases the effectiveness of the NRC and Agreement State regulatory programs by identifying safety- and security-significant events, and their causes. The reported information will aid in understanding why the events occurred, identify any actions necessary to prevent recurrence, improve the effectiveness of the NRC and Agreement States' regulatory programs, coordinate incident response as needed, and ensure public health and safety. The information is also used in preparation of the NRC's annual report to Congress on abnormal occurrences, and to support the United States' commitment to report to the International Atomic Energy Agency's international database of significant events.

Table of Contents

1	INTRODUCTION	1
2	BACKGROUND	1
2.1	Federal Statutes	1
2.2	Commission Policy Statements	1
2.3	Guidance Documents	2
3	REPORTING MATERIAL EVENTS	3
3.1	Timeliness	5
3.2	Reports to the HOC	5
3.3	Reports to NMED	8
4	NUCLEAR MATERIAL EVENTS DATABASE	8
4.1	NMED Record	9
4.2	Sensitive Information	9
4.3	Submission Methods	9
4.4	Retracted Events	12
4.5	Follow-up Reports	12
4.6	Complete Records in NMED	14
4.7	Closed Records in NMED	14
4.8	NMED Annual Report	14
5	JURISDICTION	16
5.1	Lost or Missing Nuclear Material	16
5.2	Common Carrier	16
5.3	Event Occurring in Other and/or Multiple Jurisdictions	17
6	REPORTING TRANSPORTATION EVENTS	17
7	REPORTING THEFT OR TERRORIST ACTIVITIES	19
8	REPORTABILITY THRESHOLD	20
8.1	Leaking Sealed Sources	20
8.2	Orphan Sources	21
8.3	Found Source	21
8.4	Landfill Radiation Monitor Alarms	21
8.5	Scrap Metal Recycling Facilities and Incinerator Facilities	22
8.6	Well Logging Source Rupture	22
8.7	Irretrievable Well Logging Source	22
8.8	Industrial Radiography	22
8.9	Fixed Gauge with Shutter Failure	23
9	GOVERNMENT COLLABORATION	24

9.1	Assistance from the NRC	24
9.2	Radiological Emergency Response Assistance Available to the States	24
9.3	Congressional Inquiries	24
10	EVENT NOTIFICATIONS	24
10.1	Evaluation of Event Notifications	24
10.2	Request for Additional Information	25
11	INTERNATIONAL NUCLEAR EVENT SCALE (INES) REPORTING	25
12	ABNORMAL OCCURRENCE (AO)	26
13	AGENCY ACTION REVIEW MEETING	26
14	ASSESSMENT OF OPERATING EXPERIENCE	26
15	REFERENCES	27
15.1	NUREG Reports	27
15.2	NRC Management Directives (MD)	27
15.3	NRC Inspection Manual Chapters (IMC)	28
15.4	Commission Policy	28
15.5	State and Tribal Communications Letters	28
15.6	State Agreements (SA) Procedures	29
15.7	NRC Regulatory Issue Summary (RIS)	29
15.8	NRC Information Notices	29
15.9	Event Notification Reports	29
15.10	Regulations	29
15.11	NRC Policy	30
15.12	FEMA Publications	30

Appendix A. NRC Reporting Requirements

Appendix B. Reporting Methods and Contact Information

Appendix C. Minimum Required Event Information

Appendix D. Glossary

1 INTRODUCTION

This handbook contains guidance for Agreement States on reporting nuclear material events that occurred in their State to the U.S. Nuclear Regulatory Commission (NRC). The objectives of this handbook are to improve technical information, standardize format, ensure consistency, and facilitate information retrieval. In addition, this handbook is useful to NRC staff as they support the Events program.

The NRC collects information on events to:

- a. Assess the events against the Abnormal Occurrence (AO) criteria and report to the U.S. Congress as required by the Energy Reorganization Act of 1974.
- b. Assess the events (except medical events) against the International Atomic Energy Agency (IAEA) International Nuclear Event Scale (INES) to participate in international reporting.
- c. Perform operating experience assessments and evaluate for generic applicability, including generic issues, to ensure that any safety significant issues are shared with the National Materials Program.

2 BACKGROUND

2.1 Federal Statutes

The Atomic Energy Act of 1954 (Public Law (P.L.) 83-703) (AEA), Section 274, "Cooperation with States," allows States to assume regulatory authority over byproduct, source and/or certain quantities of special nuclear materials. The AEA directs NRC to cooperate with the States in the formulation of standards to protect employees or the general public against hazards of radiation and to assure that State and Commission programs will be coordinated and compatible.

The Energy Reorganization Act of 1974 (P.L. 93-438) (ERA), Section 208, "Abnormal Occurrence Reports," requires the NRC to provide information on events that meet the AO criteria to Congress on an annual basis.

Under the Government Performance and Results Act Modernization Act of 2010 (P.L. 111-352), federal agencies are required to compare actual performance achieved with the performance goals established in the agency strategic plan. The NRC maintains NUREG-1614, "Strategic Plan," and NUREG-1100, "Performance Budget/Congressional Budget Justification." Event coordination is used to demonstrate the ability to ensure the safe and secure use of radioactive materials.

2.2 Commission Policy Statements

The Commission adopted the policy statement "Criteria for Guidance of States and NRC in Discontinuance of NRC Regulatory Authority and Assumption Thereof by States Through Agreement" (46 FR 7540, January 23, 1981; 48 FR 33376, July 21, 1983), which describes the specific requirements that a State must meet for the Commission to approve an Agreement. Specifically, Criterion 26, "Relations with Federal Government

and Other States,” states that “there should be an interchange of Federal and State information and assistance in connection with the issuance of regulations and licenses or authorizations, inspection of licensees, *reporting of incidents¹ and violations*, and training and education problems.” Criteria 26 uses the same language as the original Criteria 26 adopted by the Atomic Energy Commission (AEC) in 1961.² (The AEC was the predecessor to the NRC.)

The Commission first directed NRC staff to make Agreement State reporting of events to NRC an item of compatibility in SRM-SECY-97-054, Final Recommendations on Policy Statements and Implementing Procedures For: "Statement of Principles and Policy for the Agreement State Program" and "Policy Statement on Adequacy and Compatibility of Agreement State Programs," dated June 30, 1997. On May 7, 1998, NRC's Office of State Programs transmitted the All-Agreement State Letter SP-98-040, Guidance for Reporting Material Events (ML20247K598), which included the first final version of SA-300 and the Handbook. SP-98-040 also indicated that the reporting of incidents and events is now required for compatibility and would be evaluated under the Integrated Materials Performance Evaluation Program (IMPEP).

The “Agreement State Programs Policy Statement” (82 FR 48535, Oct. 18, 2017)³ also discusses the requirement for Agreement States programs to provide acceptable level of protection of public health and safety (adequacy) and ensure that its program supports an overall nationwide program in radiation protection (compatibility) by adopting program elements⁴ to ensure these goals.

2.3 Guidance Documents

Management Directive 5.9 “Adequacy and Compatibility of Program Elements for Agreement State Programs” describes the six categories (A, B, C, D, NRC, and health and safety (H&S)) for evaluating and classifying program elements. Program elements relating to reporting requirements are used as examples of compatibility category C.⁵

¹ The term "incident" means an event or condition that has the possibility of affecting public health and safety such as overexposure, damage to equipment or facility, release of radioactive material, equipment, or procedure failure, lost/stolen/abandoned radioactive material, leaking source, contamination event, transportation, loss of control, medical event, etc. If an Agreement State defines this term in a different fashion, this should be noted during the IMPEP review.

² “Criteria for Guidance of States and AEC in Discontinuance of AEC Regulatory Authority and Assumption Thereof by States Through Agreement” 26 FR 2536; March 24, 1961.

³ The “Agreement State Programs Policy Statement” consolidates and supersedes two previous policy statements "Statement of Principles and Policies for the Agreement State Program," and "Policy Statement on Adequacy and Compatibility of the Agreement State Programs," (62 FR 46517; September 3, 1997).

⁴ “Agreement State Programs Policy Statement” (82 FR 48535, 48538) Oct. 18, 2017). The policy statement defines “program element” to mean any component or function of a radiation control regulatory program, including regulations and other legally binding requirements imposed on regulated persons, which contributes to implementation of that program.”

⁵ Management Directive 5.9 “Adequacy and Compatibility of Program Elements for Agreement State Programs” (April 26, 2018) at pg. 6-7. “To be included in Compatibility Category C, an NRC program element must relate to regulatory areas that could create conflicts, duplications, gaps, or other conditions that would jeopardize an orderly pattern in the regulation of agreement material on a nationwide basis if not implemented by an Agreement State. Such Agreement State Program elements shall embody the essential objective of the corresponding NRC program element and, if not implemented, would result in an undesirable consequence.”

“A Program Element Table and Associated Compatibility Categories as Noted in SA-200”⁶ lists the compatibility designation for regulatory⁷ and non-regulatory program elements that States must adopt. The program elements related to Event and Allegation Response Procedures, Event Reporting Procedures and Wrongdoing Investigation Procedures are designated compatibility category C.⁸ The NRC program element “Event Reporting to the NRC” is designated compatibility category B.⁹ As an item of compatibility, the Agreement States must provide nuclear material event reports to the NRC.

The Agreement States report nuclear material events to the NRC in accordance with SA-300 “Reporting Material Events” (ML24332A089) and SA-300 “Handbook on Nuclear Material Event Reporting in Agreement States” (ML24332A085) or equivalent procedures. As a procedure, the SA-300 Handbook is a program element categorized as compatibility C.

The reporting of events to the NRC are evaluated during an IMPEP review under the performance indicator “Technical Quality of Incidents and Allegations Activities.” See SA-105 “Reviewing the Common Performance Indicator, Technical Quality of Incident and Allegation Actions” (ML20196L417) and MD 5.6 “Integrated Materials Performance Evaluation Program (IMPEP)” (ML19213A024) for further information on these subjects.

3 REPORTING MATERIAL EVENTS

Agreement States shall report to the NRC all events reported to them in accordance with their State regulations that are compatible to NRC’s reporting requirements. The NRC reporting requirements are provided in Title 10 of the *U.S. Code of Federal Regulations* (10 CFR) and referenced in Appendix A, “NRC Reporting Requirements.” Event reporting includes reporting to the NRC Headquarters Operation Center (HOC), licensees’ written reports, and submitting information to the Nuclear Material Events Database (NMED).

The Agreement States should consult with their Regional State Agreements Officer (RSAO) if they are unsure of how to report. A list of RSAOs is included on the NRC NMSS Office Directory at https://scp.nrc.gov/stpdirectr.html#Regional_State_Agreements_Officers.

Appendix B, “Reporting Methods and Contact Information,” contains a summary of the methods available for contacting the HOC, National Response Center, and other regulatory agencies.

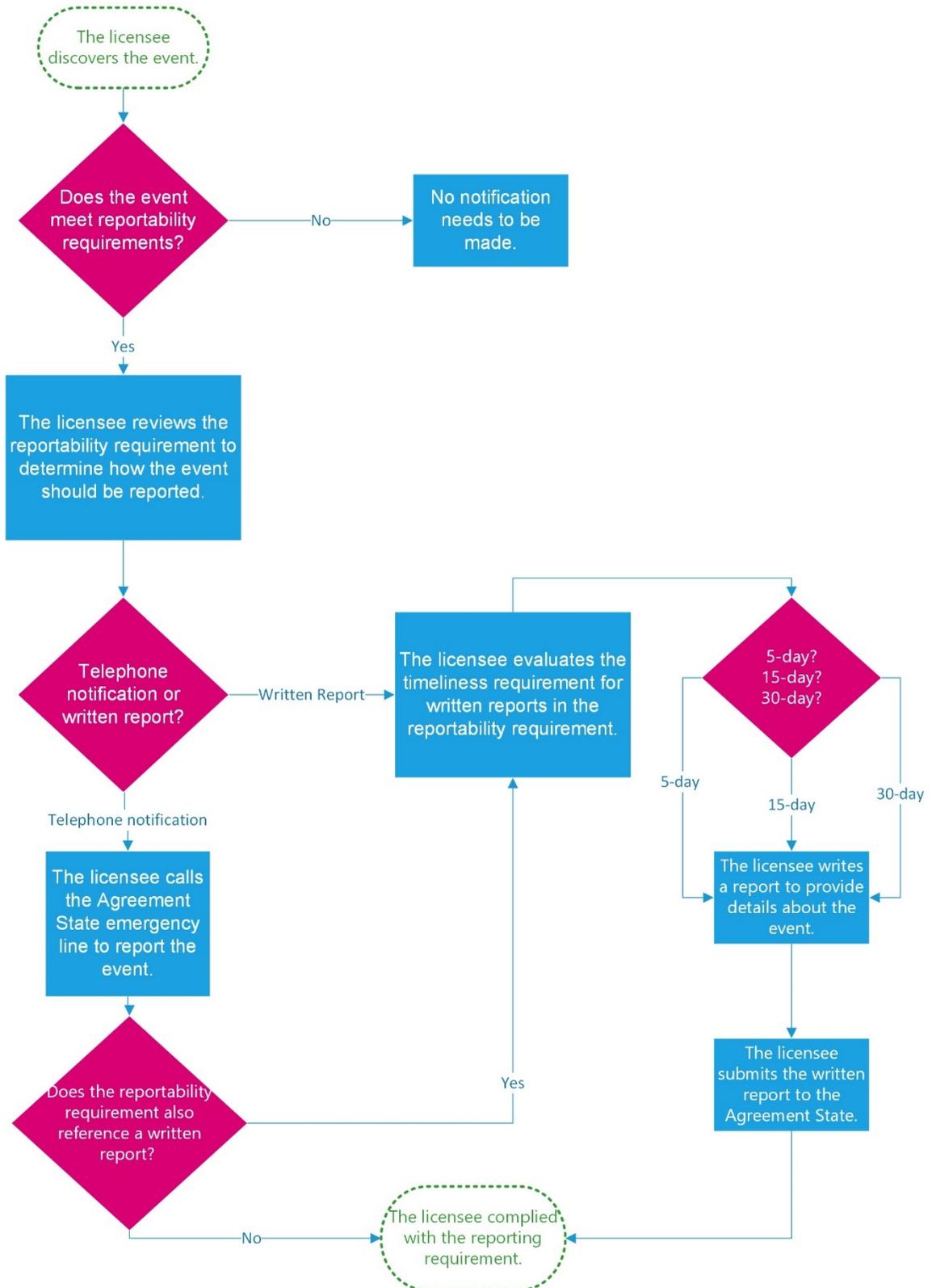
⁶ The table can be found on the Regulation Toolbox of the state communications portal Web site at: <https://scp.nrc.gov/regtoolbox.html> for both regulation and non-regulation program elements.

⁷ Id. Licensees are required to report nuclear material events in accordance with Title 10 of the *U.S. Code of Federal Regulations* (10 CFR) Parts 20, 30, 31, 34, 35, 36, 37, 39, 40, 70, and 71, specified in Appendix A below, or equivalent state regulations to their respective Agreement State regulatory agency.

⁸ Id. at pg. 5 and 6.

⁹ Id. at pg. 6. Program elements in Compatibility Category B are those that apply to activities that cross jurisdictional boundaries. These program elements have a particular impact on public health and safety and need to be adopted in an essentially identical manner in order to ensure uniformity of regulation on a nationwide basis.

Flowchart 1. The Agreement State licensee reports an event.



3.1 Timeliness

Agreement States shall report events to the NRC per the timeliness metrics established in Table 1. The timeliness requirements for Agreement State event reporting are based on compatible Agreement State regulations for licensees and can be calculated using the timeliness metrics below. In instances where the NRC reporting requirement specifies “immediate” and “as soon as possible (ASAP),” the NRC accepts Agreement State reporting within 4 hours of the receipt of the event report. Reporting the loss of Category 1 material per 10 CFR 37.81, “Reporting of events,” shall remain at one hour due to the safety-significance of these scenarios.

If the compatible Agreement State requirement specifies 24-hour notification, then the licensee shall notify the Agreement State within 24 hours, and the Agreement State shall notify the NRC within 24 hours of receiving the notification from their licensee. If the requirement specifies a 30-day written report, then the licensee should submit the written report to the Agreement State within 30 days and the Agreement State shall submit the information to the NMED contractor within 30 days of receipt. This timeliness metric is evaluated during IMPEP reviews. A summary of the timeliness requirements for the Agreement States is included in Appendix A.

Table 1. The timeliness metric for Agreement States reporting.

Licensee Reporting Based on Compatible Agreement State Regulations	Timeliness Requirement for the Agreement States to Report to the HOC or NMED
Within 1 hour	1 hour*
Immediate	4 hours
ASAP	
24 hours	24 hours
Next calendar day	24 hours
5 days	5 days
15 days	15 days
30 days	30 days

* This is specific to reporting the loss of Category 1 material per 10 CFR 37.81.

The timeliness clock for event reporting does not start if the reported event is also an allegation. The Agreement State should assess the concern first in their allegation program. The timeliness clock for event reporting begins when the validity of the allegation is established by the Agreement State.

3.2 Reports to the HOC

Agreement States shall report events to the HOC when specified in Appendix A. It is preferred that the Agreement States email the reports to the HOC; however, any of the following communication types are acceptable:

- Email: HOO.HOC@nrc.gov
- Telephone: (301) 816-5100
- Fax number: (301) 816-5151

When submitting a report to the HOC, provide as much information as is known at the

time the report is prepared. The HOC will request additional information, as needed, and will process any additional information as updates. The Agreement State does not need to perform a review for sensitive or security related information prior to reporting to the HOC as these reviews will be done by the NRC.

An Event Report Identification Number should be assigned to reports made to the HOC. The Agreement State may use its own numbering convention or reference the Event Notification (EN) Number as generated by the HOC. As an example, the Event Report Identification Number may consist of the two letter State agency ID, two-digit year corresponding to the reporting year, and a sequentially assigned four-digit ID number.

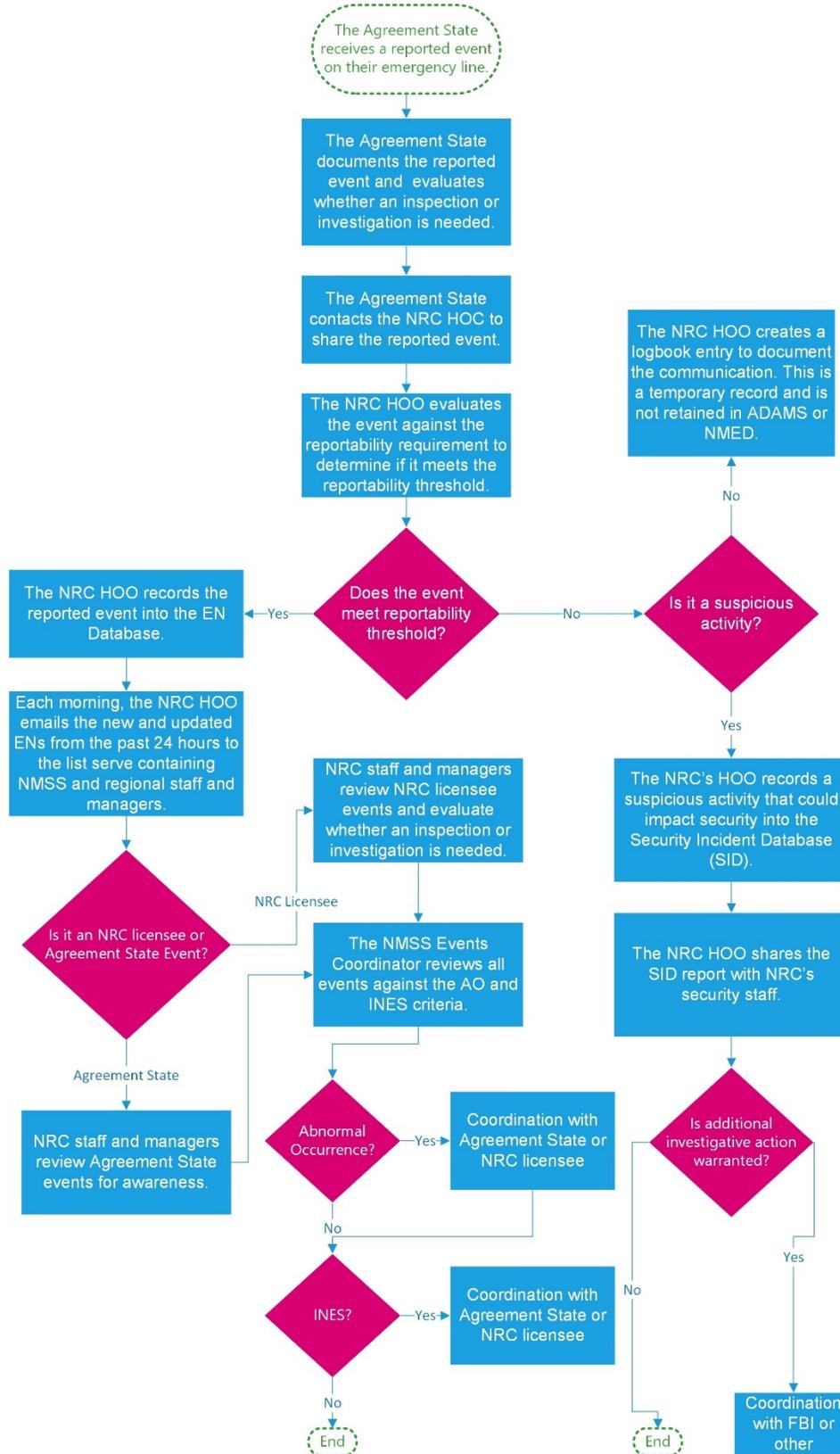
Events reported to the HOC are entered into the EN database and are shared with NRC staff. An EN number is generated for each event. ENs are added to the NRC public website (<https://www.nrc.gov/reading-rm/doc-collections/event-status/index.html>) after a 5-business day hold.¹⁰ As a result of public access to this information, Agreement States may be contacted by the public or media regarding events.

If the HOC receives information that does not meet the reportability threshold or is not within the regulatory framework of event reporting, then the Headquarters Operations Officer (HOO) shares the information within the NRC with a logbook entry. This information is not added to NMED and is not retained as an agency record.

If the HOC receives a call regarding a suspicious activity occurring at or around a licensee's facility, the HOO will generate a Security Information Database (SID) report within the protected webserver. The Office of Nuclear Security and Incident Response (NSIR) staff reviews all suspicious activity reports to determine whether additional investigative action is warranted, given the totality of circumstances captured in this report. Typically, NSIR coordinates with the FBI Weapons of Mass Destruction Coordinator responsible for the affected site / facility / geographic area, though additional engagement (e.g., DHS-sponsored fusion centers, local or state law enforcement, etc.) may occur depending on the reported incident. Agreement States are encouraged to report suspicious activities to the HOC even if it is outside of the regulatory framework of event reporting, as these types of reports help with general situational awareness and trend tracking.

¹⁰ This hold includes the day of notification. For example, a report to the HOC made on a Wednesday is released on the following Wednesday. ENs retracted during the 5-business day hold are not entered into the NRC public website. After events are published on the NRC public website, retracted events are not removed.

Flowchart 2. The Agreement State Reports Event to the NRC HOC



3.3 Reports to NMED

Agreement States shall submit information to NMED regarding events that meet the reportability threshold for written reports and to ensure that a complete record of events is maintained in NMED.

The Agreement State should ensure that their licensees submit 5-day, 15-day, and 30-day written reports as required by compatible Agreement State regulations. The Agreement State shall submit information to update the NMED record after the written reports are received. If the Agreement State licensee's investigation and/or follow-up actions are not completed within the time specified within the applicable regulations, then the Agreement State should submit information to update the NMED record to reflect the delay and the anticipated date in which the licensee plans to complete its investigation or follow-up actions. Once the Agreement State receives the licensee's information, this information should be submitted to the NMED contractor. The Agreement State should review the NMED record for completeness and whether it can be closed.

"Best Practice Concepts for Writing Medical Event Reports, Appendix E" of the FY2021 NMED Annual Report (ML22049B538), includes best practice concepts and examples of thorough medical event reports to help increase uniformity and consistency in NMED records.

4 NUCLEAR MATERIAL EVENTS DATABASE

NMED is a database that contains a historical collection of information on the occurrence, description, and resolution of events involving the use of nuclear material in the United States. The data includes information on material events that was reported to the NRC from January 1990 through the present.

Agreement State staff should email the NRC NMED Project Manager at NMEDNRC@nrc.gov to gain access. Access to NMED is only provided to the NRC, Agreement States, other federal government agencies, and/or federal government contractors who have the need to use the information in NMED. NMED is not publicly available. Agreement States may search the NMED national database of events using the web-based interface (<https://nmed.inl.gov>).¹¹ Agreement States may also choose to download the optional NMED Agreement State software.

The NMED Agreement State software is available for download from the NMED website under the Downloads tab. This optional software can be used by Agreement States to create a database of events that they regulate (this database resides on the Agreement State's computer). The software is flexible and allows the Agreement State to track all of their events, including those that are not required to be reported to the NRC (such as allegations or events involving X-ray generating devices). One feature of the NMED Agreement State software is the ability to create a transfer file for submitting event information to the NMED contractor. The transfer file contains information for events that were added or modified since the last transfer file was created. Users designate which events are included in the transfer file so that other events are not inadvertently sent to

¹¹ See the NMED Coding Manual, within the Help section of the NMED website, for a description of the methodology used to code events into the database.

the NMED contractor. The transfer file can be sent to the NMED contractor by uploading the file using the Uploads tab on the NMED website or as an email attachment. There is no requirement to use the NMED Agreement State software or to submit event information using a transfer file. See the Agreement State Software User's Guide, within the Help section of the NMED website, for more information.

4.1 NMED Record

For events reported to the HOC that meet the reportability thresholds, an NMED record is created. The NMED contractor uses the ENs posted to the NRC public website (i.e., events reported to the HOC) to establish a record in the NMED database. The EN number and the Agreement State's Event Report Identification Number are included in the "Reference" field of the NMED record. An NMED Item Number is generated for each entry.

The Agreement States should submit reports to NMED to update, complete, and/or close the NMED record. The NMED record should be comprehensive and easy to understand. Appendix C, "Minimum Required Event Information," provides a list of the minimum event information that should be included in the NMED record.

For events that are not required to be reported to the HOC, but meet the reportability threshold for a written report, the Agreement State should submit a report to NMED. In this case, the first report will initiate the NMED record. Events and updates submitted to the NMED contractor are not shared with the HOC.

4.2 Sensitive Information

Personally identifiable information (PII)¹² should not be included in reports submitted to the NMED contractor. Do not include sensitive unclassified non-safeguards information (SUNSI) – security-related information¹³ in reports to NMED. The Agreement States shall review all materials for sensitive information prior to submitting content to the NMED contractor. If sensitive information is required to describe the event, the Agreement State shall provide a copy of the document that redacts PII and/or SUNSI – security-related information with a note to describe where the unredacted version can be obtained from.

4.3 Submission Methods

Agreement States have the option of submitting information to the NMED contractor by using the upload feature on the NMED website, email, or the mail. Submitting reports electronically is the most time-efficient option.

- a. Submit the file electronically using the document "Upload" function on the NMED website;

¹² PII includes a person's name in combination with relatives' names, postal address, home electronic mail (e-mail) address, home or cellular telephone number, personal characteristics, social security number, date or place of birth, mother's maiden name, driver's license number, bank account information, credit card information, or any information that would make the individual's identity easily traceable.

¹³ NRC Regulatory Issue Summary (RIS) 2005-031 Revision 1, "Control of Security-Related Sensitive Unclassified Non-safeguards Information Handled by Individuals, Firms, and Entities Subject to NRC Regulation of the Use of Source, Byproduct, And Special Nuclear Material."

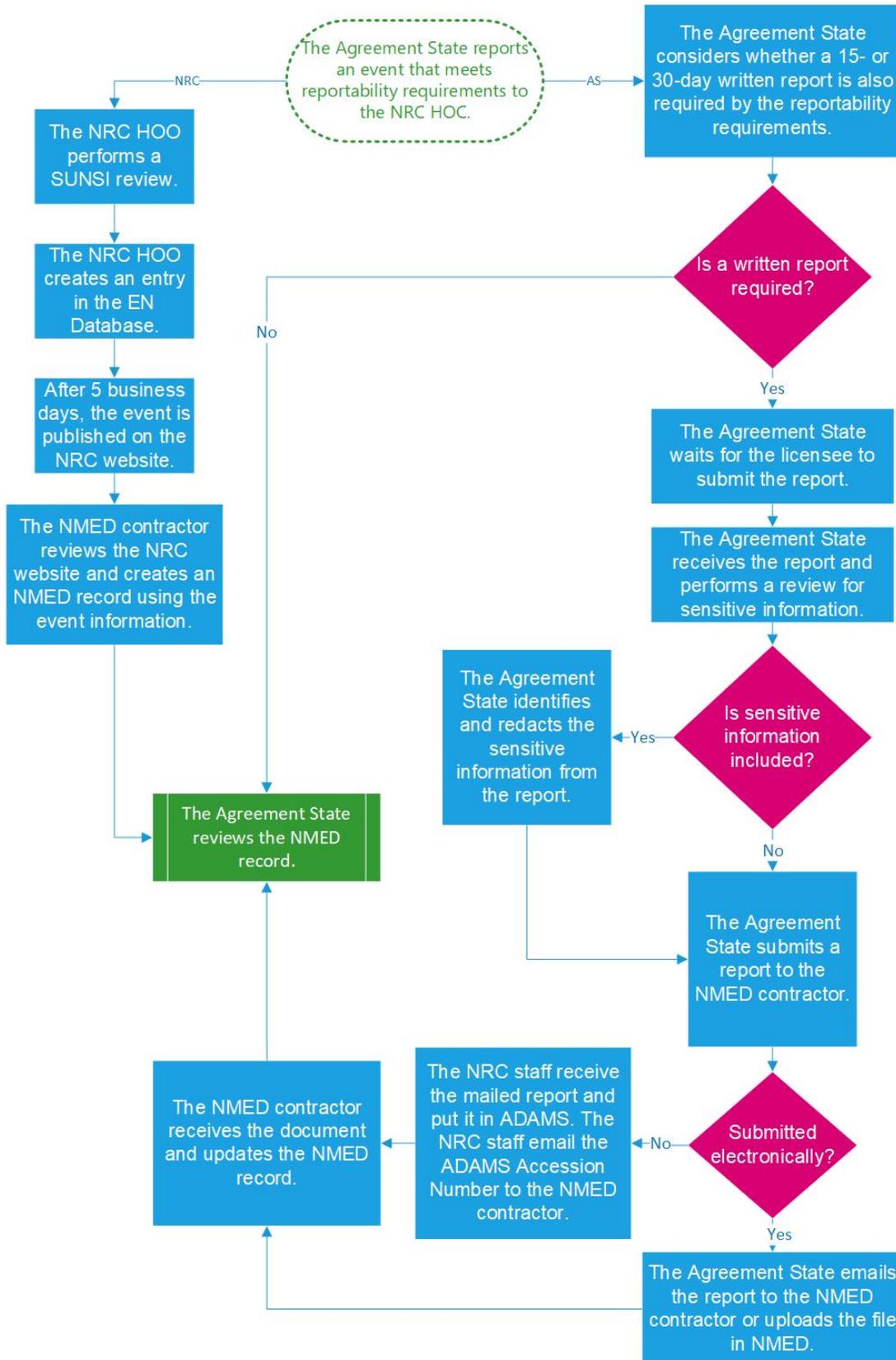
- b. Email an attached file to NMED@inl.gov; or
- c. Submit through the mail. Documents submitted through the mail shall be in an optical character recognition format and include a cover page (see Table B.5 in Appendix B).

Address the mail to:

Director
Division of Materials Safety, Security, State,
and Tribal Programs
Office of Nuclear Material Safety and
Safeguards
U.S. Nuclear Regulatory Commission
11545 Rockville Pike
Rockville, MD 20852-2738
Attention: Chief, Medical Safety & Events Assessment Branch, Mail Stop T5B60

For this option, the NRC will scan the document upon receipt and add it to ADAMS as publicly available. The NRC will provide the ADAMS Accession Number of the document to the NMED contractor.

Flowchart 3. The NMED record is created.



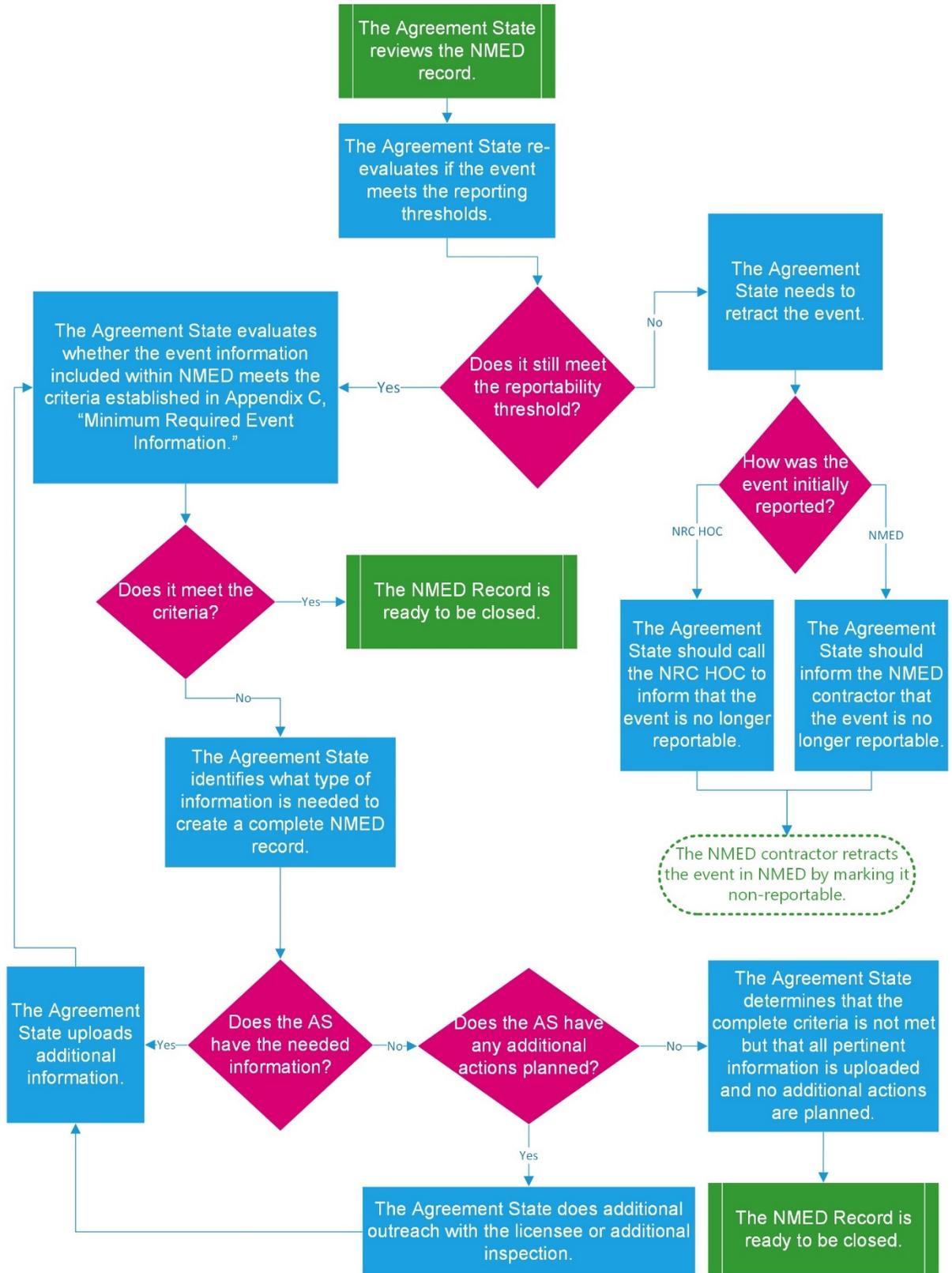
4.4 Retracted Events

The Agreement State should retract an event if the Agreement State determines that it no longer meets the threshold of the reporting requirement. The Agreement State should inform the NRC HOC, if this is how the event was initially reported. The Agreement State should contact the NMED contractor with this information if the event was initially reported directly to NMED. In both cases, the NMED contractor will then mark the event as "not reportable" in NMED, which excludes it from most searches. The NMED record will remain. The NRC will not request an Agreement State to retract an event.

4.5 Follow-up Reports

If additional information is needed to support the NMED record or information becomes available after the initial submission, the Agreement States shall submit follow-up reports to the NMED contractor. Follow-up reports should be submitted when the information becomes available. The Agreement States may upload inspection reports or other documents that contain the information needed to close the event; however, this is not required. All files are not required to be uploaded. Providing clear reference to documents within the Agreement States' record management systems (e.g., an inspection report dated mm/dd/yy) can also support the NMED record. The Agreement States may choose to submit a summary of the event in lieu of uploading inspection records.

Flowchart 4. The NMED record is updated.



4.6 Complete Records in NMED

An NMED record is complete when the event information recorded within NMED meets the minimum set of information criteria established in Appendix C, "Minimum Required Event Information." This information may also be found on the NMED website under "Help." After the NMED contractor reviews the event information and determines that the NMED record includes the minimum set of information required for a complete event, the NMED contractor marks the NMED record as complete. In certain circumstances, some NMED records are unable to ever be marked as complete.

4.7 Closed Records in NMED

An NMED record remains open in NMED until the Agreement State has indicated that the NMED record should be closed. Agreement States shall notify the NMED contractor when the NMED record can be officially closed (i.e., no further follow-up planned and/or no additional information expected). The Agreement State should ensure that the NMED record contains all available pertinent technical information, including follow-up information, before requesting the event be closed via email or by marking it closed in their event report update. An NMED record can be closed (even when it is not complete) when no further action is planned.

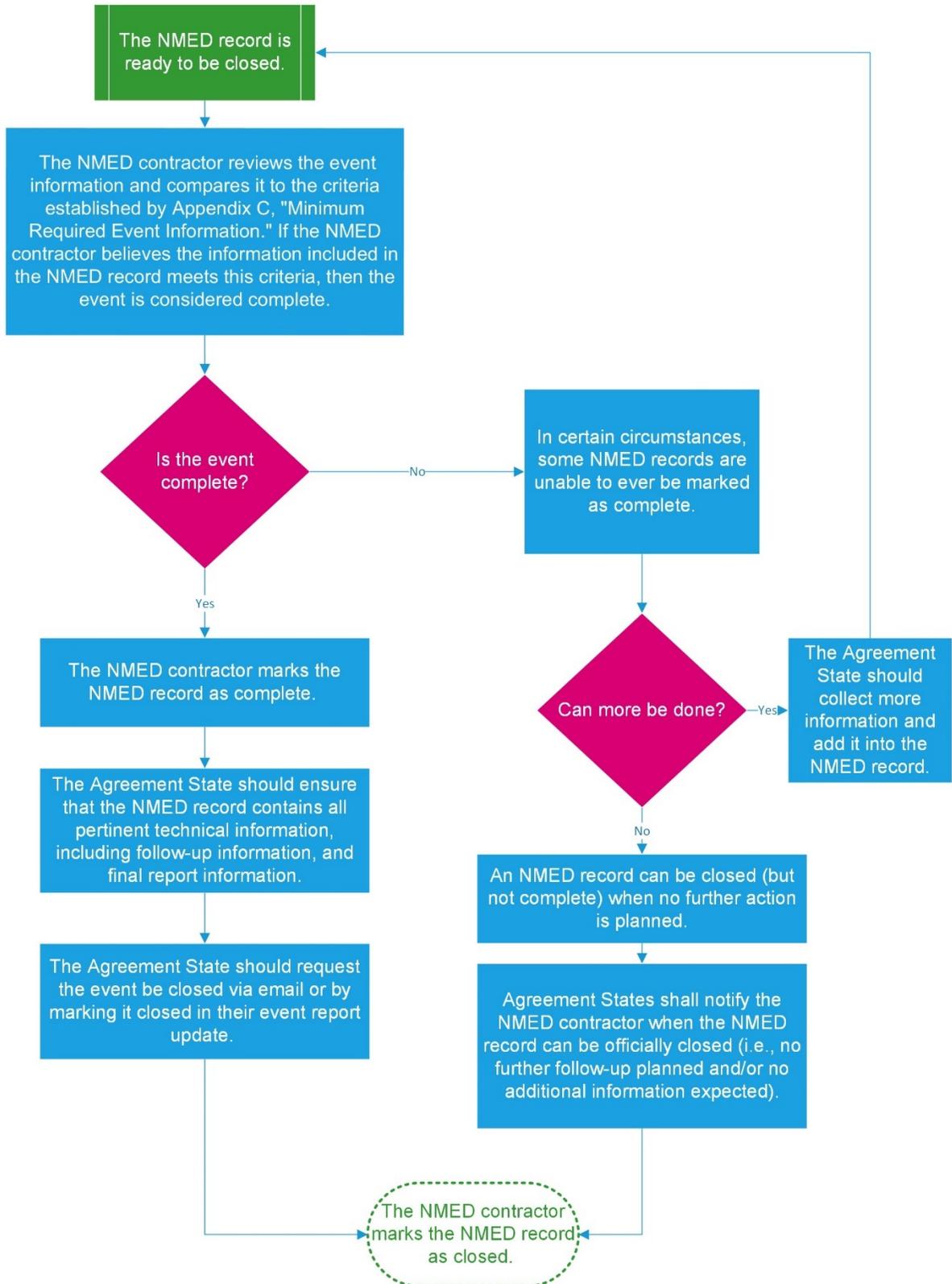
Agreement States shall follow-up and review nuclear material events through the closure of the event, which includes checking to see that the final report information was entered into NMED. Use the NMED website to search for NMED records that have or have not been closed by the regulatory agency.

An example of a requirement to report to the HOC, without an additional requirement to submit a written report, is 10 CFR 20.1906(d), "Procedures for receiving and opening packages." The Agreement State shall still update these types of events with reports to the NMED contractor to ensure that each event record is closed.

4.8 NMED Annual Report

The NMED Annual Report presents the results of the statistical analysis of event data within NMED for each fiscal year and any safety significant concerns. The NMED Annual Reports are available on the NMED website.

Flowchart 5. The NMED record is closed.



5 JURISDICTION

For events that occur at a facility licensed by an Agreement State or a temporary jobsite within that Agreement State, the licensee is required to report the event to the Agreement State. The Agreement State performs the event follow-up and investigation for events that occur within their State, except for reportable events involving a Federal Agency or those occurring in areas of exclusive federal jurisdiction within the State. After receiving the report from the licensee, the Agreement State shall report the event to the NRC. For a full discussion, see interim procedure SA-500, "Jurisdiction Determinations" (ML23228A191).

For events that occur within NRC's areas of jurisdiction, the licensee is required to report directly to the NRC.¹⁴ The NRC performs the event follow-up and investigation for these events. The Agreement State of the impacted licensee does not need to provide an additional report to the HOC.

For events occurring within the Agreement State's areas of jurisdiction, including other Agreement State or NRC licensees working under reciprocity, the Agreement State where the event occurred should report the event to the NRC. The regulatory authority where the incident or theft occurred should also coordinate with other Agreement States that are impacted.

5.1 Lost or Missing Nuclear Material

If nuclear material becomes known to be lost or missing,¹⁵ and the location of the material when it went missing is unknown, then the last confirmed location is where the event occurred. The licensee should report to the regulatory authority where the event occurred if they have a license or are working under reciprocity. For a licensee transporting nuclear material through a state where they do not have a license and are not working under reciprocity, then nuclear material lost or missing during transit should be reported to the regulatory authority that issued its license.¹⁶

Licensees are not allowed to credit decay when determining whether to report a lost or missing shipment. The quantity of the nuclear material referenced in 10 CFR 20.2201, "Reports of theft or loss of licensed material," is the amount of nuclear material that was shipped.

5.2 Common Carrier

Common carriers are subject to the U.S. DOT and are not licensed by the NRC or

¹⁴ NRC's areas of jurisdiction include areas of exclusive federal jurisdiction within an Agreement State or federal agency licensees (e.g., military bases, federal facilities, federal Tribal Reservation lands, etc.) and Agreement State licensees working under reciprocity in non-Agreement States.

¹⁵ 10 CFR 20.1003, "Definitions," defines lost or missing licensed material as "licensed material whose location is unknown. It includes material that has been shipped but has not reached its destination and whose location cannot be readily traced in the transportation system."

¹⁶ For licensees that maintain two or more licenses, the licensee should consider which license the work was conducted under.

Agreement States.¹⁷ The licensee that shipped the material is responsible for reporting to the NRC and Agreement State per compatible Agreement State regulations (e.g., 10 CFR 20.2201(a)). The licensee does not need to report nuclear material packages that are delayed in shipment, if the location of the package is readily traced within the transportation system (i.e., shipping delays do not meet the definition of lost or missing licensed material). Packages that are misplaced within a common carrier distribution facility meet the definition of lost or missing material if they cannot be readily traced within the transportation system.

5.3 Event Occurring in Other and/or Multiple Jurisdictions

When the Agreement State becomes aware of a reportable event that occurred outside of their area of jurisdiction, included material licensed by the Agreement State, and suspects that the licensee's event wasn't properly reported, then the Agreement State should communicate with their licensee. The Agreement State should ensure that the licensee is aware of the applicable reporting requirements and how to handle the situation, including whether to report to the NRC or other regulatory authority. The Agreement State should consider communicating and coordinating with the other regulatory authorities impacted. If there are multiple entities in different jurisdictions involved (e.g., shipper and receiver are in different States), this should be identified to the HOC, when reporting, to avoid confusion.

6 REPORTING TRANSPORTATION EVENTS

As required by 10 CFR 71.5, "Transportation of licensed material," which is Compatibility Category B, licensees shall comply with the applicable requirements of the U.S. Department of Transportation (DOT) regulations in 49 CFR parts 107, 171 through 180, and 390 through 397, appropriate to the mode of transport.

As more fully described in Table 2 below, 49 CFR 171.15, "Immediate notice of certain hazardous materials incidents," contains reportability requirements for transportation incidents involving hazardous material.¹⁸ The regulations are specific that "each person in physical possession of the hazardous material" (i.e., the carrier¹⁹) must provide notice by telephone or online to the National Response Center.

¹⁷ Common carriers are required to report to the National Response Center per 49 CFR, "Transportation," when necessary. Transportation of a hazardous material in commerce begins when a carrier takes physical possession of the hazardous material for the purpose of transporting it and continues until the package containing the hazardous material is delivered to the destination indicated on a shipping document, package marking, or other medium (49 CFR 171.1(c)).

¹⁸ Hazardous material is defined in [49 CFR 171.8, "Definitions and Abbreviations,"](#) as a substance or material that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and has designated as hazardous under section 5103 of Federal hazardous materials transportation law (49 U.S.C. 5103). The term includes [hazardous substances](#), hazardous wastes, marine pollutants, elevated temperature materials, materials that meet the defining criteria for hazard classes and divisions in [part 173 of this subchapter](#), and materials designated as hazardous in the Hazardous Materials Table (see [49 CFR 172.101](#)). In the Hazardous Materials Table, see items listed as radioactive material (Label Code 7, Label Name Radioactive). Also, 'Table 2 to Appendix A – Radionuclides' includes a list of hazardous substances and reportable quantities.

¹⁹ A [carrier](#) means a person who transports passengers or property in commerce by rail car, aircraft, motor vehicle, or vessel.

The Agreement State, if notified before the National Response Center, should either recommend for the carrier or licensee to notify the National Response Center or do so themselves. If the HOC is notified first, then NRC will notify the National Response Center in accordance with the NRC-DOT memorandum of understanding (44 FR 38690).

The National Response Center shares all reports involving the transportation of radioactive material to the HOC and to emergency operation centers maintained by the States. The Agreement State should not provide an additional notification to the HOC for transportation events if the event was correctly reported to the National Response Center.

49 CFR 171.15(b)(1) requires, in part, that a report be made to the National Response Center if a person is killed or receives an injury requiring admittance to a hospital, as a *direct result of the radioactive material*. This requirement is applicable during the transportation of the radioactive material as well as loading, unloading, and temporary storage. If a carrier or a passenger is killed or seriously injured in a traffic accident that is independent of the cargo and the integrity of the radioactive source or radioactive packaging is not impacted, the reportability threshold is not met and a notification to the National Response Center is not required.

49 CFR 171.15(b)(2) requires that a report be made to the National Response Center if fire, breakage, spillage, or suspected radioactive contamination occurs involving a radioactive material. If an engine fire occurred, and neither the cargo hold of the truck nor the radioactive package were impacted, then the reportability threshold was not met. If the truck was in an accident and the radioactive package was punctured, then the reportability threshold was met.

When the reporting threshold within 49 CFR 171.15 is met, the Agreement State licensee should evaluate all other reporting requirements to determine if additional reporting is necessary. If these thresholds are met, then the event may also be reportable under Part 20.

Table 2. The DOT reporting requirement for certain hazardous materials incidents.

49 CFR 171.15, Immediate Notice of Certain Hazardous Materials Incidents

(a) General. As soon as practical but no later than 12 hours after the occurrence of any incident described in [paragraph \(b\)](#) of this section, each person in physical possession of the hazardous material must provide notice by telephone to the National Response Center (NRC) on 800-424-8802 (toll free) or 202-267-2675 (toll call) or online at <http://www.nrc.uscg.mil>. Each notice must include the following information:

- (1) Name of reporter;
- (2) Name and address of person represented by reporter;
- (3) Phone number where reporter can be contacted;
- (4) Date, time, and location of incident;
- (5) The extent of injury, if any;
- (6) Class or division, proper shipping name, and quantity of hazardous materials involved, if such information is available; and
- (7) Type of incident and nature of hazardous material involvement and whether a continuing danger to life exists at the scene.

(b) Reportable incident. A telephone report is required whenever any of the following occurs during the course of transportation in commerce (including loading, unloading, and temporary storage):

(1) As a direct result of a hazardous material –

- (i) A person is killed;
- (ii) A person receives an injury requiring admittance to a hospital;
- (iii) The general public is evacuated for one hour or more;
- (iv) A major transportation artery or facility is closed or shut down for one hour or more; or
- (v) The operational flight pattern or routine of an aircraft is altered;

(2) Fire, breakage, spillage, or suspected radioactive contamination occurs involving a radioactive material (see also [§ 176.48 of this subchapter](#));

(3) Fire, breakage, spillage, or suspected contamination occurs involving an infectious substance other than a regulated medical waste;

(4) A release of a marine pollutant occurs in a quantity exceeding 450 L (119 gallons) for a liquid or 400 kg (882 pounds) for a solid;

(5) A situation exists of such a nature (e.g., a continuing danger to life exists at the scene of the incident) that, in the judgment of the person in possession of the hazardous material, it should be reported to the NRC even though it does not meet the criteria of [paragraphs \(b\)\(1\), \(2\), \(3\) or \(4\)](#) of this section; or

(6) During transportation by aircraft, a fire, violent rupture, explosion or dangerous evolution of heat (i.e., an amount of heat sufficient to be dangerous to packaging or personal safety to include charring of packaging, melting of packaging, scorching of packaging, or other evidence) occurs as a direct result of a battery or battery-powered device.

(c) Written report. Each person making a report under this section must also make the report required by [§ 171.16 of this subpart](#).

7 REPORTING THEFT OR TERRORIST ACTIVITIES

Security-related reporting requirements are included in compatible Agreement State regulations (i.e., 10 CFR Part 37, “Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material.”) Licensees are required to immediately notify their appropriate Local Law Enforcement Agency 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 in accordance with compatible Agreement State regulations (i.e., 10 CFR 37.57, “Reporting of Events.”) For the purposes of reporting events for these risk significant radioactive materials, the Agreement States should have compatible or more restrictive regulations (10 CFR 37.57 is Compatibility Category C).

The Agreement State shall determine if their licensee reported to the Local Law Enforcement Agency. If the licensee did not report the quantity of concern, the Agreement State shall determine if the activity of the radioactive material exceeds the threshold for quantities of concern and require the licensee to report to law enforcement. If the licensee already engaged law enforcement, then the Agreement States shall report only to the NRC. If it is not clear whether an event should be categorized as a possible theft or terrorist activity, the Agreement State should contact the HOC for assistance in determining if the event is required to be reported. For stolen nuclear material, the last confirmed location is where the event occurred.

Agreement States should consider notifying their local law enforcement and/or the U.S. Federal Bureau of Investigation (FBI) in all cases of actual theft, sabotage, diversions, and possible terrorism of radioactive material, regardless of the quantity of radioactive material involved. Additionally, they should coordinate their communications with other local, Federal and State Agencies (including the HOC) to ensure that shared information is accurate and consistent. The Agreement State should consider issuance of a press release, based on the H&S significance of the event.

The U.S. Code assigns lead responsibility for material events involving theft or terrorist activities to the FBI. The All-Agreement State Letter SP-98-038, dated May 5, 1998, addressed the revision to the U.S. Code regarding the expansion of the FBI criminal investigative jurisdiction to include byproduct material.

8 REPORTABILITY THRESHOLD

During event reporting, the Agreement States should determine whether the event meets the requirements for reporting events to the HOC and NMED. Special focus should be placed on whether the events meet the activity levels or other reportability thresholds specified in the compatible Agreement State regulations.

The NMED national database (web-based interface) only captures (1) reportable events and (2) events where the reportability is currently unknown but may develop into reportable events when further information is received. Situations that cannot be tied to any reporting requirement are not tracked in the national database.²⁰ The Agreement States may maintain regulations, in addition to the compatible Agreement State regulations, for event reporting. These additional Agreement State reporting requirements are not tracked in the national database. The Agreement State may use the optional NMED Agreement State software to track all their events, even additional reporting requirements that are unique to that State.

The NRC frequently receives questions about the following topics. The subsequent sections are included to provide further information.

8.1 Leaking Sealed Sources

²⁰ On April 1, 2019, NMED ceased capturing non-reportable events. This change was due to budgetary constraints. Records of voluntary reporting are no longer supported. Non-reportable records that were added to NMED prior to April 1, 2019, will continue to be supported in NMED and can be updated as new event information is received.

The Agreement State licensee is required to submit a 5-day written report when a leak test reveals 185 becquerel (Bq) (0.005 microcuries (μCi)) or more of removable radioactive material from a sealed source. The compatible Agreement State regulations (i.e., 10 CFR 31.5, "Certain detecting, measuring, gauging, or controlling devices and certain devices for producing light or an ionized atmosphere," 10 CFR 34.27, "Leak testing and replacement of sealed sources," 10 CFR 35.3067, "Report of a leaking source," or 10 CFR 39.35, "Leak testing of sealed sources") all have the same activity threshold for reporting. In some cases (such as portable or fixed gauges), leak test reporting is required as a license condition for NRC licensees that do not fall within the previously mentioned regulations. In these cases, the NMED contractor marks the reporting requirement section of the NMED record with 10 CFR 30.50, "Reporting requirements," section (b)(2).

NMED tracks all sealed sources with leak test results of 185 Bq (0.005 μCi) or more. If the leak test results are less than the reportability threshold (i.e., 185 Bq (0.005 μCi)), the events are not entered into NMED.

8.2 Orphan Sources

Orphan sources²¹ with quantities of licensed material less than or equal to 10 times the 10 CFR Part 20 Appendix C, "Quantities of Licensed Materials Requiring Labeling," are no longer tracked in NMED. (NMED records created before April 1, 2019, remain in the database.) If an entity discovers an orphan source that meets the isotope and quantity thresholds in 10 CFR 20.2201(a), they should report it to the HOC.²² Sources that meet the isotope and quantity thresholds are tracked in NMED.

8.3 Found Source

Found sources with quantities less than the reportability threshold are no longer tracked in NMED. If the found source was not previously reported as lost but had met reporting requirements at the time when it was lost, then the licensee shall report it as lost and found. If the lost or stolen source already had an NMED record, then the record should be updated when the source is found. The timeliness requirement and method of reporting is the same for a found source as it is for a lost source (e.g., 10 CFR 20.2201 and/or 10 CFR 37.81). NMED will maintain a record of the found source whether it was reported by a licensee or a private citizen.

8.4 Landfill Radiation Monitor Alarms

Records of landfill radiation monitor alarms are added into NMED, unless the calculated/estimated activity of the lost nuclear material supports the determination that it is below the reportable threshold (i.e., 20.2201(a)(1)(ii) - Lost, stolen, or missing licensed material in a quantity greater than 10 times the Part 20 Appendix C quantities). A record of the landfill radiation monitor alarms (with incomplete information) is marked as reportable or uncertain reportability in NMED, depending on the radionuclide. If the

²¹ The keyword, Orphan Source, is added to the NMED record when the owner of the radioactive source was not identified. To learn more, see the NRC public website titled "Orphan Sources," <https://www.nrc.gov/materials/miau/miau-reg-initiatives/orphan.html>.

²² The reporting requirements are only requirements for licensees. In the case of an orphan source, the licensee is unknown. As such, the reporting of found orphan sources by a non-licensee is voluntary.

radionuclide that sets off landfill radiation monitor alarms is not provided, the reportability will be listed as uncertain. If the Agreement State assumes that a particular radionuclide was involved, that assumption should be included in the information provided to NMED. A landfill radiation monitor alarm involving residential patient waste is treated as non-reportable.

8.5 Scrap Metal Recycling Facilities and Incinerator Facilities

Licensable quantities of radioactive material identified at scrap metal recycling facilities and incinerator facilities should be reported by the Agreement State. Records from scrap metal recycling facilities and incinerator facilities are added into NMED, unless the calculated/estimated activity of the lost nuclear material supports the determination that it is below the reportable threshold (i.e., 20.2201(a)(1)(ii) - Lost, stolen, or missing licensed material in a quantity greater than 10 times the Part 20 Appendix C quantities). The NMED record is maintained if it's a reportable quantity or if the activity and/or radionuclide is unknown and the reportability is uncertain.

8.6 Well Logging Source Rupture

The Agreement State shall ensure that the licensee submits a written report within 30 days, after receiving notice that a sealed source ruptured while in a well or other location (i.e., 10 CFR 39.77, "Notification of incidents and lost sources; abandonment procedures for irretrievable sources," section (a)). The report shall designate the well or other location, describe the magnitude and extent of the escape of licensed materials, assess the consequences of the rupture, and explain efforts planned or being taken to mitigate the consequences. The Agreement State should submit this information to NMED.

The immediate notification to the regulator for well logging source rupture does not fall under event reporting and therefore a report to the HOC is not required for a well logging source rupture. Since the regulation does not specify a notification to the HOC emergency line, an equivalent notification is not expected from the Agreement State. The Agreement State licensee is required to contact the Agreement State office immediately.

8.7 Irretrievable Well Logging Source

The Agreement State shall ensure that the licensee submits a written report within 30 days, after a sealed source has been classified as irretrievable per 10 CFR 39.77(d). The Agreement State should submit this report to NMED. A notification to the HOC is not required. 10 CFR 39.77(c) does not represent a reporting requirement.²³ The licensee shall contact the regulator to initiate abandonment procedures when a sealed source becomes lodged in a well and it is apparent that efforts to recover the sealed source will not be successful. An irretrievable source that received approval from the regulator to implement abandonment procedures is not a lost source and therefore, is not required to be reported under 10 CFR 39.77(b).

8.8 Industrial Radiography

²³ The Agreement State should manage records pertaining to the approval to implement abandonment procedure (10 CFR 39.77(c)). There are no requirements that records of these notifications to Agreement States should be maintained by the NRC.

The following incidents involving radiographic equipment require the licensee to submit a written report within 30 days of the occurrence under 10 CFR 34.101, "Notifications," section (a).

1. Unintentional disconnection of the source assembly from the control cable;
2. Inability to retract the source assembly to its fully shielded position and secure it in this position; or
3. Failure of any component (critical to safe operation of the device) to properly perform its intended function.

This reporting requirement is in addition to the 24-hour report to the HOC if 10 CFR 30.50(b)(2) also applies.

NRC Information Notice 2001-03, "Incident Reporting Requirements for Radiography Licensees," (ML010800026) provides guidance on reporting requirements for all industrial radiography licensees.

8.9 Fixed Gauge with Shutter Failure

For fixed gauges that are specifically licensed, a failure of the shutter mechanism to fully close is reportable under compatible Agreement State regulations (i.e., 10 CFR 30.50(b)(2)). If the shutter is fully closed but unable to open, this is not reportable. See NRC Information Notice 2023-02, "Reporting when a Fixed Gauge Shutter is Stuck in the Closed Position," (ML22326A295) for more information. For reports made under 10 CFR 30.50(b)(2), Agreement States should provide 24-hour notification to the NRC HOC after receiving the licensee's notification and a 30-day written report to NMED.

For generally licensed fixed gauges, failure of the shutter mechanism, regardless of the position that the shutter is stuck in (e.g., open or closed), is reportable under 10 CFR 31.5(c)(5) and a 30-day written report is required. In addition, a generally licensed fixed gauge with the shutter stuck open would also be reportable under 10 CFR 30.50(b)(2). Therefore, the Agreement State should also provide 24-hour notification to the NRC HOC after receiving the licensee's notification.

Table 3. The Agreement State should determine the reporting requirements for a fixed gauge with a shutter failure, which depends on the type of license that was issued.

License	Fixed Gauge Shutter Failure	Notify the NRC HOC	Written Report
Specific license	Stuck closed or failed in the safe position.	N/A	N/A
	Stuck open or failed in the unsafe position.	24-hour notification per 10 CFR 30.50(b)(2)	30-day written report is required per 10 CFR 30.50(c)(2).
General license	Stuck closed or failed in the safe position.	N/A	30-day written report is required per 10 CFR 31.5(c)(5).
	Stuck open or failed in the unsafe position	24-hour notification per 10 CFR 30.50(b)(2)	30-day written report that meets both 10 CFR 30.50(c)(2) and 10 CFR 31.5(c)(5).

9 GOVERNMENT COLLABORATION

9.1 Assistance from the NRC

Agreement States perform the event follow-up and investigation for events within their jurisdiction. For events with significant safety or security concerns, the Agreement State may request assistance from the NRC. The Agreement State should contact the HOC if activation of the NRC Incident Response Program is likely. If the Agreement State needs assistance in assessing the scale and/or safety impact of an event or assistance in calculating the dose, the Agreement State should contact their RSAO.²⁴

NRC Inspection Manual Chapter (IMC) 1330, "Response to Transportation Accidents Involving Radioactive Materials," provides ways that the NRC may offer assistance during an accident involving the transportation of radioactive material. IMC 1360, "Use of Physicians and Scientific Consultants in the Medical Consultant Program," provides information on types of assistance available for the assessment of medical events.

9.2 Radiological Emergency Response Assistance Available to the States

Agreement States may request radiological emergency response assistance by contacting the HOC. The Federal government, upon request, has the capability to assist States in responding to radiological emergencies. Under the Nuclear Radiological Incident Annex to the Response and Recovery Federal Interagency Operational Plan, the NRC is the Lead Federal Agency (LFA) for domestic incident management for incidents involving radioactive materials or facilities licensed by the NRC or Agreement States. As LFA, the NRC may request assistance from other federal agencies (e.g., Department of Homeland Security, Federal Emergency Management Agency (FEMA), Department of Energy, etc.). See IMC 1303, "Requesting Emergency Acceptance of Radioactive Material by the U.S. Department of Energy (DOE)," for more information.

9.3 Congressional Inquiries

The NRC has the lead on responding to any inquiries from the U.S. Congress pertaining to events or other occurrences covered in this Handbook. The RSAO should contact the Agreement State to raise awareness of the inquiry and to obtain an answer ASAP, if appropriate. If the congressional inquiry is in depth, NMSS and/or Office of Congressional Affairs staff will issue a letter to the Agreement State and include a due date for the response.

10 EVENT NOTIFICATIONS

10.1 Evaluation of Event Notifications

RSOs review the ENs to ensure that they are familiar with the issues impacting the Agreement States. The RSAs are responsible for serving as a point of contact for NMSS staff and management, if any questions arise.

²⁴ See SA-1001, "Implementation of Management Directive 5.7 Technical Assistance to Agreement States," (ML17152A403) for additional ways of requesting assistance.

Select NMSS staff review all new and updated ENs. NMSS staff should notify the appropriate RSAO if an event is reportable to the INES, a potential AO, or if an event indicates the possible presence of a generic issue. ENs identified as having a significant potential risk to public health and safety, security, and/or the environment may receive additional NRC management review.

10.2 Request for Additional Information

Additional information may be requested to help determine the safety significance, any possible generic implications (e.g., equipment malfunction or failure, significant exposures), and to determine if the event meets the INES or AO criteria. For immediate or 24-hour reportable events, these requests would normally be initiated by the RSAO and would occur on an as needed basis (possibly within hours to a few days of notification of the occurrence.)

For events not considered to be significant (i.e., not required to be reported within 24 hours), the standard procedure is to allow at least 30 days before making such requests to provide reasonable time for Agreement State review and evaluation, and submission of follow-up information.

NMED sends a request for follow-up information via email when the NMED record is incomplete after 60 days from the date reported to the regulatory agency.

11 INTERNATIONAL NUCLEAR EVENT SCALE (INES) REPORTING

The IAEA maintains a scale used for rating the safety significance of events associated with the use of nuclear materials. Since 2004, the NRC has used the INES and shared event information with the international community for nuclear, transportation and radiation source events. INES events involve events occurring in areas regulated by the NRC and the Agreement States.

The NRC does not require the States to classify events or to provide direct notifications to IAEA using the INES scale. The NRC will use information provided by the States during their initial reporting and updates of the event for classifying the event and notifying IAEA. The NRC has committed to notifying the IAEA of any applicable event that is rated at an INES Level 2 or higher within two business days.

For events that occur in an Agreement State, the RSAO provides the Agreement State with the draft INES Event Rating Form within 24 hours of its generation. The Agreement State is asked to concur that the information in the report is factual. If the State cannot review the draft INES Event Rating Form in time to meet the two business days reporting deadline, the NRC provides the report to INES and marks the event as “Provisional.”

A “Provisional” rating is also recommended in situations where not all the details of the event are known. The rating is issued based on the information that is available and the judgement of those understanding the nature of the event. If a “Provisional” rating is issued, a final rating needs to be issued with any differences explained.

For further information on INES reporting procedures and rating criteria, see MD 5.12, “International Nuclear Event Scale Participation.”

12 ABNORMAL OCCURRENCE (AO)

The NRC is responsible for determining if events reported by Agreement States meet the criteria of an AO. NMSS performs an initial screening of all Agreement State events against the AO criteria in accordance with MD 8.1, "AO Reporting," and may have follow up questions to these events.

The RSAO contacts the Agreement State if a potential AO is identified. The Agreement State shall support the NRC by providing information on potential AOs that have occurred in their State. The RSAO provides the Agreement State with a draft AO write-up. The Agreement State staff shall review the draft AO write-up to verify that the details are correct and to provide corrections to their assigned RSAO.

The NRC annually publishes NUREG-0090, "Report to Congress on Abnormal Occurrences." It is publicly available and can be accessed at <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0090/>.

13 AGENCY ACTION REVIEW MEETING

Agreement State licensee events will be considered, along with NRC nuclear material licensees, for discussion during the annual Agency Action Review Meeting (AARM).²⁵ The NRC has the lead for the discussion on Agreement State licensees; however, NMSS will work with the RSAOs to contact the Agreement State to discuss their participation in the AARM process, as needed. The results of the AARM are briefed to the NRC Commission and is open to the public.

14 ASSESSMENT OF OPERATING EXPERIENCE

The NRC performs operating experience assessments.²⁶ The NRC identifies events that may involve generic applicability or could have significant impact on public health and safety, security, and/or the environment.²⁷ The assessment may result in the identification of actions that could lead to improvements in the effectiveness of the NRC and Agreement State regulatory programs. The NRC issues Generic Communications in response to identified trends, safety significant issues, or concerns with generic applicability.²⁸

Agreement States should assess events occurring within their jurisdiction or related to products registered or licensed in their jurisdiction to identify any events that may involve

²⁵ NRC's MD and Handbook 8.14, "Agency Action Review Meeting," describes NMSS and regional participation in the AARM. The inclusion of Agreement State licensees in this process is discussed in SECY-11-0132, "Revision of the Criteria for Identifying Nuclear Materials Licensees for Discussion at the Agency Action Review Meeting (ML112280111)."

²⁶ MD 8.5, "Nonreactor Operational Safety Data Review" includes guidance on implementing operating experience assessments.

²⁷ An event may have generic applicability if the condition could impact other licensees of the same type or is part of an ongoing safety concern with one or more licensees. The concern should be evaluated for safety significance and resolved, if appropriate. The concern should only be managed within the generic issue program if it meets the generic issue criteria.

²⁸ Generic Communications are NRC documents to communicate with industry and the public regarding specific issues of generic nature. See the NRC public website, "Generic Communications" at: <https://www.nrc.gov/reading-rm/doc-collections/gen-comm/index.html>.

generic applicability or could have significant impact on public health and safety, security, and/or the environment. In the instance that the Agreement State identified events with generic applicability and formalized it in an operating experience assessment or trending study, the Agreement State may submit the assessment to the NRC to facilitate distribution. The NRC can post assessments to the NMED website and/or distribute in a letter to all-Agreement States. Agreement States should work with their RSAO to initiate distribution. As an alternative, the Agreement State can also send an email to NMEDNRC@nrc.gov.

The NRC evaluates issues using the criteria listed in MD 6.4, "Generic Issues," to formally identify and process generic issues. Agreement States may process generic issues under their jurisdiction through State processes or may request NRC assistance.

15 REFERENCES

The following is a list of NRC documents, manuals and procedures that contain additional information on incident response and AOs.

15.1 NUREG Reports

NUREG Reports are available at: <https://www.nrc.gov/reading-rm/doc-collections/nuregs/index.html>.

NUREG-0090, "Report to Congress on Abnormal Occurrences."

NUREG-1100, "Performance Budget/ Congressional Budget Justification."

NUREG-1614, "Strategic Plan."

15.2 NRC Management Directives (MD)

MDs are available at: <https://www.nrc.gov/reading-rm/doc-collections/management-directives/index.html>.

MD 5.6, "Integrated Material Performance Evaluation Program (IMPEP)."

MD 5.9, "Adequacy and Compatibility of Program Elements for Agreement State Programs."

MD 5.12, "International Nuclear and Radiological Event Scale (INES) Participation."

MD 6.4, "Generic Issues Program."

MD 8.1, "Abnormal Occurrence Reporting Procedure."

MD 8.5, "Nonreactor Operational Safety Data Review."

MD 8.10, "NRC Assessment Program for an Event Occurring at a Medical Facility."

MD 8.14, "Agency Action Review Meeting."

15.3 NRC Inspection Manual Chapters (IMC)

IMCs are available at: <https://www.nrc.gov/reading-rm/doc-collections/insp-manual/manual-chapter/index.html>.

IMC 1301, "Response to Radioactive Material Incidents That Do Not Require Activation of the NRC Incident Response Plan."

IMC 1302, "Follow-up Actions and Action Levels for Radiation Exposures Associated with Material Incidents Involving Members of the Public."

IMC 1303, "Requesting Emergency Acceptance of Radioactive Material by the U.S. Department of Energy (DOE)."

IMC 1330, "Response to Transportation Accidents Involving Radioactive Materials."

IMC 1360, "Use of Physician and Scientific Consultants in the Medical Consultant Program."

IMC 2800, "Materials Inspection Program."

15.4 Commission Policy

SRM-SECY-97-054, "Final Recommendations on Policy Statements and Implementing Procedures For: 'Statement of Principles and Policy for the Agreement State Program' and 'Policy Statement on Adequacy and Compatibility of Agreement State Programs,'" dated June 30, 1997 (ML051610710).

SECY-11-0132, "Revisions of the Criteria for Identifying Licensees for Discussion at the AARM," dated September 20, 2011 (ML112280111).

Agreement State Program Policy Statement. October 19, 2017 (ML17262B205).

15.5 State and Tribal Communications Letters

State and Tribal Communications Letters are available at: <https://www.nrc.gov/reading-rm/doc-collections/ag-comm/index.html>.

All-Agreement State Letter SP-98-018, dated March 17, 1998, "Use of the Nuclear Material Events Database (NMED) as a Central Listing of Lost or Stolen Sealed Sources and Devices."

All-Agreement State Letter SP-98-038, dated May 5, 1998, "Expansion of Federal Bureau of Investigation (FBI) Criminal Investigative Jurisdiction to Include Byproduct Materials."

All-Agreement State Letter SP-98-040, dated May 7, 1998, "Guidance for Reporting Material Events."

All-Agreement State Letter STP-00-081, dated November 29, 2000, "Strategic Plan and Nuclear Material Safety Performance Plan Data Goals."

15.6 State Agreements (SA) Procedures

SA Procedures are available at: <https://www.nrc.gov/reading-rm/doc-collections/nmss-procedures/state-agreement.html>.

SA-100, "Implementation of the Integrated Materials Performance Evaluation Program."

SA-105, "Reviewing the Common Performance Indicator, Technical Quality of Incident and Allegation Activities."

SA-112, "Emergency Suspension of Section 274b. Agreement."

SA-200, "Compatibility Categories and Health and Safety Identification for NRC Regulations and Other Program Elements."

SA-500, "Jurisdiction Determinations (interim)."

SA-1001, "Implementation of Management Directive 5.7 Technical Assistance to Agreement States."

15.7 NRC Regulatory Issue Summary (RIS)

RIS are available at: <https://www.nrc.gov/reading-rm/doc-collections/gen-comm/reg-issues/index.html>.

RIS 2005-031 Revision 1, "Control of Security-Related Sensitive Unclassified Non-safeguards Information Handled by Individuals, Firms, and Entities Subject to NRC Regulation of the Use of Source, Byproduct, And Special Nuclear Material."

15.8 NRC Information Notices

NRC Information Notices are available at: <https://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notices/index.html>.

NRC Information Notice 2001-03, "Incident Reporting Requirements for Radiography Licensees," dated April 6, 2001 (ML010800026).

NRC Information Notice 2023-02, "Reporting when a Fixed Gauge Shutter is Stuck in the Closed Position," dated March 17, 2023 (ML22326A295).

15.9 Event Notification Reports

Event Notification Reports are available at: <https://www.nrc.gov/reading-rm/doc-collections/event-status/event/index.html>.

15.10 Regulations

Title 10, "Energy," regulations are available at: <https://www.ecfr.gov/on/2021-09-20/title-10/chapter-I>.

Title 49, "Transportation," Chapter 1, "Pipeline and Hazardous Materials Safety Administration, Department of Transportation," Part 171, "General Information, Regulations, and Definitions," are available at: <https://www.ecfr.gov/current/title-49/subtitle-B/chapter-I/subchapter-C/part-171?toc=1>.

15.11 NRC Policy

The *Federal Register* (FR) is available at: <https://www.federalregister.gov/documents/search#advanced>.

82 FR 45907, "Abnormal Occurrence Reports; Policy revision; issuance," dated October 2, 2017.

82 FR 46840, "Agreement State Program Policy Statement; Revision to policy statement," dated October 6, 2017.

82 FR 48535, "Agreement State Program Policy Statement; Correction," dated October 18, 2017.

26 FR 2536, "Criteria for Guidance of States and AEC in Discontinuance of AEC Regulatory Authority and Assumption Thereof by States Through Agreement," dated March 24, 1961.

44 FR 38690, "Memorandum of Understanding Between the NRC and DOT," dated July 2, 1979.

15.12 FEMA Publications

Nuclear Radiological Incident Annex to the Response and Recovery Federal Interagency Operational Plan; https://remm.hhs.gov/NRIA_intro.htm.

Appendix A. NRC Reporting Requirements

The following provides a list of the NRC reporting requirements for which Agreement States should have compatible regulations. These tables may not contain all the NRC's reporting requirements in Title 10 of the *Code of Federal Regulations* (10 CFR). These tables do not include reporting requirements from 10 CFR Part 21, "Reporting of Defects and Noncompliances," since licensees regulated by an Agreement State are not required to comply with this regulation.²⁹

The tables below are for the Agreement States to reference when reporting events. The Agreement States may have additional reporting requirements and they should manage them accordingly.

²⁹ The provisions in Part 21 derive from statutory authority in the Energy Reorganization Act, not the Atomic Energy Act, which does not apply to Agreement States. Therefore, this Part cannot be addressed under either compatibility or adequacy. While it may be argued that there are health and safety reasons to require States to adopt the certain provisions of Part 21, States may not have the statutory authority to do so.

Table A.1. Reporting requirements from 10 CFR Part 20, “Standards for Protection Against Radiation,” are listed below. The Agreement State timeliness requirements for notifying the HOC and for submitting written reports to NMED are summarized for each reporting requirement.

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirement for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Req. for Submitting Written Report to NMED
10 CFR Part 20, “Standards for Protection Against Radiation.”				
§ 20.1906(d)(1)	Procedures for receiving and opening packages. Removable radioactive surface contamination exceeds the limits of § 71.87(i) .	4 hours	N/A	N/A
§ 20.1906(d)(2)	Procedures for receiving and opening packages. External radiation levels exceed the limits of § 71.47 .	4 hours	N/A	N/A
§ 20.2201(a)(1)(i)	Reports of theft or loss of licensed material. After its occurrence becomes known to the licensee, any lost, stolen, or missing licensed material in an aggregate quantity equal to or greater than 1,000 times the quantity specified in Part 20 Appendix C under such circumstances that it appears to the licensee that an exposure could result to persons in unrestricted areas.	4 hours	30 days after initial notification per § 20.2201(b) or compatible regulation.	30 days

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirement for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Req. for Submitting Written Report to NMED
§ 20.2201(a)(1)(ii)	<p>Reports of theft or loss of licensed material.</p> <p>After the occurrence of any lost, stolen, or missing licensed material becomes known to the licensee, all licensed material in a quantity greater than 10 times the quantity specified in Part 20 Appendix C that is still missing at this time.</p>	30 days	30 days after initial notification per § 20.2201(b) or compatible regulation.	30 days
§ 20.2202(a)(1)	<p>Notification of incidents.</p> <p>Any event involving byproduct, source, or special nuclear material possessed by the licensee that may have caused or threatens to cause any of the following conditions an individual to receive</p> <p>(i) A total effective dose equivalent of 25 rems (0.25 Sv) or more; or</p> <p>(ii) A lens dose equivalent of 75 rems (0.75 Sv) or more; or</p> <p>(iii) A shallow-dose equivalent to the skin or extremities of 250 rads (2.5 Gy) or more;</p> <p>(Overexposure)</p>	4 hours	30 days per § 20.2203(a)(1) or compatible regulation.	30 days

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirement for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Req. for Submitting Written Report to NMED
§ 20.2202(a)(2)	<p>Notification of incidents.</p> <p>Any event involving byproduct, source, or special nuclear material possessed by the licensee that may have caused or threatens to cause the release of radioactive material, inside or outside of a restricted area, so that, had an individual been present for 24 hours, the individual could have received an intake five times the annual limit on intake (ALI).</p> <p>Note. The provisions of this paragraph do not apply to locations where personnel are not normally stationed during routine operations, such as hot-cells or process enclosures.</p> <p>(Overexposure)</p>	4 hours	30 days per § 20.2203(a)(1) or compatible regulation.	30 days
§ 20.2202(b)(1)	<p>Notification of incidents.</p> <p>Any event involving loss of control of licensed material possessed by the licensee that may have caused, or threatens to cause, an individual to receive, in a period of 24 hours –</p>	24 hours	30 days per § 20.2203(a)(1) or compatible regulation.	30 days

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirement for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Req. for Submitting Written Report to NMED
	<p>(i) A total effective dose equivalent exceeding 5 rems (0.05 Sv); or</p> <p>(ii) A lens dose equivalent exceeding 15 rems (0.15 Sv); or</p> <p>(iii) A shallow-dose equivalent to the skin or extremities exceeding 50 rems (0.5 Sv)</p> <p>(Overexposure)</p>			
<p>§ 20.2202(b)(2)</p>	<p>Notification of incidents.</p> <p>Any event involving loss of control of licensed material possessed by the licensee that may have caused, or threatens to cause, the release of radioactive material, inside or outside of a restricted area, so that, had an individual been present for 24 hours, the individual could have received an intake in excess of one occupational ALI.</p> <p>Note: the provisions of this paragraph do not apply to locations where personnel are not normally stationed during routine</p>	<p>24 hours</p>	<p>30 days per § 20.2203(a)(1) or compatible regulation.</p>	<p>30 days</p>

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirement for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Req. for Submitting Written Report to NMED
	<p>operations, such as hot-cells or process enclosures.</p> <p>(Overexposure)</p>			
<p>§ 20.2203(a)(2)(i)</p>	<p>Reports of exposures, radiation levels, and concentrations of radioactive material exceeding the constraints or limits.</p> <p>Doses in excess of any of the following:</p> <p>(i) The occupational dose limits for adults in § 20.1201; or</p> <p>(ii) The occupational dose limits for a minor in § 20.1207; or</p> <p>(iii) The limits for an embryo/fetus of a declared pregnant woman in § 20.1208; or</p> <p>(iv) The limits for an individual member of the public in § 20.1301; or</p> <p>(v) Any applicable limit in the license; or</p> <p>(vi) The ALARA constraints for air emissions established under § 20.1101(d).</p>	<p>N/A</p>	<p>30 days per § 20.2203(a)(2)(i) or compatible regulation.</p>	<p>30 days</p>

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirement for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Req. for Submitting Written Report to NMED
	(Overexposure)			
§ 20.2203(a)(3)	<p>Reports of exposures, radiation levels, and concentrations of radioactive material exceeding the constraints or limits.</p> <p>Levels of radiation or concentrations of radioactive material in –</p> <p>(i) A restricted area in excess of any applicable limit in the license; or</p> <p>(ii) An unrestricted area in excess of 10 times any applicable limit set forth in this part or in the license (whether or not involving exposure of any individual in excess of the limits in § 20.1301).</p>	N/A	30 days per § 20.2203(a)(3) or compatible regulation.	30 days
§ 20.2203(a)(4)	For licensees subject to the provisions of EPA's generally applicable environmental radiation standards in 40 CFR Part 190 , levels of radiation or releases of radioactive material in excess of those standards, or of license conditions related to those standards.	N/A	30 days per § 20.2203(a)(4) or compatible regulation.	30 days

Table A.2. Reporting requirements that may be applicable depending on the type of license and nuclear material. The Agreement State timeliness requirements for notifying the HOC and for submitting written reports to NMED are summarized for each reporting requirement.

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
10 CFR Part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material."				
§ 30.50(a)	<p>Reporting Requirements.</p> <p>An event that prevents immediate protective actions necessary to avoid exposures to radiation or radioactive materials that could exceed regulatory limits or releases of licensed material that could exceed regulatory limits (events may include fires, explosions, toxic gas releases, etc.).</p>	4 hours	30 days per § 30.50(c)(2) or compatible regulation.	30 days
§ 30.50(b)(1)	<p>Reporting Requirements.</p> <p>An unplanned contamination event that:</p> <p>(i) Requires access to the contaminated area, by workers or the public, to be restricted for more than 24 hours by imposing additional radiological controls or by prohibiting entry</p>	24 hours	30 days per § 30.50(c)(2) or compatible regulation.	30 days

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>into the area;</p> <p>(ii) Involves a quantity of material greater than five times the lowest ALI specified in Part 20 Appendix B for the material; and</p> <p>(iii) Has access to the area restricted for a reason other than to allow isotopes with a half-life of less than 24 hours to decay prior to decontamination.</p>			
<p>§ 30.50(b)(2)</p>	<p>Reporting Requirements.</p> <p>An event in which equipment is disabled or fails to function as designed when:</p> <p>(i) The equipment is required by regulation or license condition to prevent releases exceeding regulatory limits, to prevent exposures to radiation and radioactive materials exceeding regulatory limits, or to mitigate the consequences of an accident;</p> <p>(ii) The equipment is</p>	<p>24 hours</p>	<p>30 days per § 30.50(c)(2) or compatible regulation.</p>	<p>30 days</p>

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>required to be available and operable when it is disabled or fails to function; and</p> <p>(iii) No redundant equipment is available and operable to perform the required safety function.</p>			
<p>§ 30.50(b)(3)</p>	<p>Reporting Requirements.</p> <p>An event that requires unplanned medical treatment at a medical facility of an individual with spreadable radioactive contamination on the individual's clothing or body.</p>	<p>24 hours</p>	<p>30 days per § 30.50(c)(2) or compatible regulation.</p>	<p>30 days</p>
<p>§ 30.50(b)(4)</p>	<p>Reporting Requirements.</p> <p>An unplanned fire or explosion damaging any licensed material or any device, container, or equipment containing licensed material when:</p> <p>(i) The quantity of material involved is greater than five times the lowest ALI specified in Part 20</p>	<p>24 hours</p>	<p>30 days per § 30.50(c)(2) or compatible regulation.</p>	<p>30 days</p>

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>Appendix B for the material; and</p> <p>(ii) The damage affects the integrity of the licensed material or its container.</p>			
10 CFR Part 31, "General Domestic Licenses for Byproduct Material."				
<p>§ 31.5(c)(5)</p>	<p>Certain detecting, measuring, gauging, or controlling devices and certain devices for producing light or an ionized atmosphere.</p> <p>Any person who acquires, receives, possesses, uses or transfers byproduct material in a device pursuant to the general license in paragraph (a) of this section:</p> <p>Shall immediately suspend operation of the device if there is a failure of, or damage to, or any indication of a possible failure of or damage to, the shielding of the radioactive material or the on-off mechanism or indicator, or upon the detection of 185 Bq (0.005 µCi) or</p>	N/A	<p>30 days per § 31.5(c)(5) or compatible regulation.</p>	30 days

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>more removable radioactive material. The device may not be operated until it has been repaired by the manufacturer or other person holding a specific license to repair such devices that was issued under Parts 30 and 32 of this chapter or by an Agreement State. The device and any radioactive material from the device may only be disposed of by transfer to a person authorized by a specific license to receive the byproduct material in the device or as otherwise approved by the Commission. A report containing a brief description of the event and the remedial action taken; and, in the case of detection of 185Bq (0.005 µCi) or more removable radioactive material or failure of or damage to a source likely to result in contamination of the premises or the environs, a plan for</p>			

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>ensuring that the premises and environs are acceptable for unrestricted use, must be furnished within 30 days. Under these circumstances, the criteria set out in § 20.1402 of this chapter, “Radiological criteria for unrestricted use,” may be applicable, as determined by the Commission on a case-by-case basis.</p>			
10 CFR Part 34, “Licenses for Radiography and Radiation Safety Requirements for Radiographic Operations.”				
§ 34.27(d)	<p>Leak testing and replacement of sealed sources.</p> <p>Any test conducted pursuant to paragraph (c) of this section which reveals the presence of 185 Bq (0.005 µCi) or more of removable radioactive material must be considered evidence that the sealed source is leaking. The licensee shall immediately withdraw the equipment involved</p>	N/A	<p>5 days per § 34.27(d) or compatible regulation.</p>	5 days

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>from use and shall have it decontaminated and repaired or disposed of in accordance with Commission regulations. A report must be filed within 5 days of any test with results that exceed the threshold in this paragraph (d), and to describe the equipment involved, the test results, and the corrective action taken.</p>			
<p>§ 34.101(a)</p>	<p>Notifications.</p> <p>Each licensee shall send a written report within 30 days of the occurrence of any of the following incidents involving radiographic equipment:</p> <p>(1) Unintentional disconnection of the source assembly from the control cable;</p> <p>(2) Inability to retract the source assembly to its fully shielded position and secure it in this position; or</p> <p>(3) Failure of any</p>	<p>If § 30.50(b)(2) also applies, then a 24 hour report to the HOC is required.</p>	<p>30 days per § 34.101(a) or compatible regulation.</p>	<p>30 days</p>

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	component (critical to safe operation of the device) to properly perform its intended function.			
10 CFR Part 35, "Medical Use of Byproduct Material."				
§ 35.67(e)	<p>§ 35.67 Requirements for possession of sealed sources and brachytherapy sources.</p> <p>If the leak test reveals the presence of 185 Bq (0.005 µCi) or more of removable contamination, the licensee shall –</p> <p>(1) Immediately withdraw the sealed source from use and store, dispose, or cause it to be repaired in accordance with the requirements in Parts 20 and 30 of this chapter; and</p> <p>(2) File a report within 5 days of the leak test in accordance with § 35.3067.</p>	N/A	5 days per § 35.67(e) or compatible regulation.	5 days
§ 35.3045(a)(1)(i)	<p>Report and notification of a medical event.</p> <p>A licensee shall report any event as a</p>	24 hours	15 days per § 35.3045(d) or compatible regulation.	15 days

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>medical event, except for an event that results from patient intervention, in which the administration of byproduct material or radiation from byproduct material, except permanent implant brachytherapy, results in a dose that differs from the prescribed dose or dose that would have resulted from the prescribed dosage by more than 0.05 Sv (5 rem) effective dose equivalent, 0.5 Sv (50 rem) to an organ or tissue, or 0.5 Sv (50 rem) shallow dose equivalent to the skin; and</p> <p>(A) The total dose delivered differs from the prescribed dose by 20 percent or more;</p> <p>(B) The total dosage delivered differs from the prescribed dosage by 20 percent or more or falls outside the prescribed dosage range; or</p> <p>(C) The fractionated</p>			

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	dose delivered differs from the prescribed dose for a single fraction, by 50 percent or more.			
§ 35.3045(a)(1)(ii)	<p>Report and notification of a medical event.</p> <p>A licensee shall report any event as a medical event, except for an event that results from patient intervention, in which the administration of byproduct material or radiation from byproduct material, except permanent implant brachytherapy, results in a dose that exceeds 0.05 Sv (5 rem) effective dose equivalent, 0.5 Sv (50 rem) to an organ or tissue, or 0.5 Sv (50 rem) shallow dose equivalent to the skin from any of the following –</p> <p>(A) An administration of a wrong radioactive drug containing byproduct material or the wrong radionuclide for a brachytherapy procedure;</p>	24 hours	15 days per § 35.3045(d) or compatible regulation.	15 days

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>(B) An administration of a radioactive drug containing byproduct material by the wrong route of administration;</p> <p>(C) An administration of a dose or dosage to the wrong individual or human research subject;</p> <p>(D) An administration of a dose or dosage delivered by the wrong mode of treatment; or</p> <p>(E) A leaking sealed source.</p>			
<p>§ 35.3045(a)(1)(iii)</p>	<p>Report and notification of a medical event.</p> <p>A licensee shall report any event as a medical event, except for an event that results from patient intervention, in which the administration of byproduct material or radiation from byproduct material, except permanent implant brachytherapy, results in a dose to the skin or an organ or tissue other than the</p>	<p>24 hours</p>	<p>15 days per § 35.3045(d) or compatible regulation.</p>	<p>15 days</p>

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>treatment site that exceeds by:</p> <p>(A) 0.5 Sv (50 rem) or more the expected dose to that site from the procedure if the administration had been given in accordance with the written directive prepared or revised before administration; and</p> <p>(B) 50 percent or more the expected dose to that site from the procedure if the administration had been given in accordance with the written directive prepared or revised before administration.</p>			
<p>§ 35.3045(a)(2)</p>	<p>Report and notification of a medical event.</p> <p>For permanent implant brachytherapy, the administration of byproduct material or radiation from byproduct material (excluding sources that were implanted in the correct site but migrated outside the treatment site) that</p>	<p>24 hours</p>	<p>15 days per § 35.3045(d) or compatible regulation.</p>	<p>15 days</p>

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>results in –</p> <p>(i) The total source strength administered differing by 20 percent or more from the total source strength documented in the post-implantation portion of the written directive;</p> <p>(ii) The total source strength administered outside of the treatment site exceeding 20 percent of the total source strength documented in the post-implantation portion of the written directive;</p> <p>or</p> <p>(iii) An administration that includes any of the following:</p> <p>(A) The wrong radionuclide;</p> <p>(B) The wrong individual or human research subject;</p> <p>(C) Sealed source(s) implanted directly</p>			

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>into a location discontiguous from the treatment site, as documented in the post-implantation portion of the written directive; or</p> <p>(D) A leaking sealed source resulting in a dose that exceeds 0.5 Sv (50 rem) to an organ or tissue.</p>			
<p>§ 35.3045(b)</p>	<p>Report and notification of a medical event.</p> <p>Any event resulting from intervention of a patient or human research subject in which the administration of byproduct material or radiation from byproduct material results or will result in unintended permanent functional damage to an organ or a physiological system, as determined by a physician.</p>	<p>24 hours</p>	<p>15 days per § 35.3045(d) or compatible regulation.</p>	<p>15 days</p>
<p>§ 35.3047(a)</p>	<p>Report and notification of a dose to an</p>	<p>24 hours</p>	<p>15 days per</p>	<p>15 days</p>

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>embryo/fetus or a nursing child.</p> <p>Any dose to an embryo/fetus that is greater than 50 mSv (5 rem) dose equivalent that is a result of an administration of byproduct material or radiation from byproduct material to a pregnant individual unless the dose to the embryo/fetus was specifically approved, in advance, by the authorized user.</p>		<p>§ 35.3047(d) or compatible regulation.</p>	
<p>§ 35.3047(b)</p>	<p>Report and notification of a dose to an embryo/fetus or a nursing child.</p> <p>Any dose to a nursing child that is a result of an administration of byproduct material to a breast-feeding individual that-</p> <p>(1) Is greater than 50 mSv (5 rem) total effective dose equivalent; or</p>	<p>24 hours</p>	<p>15 days per § 35.3047(d) or compatible regulation.</p>	<p>15 days</p>

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	(2) Has resulted in unintended permanent functional damage to an organ or a physiological system of the child, as determined by a physician.			
§ 35.3067	Report of a leaking source. Leak test required by § 35.67 reveals the presence of 185 Bq (0.005 µCi) or more of removable contamination.	N/A	5 days per § 35.3067 or compatible regulation.	5 days
§ 35.3204	Report and notification for an eluate exceeding permissible molybdenum-99, strontium-82, and strontium-85 concentrations. After discovery that an eluate exceeded the permissible concentration listed in § 35.204(a) at the time of generator elution.	7 days	30 days per § 35.3204 or compatible regulation.	30 days
10 CFR Part 36, "Licenses and Radiation Safety Requirements for Irradiators."				
§ 36.83(a)	Reports.	24 hours	30 days per	30 days

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>(1) Source stuck in an unshielded position.</p> <p>(2) Any fire or explosion in a radiation room.</p> <p>(3) Damage to the source racks.</p> <p>(4) Failure of the cable or drive mechanism used to move the source racks.</p> <p>(5) Inoperability of the access control system.</p> <p>(6) Detection of radiation source by the product exit monitor.</p> <p>(7) Detection of radioactive contamination attributable to licensed radioactive material.</p> <p>(8) Structural damage to the pool liner or walls.</p> <p>(9) Abnormal water loss or leakage from</p>		<p>§ 36.83(b) or compatible regulation.</p>	

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>the source storage pool.</p> <p>(10) Pool water conductivity exceeding 100 microsiemens per centimeter.</p>			
10 CFR Part 37, “Physical Protection of Category 1 and 2 Quantities of Radioactive Material.”				
§ 37.57(a)	<p>Reporting of events.</p> <p>The licensee shall immediately notify the Local Law Enforcement Agency after determining that an unauthorized entry resulted in an actual or attempted theft, sabotage, or diversion of a category 1 or category 2 quantity of radioactive material. As soon as possible after initiating a response, but not at the expense of causing delay or interfering with the Local Law Enforcement Agency response to the event, the licensee shall notify the [emergency line]³⁰.</p>	4 hours	30 days per § 37.57(c) or compatible regulation.	30 days
	<p>See Table 1, Category 1 and</p>			

³⁰ The term “HOC” was removed from the ‘Brief Summary of Reporting Requirements’ column and was replaced with [emergency line] to signify the Agreement State equivalent of the HOC.

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	Category 2 Threshold, in Appendix A to Part 37.			
§ 37.57(b)	Reporting of events. The licensee shall assess any suspicious activity related to possible theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material and notify the LLEA as appropriate. As soon as possible but not later than 4 hours after notifying the LLEA, the licensee shall notify the [emergency line]. See Table 1, "Category 1 and Category 2 Threshold," in Appendix A to Part 37.	4 hours	N/A	N/A
§ 37.81(a)	Reporting of events. The shipping licensee shall notify the appropriate LLEA and the [emergency line] within 1 hour of its determination that a shipment of category 1 quantities of radioactive material is lost or missing. The appropriate LLEA	1 hour	30 days per § 37.81(g) or compatible regulation.	30 days

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>would be the law enforcement agency in the area of the shipment's last confirmed location. During the investigation required by § 37.79(c), the shipping licensee will provide agreed upon updates to the [emergency line] on the status of the investigation. See Table 1, "Category 1 and Category 2 Threshold," in Appendix A to Part 37.</p>			
<p>§ 37.81(b)</p>	<p>Reporting of events. The shipping licensee shall notify the [emergency line] within 4 hours of its determination that a shipment of category 2 quantities of radioactive material is lost or missing. If, after 24 hours of its determination that the shipment is lost or missing, the radioactive material has not been located and secured, the licensee shall immediately notify the [emergency line]. See</p>	<p>4 hours</p> <p>After 24 hours, a second notification is required if the shipment continues to be missing.</p>	<p>30 days per § 37.81(g) or compatible regulation.</p>	<p>30 days</p>

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	Table 1, "Category 1 and Category 2 Threshold," in Appendix A to Part 37.			
§ 37.81(c)	<p>Reporting of events.</p> <p>The shipping licensee shall notify the designated LLEA along the shipment route as soon as possible upon discovery of any actual or attempted theft or diversion of a shipment or suspicious activities related to the theft or diversion of a shipment of a category 1 quantity of radioactive material. As soon as possible after notifying the LLEA, the licensee shall notify the [emergency line] upon discovery of any actual or attempted theft or diversion of a shipment, or any suspicious activity related to the shipment of category 1 radioactive material. See Table 1,</p>	<p>1 hour</p>	<p>30 days per § 37.81(g) or compatible regulation.</p>	<p>30 days</p>

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	“Category 1 and Category 2 Threshold,” in Appendix A to Part 37.			
§ 37.81(d)	<p>Reporting of events.</p> <p>The shipping licensee shall notify the [emergency line] as soon as possible upon discovery of any actual or attempted theft or diversion of a shipment, or any suspicious activity related to the shipment, of a category 2 quantity of radioactive material. See Table 1, “Category 1 and Category 2 Threshold,” in Appendix A to Part 37.</p>	4 hours	30 days per § 37.81(g) or compatible regulation.	30 days
§ 37.81(e)	<p>Reporting of events.</p> <p>The shipping licensee shall notify the [emergency line] and the LLEA as soon as possible upon recovery of any lost or missing category 1 quantities of radioactive material. See Table 1, “Category 1 and Category 2</p>	1 hour	N/A	N/A

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	Threshold,” in Appendix A to Part 37.			
§ 37.81(f)	Reporting of events. The shipping licensee shall notify the [emergency line] as soon as possible upon recovery of any lost or missing category 2 quantities of radioactive material. See Table 1, “Category 1 and Category 2 Threshold,” in Appendix A to Part 37.	4 hours	N/A	N/A
10 CFR Part 39, “Licenses & Radiation Safety Requirements for Well Logging.”				
§ 39.35(d)(2)	Leak testing of sealed sources. Leak test results reveal the presence of 185 Bq (0.005 µCi) or more of removable radioactive material. (Well logging)	N/A	5 days per § 39.35(d)(2) or compatible regulation.	5 days
§ 39.77(a)	Notification of incidents and lost sources; abandonment procedures for irretrievable sources.	N/A ³¹	30 days per § 39.77(a) or compatible regulation.	30 days
³¹ The immediate notification to the HOC is not required for a well logging source rupture.	The licensee shall immediately notify the HOC if well logging does NOT fall under event reporting. A			

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>appropriate regulator by telephone and subsequently, within 30 days, by confirmation in writing, if the licensee knows or has reason to believe that a sealed source has been ruptured. The written confirmation must designate the well or other location, describe the magnitude and extent of the escape of licensed materials, assess the consequences of the rupture, and explain efforts planned or being taken to mitigate these consequences.</p> <p>(Well logging source rupture)</p>			
<p>§ 39.77(b)</p>	<p>Notification of incidents and lost sources; abandonment procedures for irretrievable sources.</p> <p>Theft or loss of radioactive materials, radiation overexposures, excessive levels and</p>	<p>See methods in referenced regulations.</p>	<p>See methods in referenced regulations.</p>	<p>See methods in referenced regulations.</p>

Reporting Requirement (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>concentrations of radiation, and certain other accidents as required by §§ 20.2201 - 20.2202, § 20.2203 and § 30.50.</p> <p>Note. An irretrievable source that received approval from the regulator to implement abandonment procedures is not a lost source.</p>			
<p>§ 39.77(d)</p>	<p>Notification of incidents and lost sources; abandonment procedures for irretrievable sources.</p> <p>A sealed source has been classified as irretrievable. (Well logging source abandonment)</p>	<p>N/A</p>	<p>30 days per § 39.77(d) or compatible regulation.</p>	<p>30 days</p>

Table A.3. Reporting requirements in 10 CFR 40, “Domestic licensing of source material,” and 10 CFR 70, “Domestic licensing of special nuclear material,” may be applicable to some licensees. The Agreement State timeliness requirements for notifying the HOC and for submitting written reports to NMED are summarized for each reporting requirement.

Reporting Req. (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
10 CFR Part 40, “Domestic Licensing of Source Material.”				
§ 40.60(a)	<p>Reporting requirements.</p> <p>After the discovery of an event that prevents immediate protective actions necessary to avoid exposures to radiation or radioactive materials that could exceed regulatory limits or releases of licensed material that could exceed regulatory limits (events may include fires, explosions, toxic gas releases, etc.).</p>	4 hours	30 days per § 40.60(c)(2) or compatible regulation.	30 days
§ 40.60(b)(1)	<p>Reporting requirements.</p> <p>An unplanned contamination event that:</p> <p>(i) Requires access to the contaminated area, by workers or the public, to be restricted for more than 24 hours by imposing additional radiological controls or by prohibiting entry into the area;</p> <p>(ii) Involves a quantity of material greater than five</p>	24 hours	30 days per § 40.60(c)(2) or compatible regulation.	30 days

Reporting Req. (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>times the lowest ALI specified in Part 20 Appendix B for the material; and</p> <p>(iii) Has access to the area restricted for a reason other than to allow isotopes with a half-life of less than 24 hours to decay prior to decontamination.</p>			
<p>§ 40.60(b)(2)</p>	<p>Reporting requirements.</p> <p>An event in which equipment is disabled or fails to function as designed when:</p> <p>(i) The equipment is required by regulation or license condition to prevent releases exceeding regulatory limits, to prevent exposures to radiation and radioactive materials exceeding regulatory limits, or to mitigate the consequences of an accident;</p> <p>(ii) The equipment is required to be available and operable when it is</p>	<p>24 hours</p>	<p>30 days per § 40.60(c)(2) or compatible regulation.</p>	<p>30 days</p>

Reporting Req. (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>disabled or fails to function; and</p> <p>(iii) No redundant equipment is available and operable to perform the required safety function.</p>			
<p>§ 40.60(b)(3)</p>	<p>Reporting requirements.</p> <p>An event that requires unplanned medical treatment at a medical facility of an individual with spreadable radioactive contamination on the individual's clothing or body.</p>	<p>24 hours</p>	<p>30 days per § 40.60(c)(2) or compatible regulation.</p>	<p>30 days</p>
<p>§ 40.60(b)(4)</p>	<p>Reporting requirements.</p> <p>An unplanned fire or explosion damaging any licensed material or any device, container, or equipment containing licensed material when:</p> <p>(i) The quantity of material involved is greater than five times the lowest ALI specified in Part 20 Appendix B for the material; and</p>	<p>24 hours</p>	<p>30 days per § 40.60(c)(2) or compatible regulation.</p>	<p>30 days</p>

Reporting Req. (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	(ii) The damage affects the integrity of the licensed material or its container.			
10 CFR Part 70, "Domestic Licensing of Special Nuclear Material."				
§ 70.50(a)	Reporting requirements. Event that prevents immediate protective actions necessary to avoid exposures to radiation or radioactive materials that could exceed regulatory limits or releases of licensed material that could exceed regulatory limits.	4 hours	30 days per § 70.50(c)(2) or compatible regulation.	30 days
§ 70.50(b)(1)	Reporting requirements. An unplanned contamination event that: (i) Requires access to the contaminated area, by workers or the public, to be restricted for more than 24 hours by imposing additional radiological controls or by prohibiting entry into the area; (ii) Involves a quantity of material greater than five times the lowest ALI specified in Part 20 .	24 hours	30 days per § 70.50(c)(2) or compatible regulation.	30 days

Reporting Req. (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	<p>Appendix B for the material; and</p> <p>(iii) Has access to the area restricted for a reason other than to allow isotopes with a half-life of less than 24 hours to decay prior to decontamination.</p>			
<p>§ 70.50(b)(2)</p>	<p>Reporting requirements.</p> <p>An event in which equipment is disabled or fails to function as designed when:</p> <p>(i) The equipment is required by regulation or licensee condition to prevent releases exceeding regulatory limits, to prevent exposures to radiation and radioactive materials exceeding regulatory limits, or to mitigate the consequences of an accident;</p> <p>(ii) The equipment is required to be available and operable when it is disabled or fails to function; and</p>	<p>24 hours</p>	<p>30 days per § 70.50(c)(2) or compatible regulation.</p>	<p>30 days</p>

Reporting Req. (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	(iii) No redundant equipment is available and operable to perform the required safety function.			
§ 70.50(b)(3)	<p>Reporting requirements.</p> <p>An event that requires unplanned medical treatment at a medical facility of an individual with spreadable radioactive contamination on the individual's clothing or body.</p>	24 hours	30 days per § 70.50(c)(2) or compatible regulation.	30 days
§ 70.50(b)(4)	<p>Reporting requirements.</p> <p>An unplanned fire or explosion damaging any licensed material or any device, container, or equipment containing licensed material when:</p> <p>(i) The quantity of material involved is greater than five times the lowest ALI specified in Part 20 Appendix B for the material; and</p>	24 hours	30 days per § 70.50(c)(2) or compatible regulation.	30 days

Reporting Req. (10 CFR)	Brief Summary of Reporting Requirement	Agreement State Timeliness Requirements for Notifying the HOC	Licensee Reporting Requirement for Submitting a Written Report to the Agreement State	Agreement State Timeliness Requirement for Submitting Written Report to NMED
	(ii) The damage affects the integrity of the licensed material or its container.			

Appendix B. Reporting Methods and Contact Information

Table B.1. Reporting methods and contact information for the NRC.

Report	Contact Information
Report to the NRC Headquarters Operations Center using one of the following methods.	<p style="text-align: center;">NRC Headquarters Operations Center Email: HOO.HOC@nrc.gov Telephone: (301)-816-5100 Fax: (301)-816-5151</p>
Submit a report to the NMED contractor by using one of the following methods.	<p style="text-align: center;">Upload function on the NMED website. https://nmed.inl.gov</p>
	<p style="text-align: center;">Email the NMED contractor. NMED@inl.gov</p>
	<p style="text-align: center;">By mail:</p> <p>Director Division of Materials Safety, Security, State, and Tribal Programs Office of Nuclear Material Safety and Safeguards U.S. Nuclear Regulatory Commission 11545 Rockville Pike Rockville, MD 20852-2738 Attention: Chief, Medical Safety & Events Assessment Branch, Mail Stop T5B60</p>

Table B.2. Reporting to other entities as required by the NRC.

Reason to Report	Reporting Methods and Contact Information
<p>Ensure that the licensee reported the theft or terrorist activities to the local law enforcement and/or the Federal Bureau of Investigation (FBI).</p> <p>Share the concurrent report with the NRC Headquarters Operations Center (after the event has been reported to law enforcement).</p>	<p>Local Law Enforcement 911 FBI Telephone (202)-324-3000</p> <hr/> <p>Concurrent Report to the NRC Headquarters Operations Center</p>
<p>Transportation events</p> <p>49 CFR 171.15, "Immediate notice of certain hazardous materials incidents."</p>	<p>National Response Center (800)-424-8802 (toll free) (202)-267-2675 (toll call) Online at http://www.nrc.uscg.mil The National Response Center subsequently contacts the HOC.</p>

Table B.3. Agreement States may choose to contact the HOC by email, telephone, and/or fax. The Agreement State is required to report but may chose the method of contact.

Notification method	Reports to the HOC
Email	To report to the HOC, the Agreement States should email the reports to the HOC using the email address, HOO.HOC@nrc.gov.
Telephone	To report to the HOC, the Agreement States should use the recorded telephone line to submit reports to the HOC at (301)-816-5100. The HOO may ask for Agreement States to follow-up with an email.
Facsimile	<p>Agreement States should report to the HOC using the sample fax sheet in Table B.4 or by sending NRC Form 361A, "Fuel Cycle and Materials Event Notification Worksheet," through facsimile. The Fax Number is (301)-816-5151.</p> <p>The NRC Form 361A, "Fuel Cycle and Materials Event Notification Worksheet," can be downloaded from the NRC Forms public website, https://www.nrc.gov/reading-rm/doc-collections/forms/index.html. This can be used to report to the HOC via facsimile or email. This form is not often used but is available.</p>

Table B.4. Sample fax sheet for reporting to the HOC.

FAX TO:	NRC HEADQUARTERS OPERATIONS CENTER (301)-816-5151
Agreement State Agency:	[State] Dept. of Health, Division of Radiation Protection
Event Report ID Number:	State ID, YY, No., e.g., TN-20-0001
Licensee Name:	County Inspection Inc.
Licensee Number:	CL-Z00X-1
Event date and time:	Month XX, YYYY, between 4:00 and 5:00 am
Event location:	City, State
Event type:	Stolen Radiography Device
Event description:	[State] Dept. of Health was notified on [notification date], by a representative from [licensee], of the theft of a radiography exposure device [camera] from a locked equipment trailer on Thursday morning, April 6, 2006. The locked camera and the keys to the camera were stolen. The radiography camera is identified as XYZ Company, Model 160B, serial No. B-3333, containing [radionuclide] [activity, when known] 88.3 curies of iridium-192. The device cables were not stolen. The Agreement State has an inspector on site and will continue to keep the NRC informed of the status of our investigation.
Transport vehicle description:	N/A
Notifications:	[State] Dept. of Health has notified local law enforcement, and the FBI due to possibility of unlawful criminal activity. Press release has not been issued at this time. [State] Dept. of Health has received inquiries from the media regarding this incident.
Point of contact:	Minnie C. Gauges, (301)-415-0001

Table B.5. This cover page should be used when submitting a report to NMED by mail. The cover page ensures that the document is handled appropriately by the NRC's Document Control Desk.

AGREEMENT STATE
EVENT REPORT ID NUMBER _____
(State\YY\No.)

DATE:

TO: Branch Chief
Medical Safety & Events Assessment Branch

SUBJECT:

STATE:

Signature and Title: _____

Public Availability of Event Information: Any event information that is considered preliminary pre-decisional information by the State should be clearly identified on the cover page as follows: **"Preliminary, Not for Public Disclosure."** For event information in the NRC's possession, the final determination on whether to withhold from public disclosure will be made by the NRC on a case-by-case basis in accordance with the requirements of 10 CFR Part 9.

Appendix C.

Minimum Required Event Information

The NMED records should include the minimum event information.

Essential Details

- Narrative event description (e.g., Event circumstances and details including source radionuclide and activity)
- Report identification number
- Event date and notification date
- Licensee name and license number
- Licensee address (city, state, zip code)
- Whether the event is NRC reportable and the applicable reporting requirement
- Cause and corrective actions (Agreement State and licensees' actions)
- Notifications: local law enforcement, FBI, and other States, as needed
- Indicate if there are any generic implications (i.e., generic issues or concerns)

Source/Radioactive Material

- Isotope and activity
- Manufacturer
- Model and serial number
- Leak test results, if applicable

Device/Associate Equipment

- For equipment/device involved, indicate the manufacturer, model, and serial number
- Provide clear description of any equipment problems.

Release of Licensed Material or Contamination

- Release type (air or water)
- Contamination (person or surface)
- Isotope and activity released

Medical Event

- Procedure administered, dose intended, and actual dose administered
- Isotope and activity administered, target organ
- Whether the patient and referring physician were notified

Overexposure

- Radiation source and activity
- Exposure dose and exposure type (e.g., whole body, extremity, etc.)

Transportation

- Type of transport
- Identity of shipper
- Package type and ID number (if available)

Appendix D. Glossary

AARM	The Agency Action Review Meeting (AARM) is an NRC meeting that includes discussions on licensee performance trends and/or significant nuclear materials issues. For each fiscal year, the NRC staff evaluate licensees against established criteria to determine if any NRC or Agreement State licensee should be discussed at the AARM.
ADAMS	Agencywide Documents Access and Management System (ADAMS) is the NRC's official record electronic recordkeeping system. The public can access it at https://www.nrc.gov/reading-rm/adams.html .
AEA	The Atomic Energy Act of 1954 (AEA) is the fundamental U.S. law on both the civilian and the military uses of nuclear materials.
AEC	The U.S. Atomic Energy Commission (AEC) was the predecessor to the NRC.
ALI	Annual Limits on Intake (ALI) are established in Table 1, "Occupational Values," of Appendix B to Part 20, "Annual Limits on Intake (ALIs) and Derived Air Concentrations (DACs) of Radionuclides for Occupational Exposure; Effluent Concentrations; Concentrations for Release to Sewerage (Part 20 Appendix B).
AO	Section 208 of the Energy Reorganization Act of 1974 defines an abnormal occurrence (AO) as an unscheduled incident or event which the NRC determines to be significant from the standpoint of public health or safety.
Carrier	A carrier, as defined by 49 CFR 171.8 , means a person who transports passengers or property in commerce by rail car, aircraft, motor vehicle, or vessel.
Conventional Units	Conventional units include curie (Ci), rad, and rem.
CRCPD	The Conference of Radiation Control Program Directors (CRCPD) is a non-profit entity representing the radiation control programs of each State (not limited to Agreement States).
DOE	The U.S. Department of Energy (DOE) manages the United States' nuclear infrastructure and administers the country's energy policy.
DOT	The U.S. Department of Transportation (DOT) sets safety regulations for all major modes of transportation; including the transportation of NRC and Agreement State-licensed nuclear materials.
ERA	Section 208 of the Energy Reorganization Act of 1974 (ERA) (P.L. 93-438, 42 USC 5848) establishes the NRC's AO responsibilities.

Event Notification	After a report is made to the HOC, it is referred to as an Event Notification (EN).
Event Notification Database	The EN database is an NRC event tracking system used by the HOO to track event reports made to the HOC. The ENs are publicly available and published on the NRC public website (https://www.nrc.gov/reading-rm/doc-collections/event-status/index.html).
Event Notification Number	The EN number is generated by the EN database when events are entered so that each event is unique in the system.
Event Report	Includes reporting to the HOC, licensees' written reports, and submitting information to the NMED contractor.
Event Report ID Number	The Event Report Identification Number is an Agreement State-generated tracking number for their events. The Agreement States may use the EN number generated by the HOC in lieu of this number.
FEMA	The Federal Emergency Management Agency (FEMA) is an agency of the Department of Homeland Security whose purpose is to coordinate the response to disasters in the United States that overwhelms the resources of local and state authorities.
FBI	The U.S. Federal Bureau of Investigation (FBI) is a federal law enforcement agency.
Follow-up Report	Any information submitted to NMED that follows an initial report.
FR	The <i>Federal Register</i> (FR) is the official daily publication for rules, proposed rules, and notices of Federal agencies and organizations.
Generic Applicability	A condition that could impact other licensees of the same type or an ongoing safety concern with one or more licensees. The concern should be managed within the generic issue program if it meets the generic issue criteria. If not, the concern should be evaluated for safety significance and resolved, if appropriate.
Generic Issues	Generic issues are complex safety or security issues that require extensive NRC staff and industry involvement to resolve. The defined criteria in Management Directive 6.4, "Generic Issues Program," must be met for an event to be identified as a generic issue.
Hazardous Material	A hazardous material is defined in 49 CFR 171.8, "Definitions and Abbreviations," as a substance or material that the Secretary of Transportation has determined is capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and has designated as hazardous under section 5103 of Federal hazardous materials transportation law (49 U.S.C. 5103). The term includes hazardous substances , hazardous wastes, marine pollutants, elevated temperature materials, materials that meet the defining criteria for hazard classes and divisions in part 173 of this subchapter ,

and materials designated as hazardous in the Hazardous Materials Table (see [49 CFR 172.101](#)). In the Hazardous Materials Table, see items listed as radioactive material (Label Code 7, Label Name Radioactive). Also, 'Table 2 to Appendix A – Radionuclides' includes a list of hazardous substances and reportable quantities.

HOC	The Headquarters Operations Center (HOC) is in Rockville, MD and is staffed 24 hours a day by employees trained to receive and evaluate event reports and coordinate incident response activities.
HOO	The Headquarters Operations Officers (HOO) staff the HOC. The HOO are trained to receive, evaluate, and respond to events.
H&S	Health and Safety
IAEA	The International Atomic Energy Agency (IAEA) is the world's center for cooperation in the nuclear field and seeks to promote the safe, secure, and peaceful use of nuclear technologies.
IMPEP	Periodic evaluations of Agreement State and NRC programs as part of the Integrated Materials Performance Evaluation Program (IMPEP).
Incident	Incident means an event or condition that has the possibility of affecting public health and safety such as overexposure, damage to equipment or facility, release of radioactive material, equipment, or procedure failure, lost/stolen/abandoned radioactive material, leaking source, contamination event, transportation, loss of control, medical event, etc.
INES	The IAEA's International Nuclear Event Scale (INES) is a scale that is used for rating safety significance of events associated with the use of nuclear materials.
INL	Idaho National Laboratory (INL)
LFA	The Lead Federal Agency (LFA) is the agency assigned the lead in the Nuclear Radiological Incident Annex to the Response and Recovery Federal Interagency Operational Plan.
LLEA	A Local Law Enforcement Agency (LLEA) represents different law enforcement agencies operating in different layers of the government. The local police department is one example. The FBI represents federal law enforcement.
Logbook Entry	The HOC issues a logbook entry when a report from the National Response Center is received, to record calls with members of the public, and to document licensee or Agreement State calls when the reporting requirements were not met. The logbook entries are temporary work products and are not retained as an official agency record. They are not publicly available.
MAP-X	The MAP-X web portal allows the information contained in NRC Form

361A, "Fuel Cycle and Materials Event Notification Worksheet," to be submitted electronically to the HOC. This data automatically propagates the database used in the HOC.

MSEB	Medical Safety and Events Assessment Branch (MSEB) manages the Events Coordination program for NMSS.
MSST	NMSS's Division of Material Safety, Security, State, and Tribal Programs (MSST) works with the Agreement States, non-Agreement States, NRC Regional Offices, NRC licensees, and the public to provide structure and implement the national materials program to enable the safe and secure use of radioactive materials in medical, industrial, and academic applications for beneficial civilian purposes.
National Response Center	The National Response Center is a part of the federally established National Response System and is staffed 24 hours a day by the U.S. Coast Guard. It is the designated federal point of contact for reporting all oil, chemical, radiological, biological, and etiological discharges into the environment, anywhere in the United States and its territories.
NMED	The Nuclear Material Events Database (NMED) is a historical collection of events that have occurred throughout the United States involving the use of nuclear material covered under the Atomic Energy Act. This is the NMED national database. The database excludes events occurring at nuclear power plants. Fuel cycle events have not been added since January 1, 2018.
NMED Agreement State Software	The optional NMED Agreement State software is available for download from the NMED website under the Downloads tab. See the Agreement State Software User's Guide, within the Help section of the NMED website, for more information.
NMED Coding Manual	The NMED Coding Manual is located within the Help section of the NMED website. The purpose of this manual is to describe the methodology used to code events into the database. This is also known as the Idaho National Laboratory (INL) Coding Manual.
NMED Item Number	The NMED Item Number is a tracking number generated by NMED.
NMED Record	An entry in NMED.
NMED Website	The web-based interface can be used to search the national database of events and to upload information for the NMED contractor. Users authorized for log in can access the website at https://nmed.inl.gov .
NMSS	The Office of Nuclear Material Safety and Safeguards (NMSS) is responsible for the licensing and regulation of facilities and materials associated with the processing, transport, and handling of nuclear materials, including uranium recovery activities and the fuel used in commercial nuclear reactors.
NSIR	The Office of Nuclear Security and Incident Response (NSIR)

assesses the threat environment affecting regulated activities, performs rapid assessment of the credibility of threats and security events, and coordinates with the intelligence and law enforcement communities.

Orphan Source	An orphan source is when the owner of the radioactive source was not identified and is unknown.
PII	Personally Identifiable Information (PII) includes a person's name in combination with relatives' names, postal address, home electronic mail (e-mail) address, home or cellular telephone number, personal characteristics, social security number, date or place of birth, mother's maiden name, driver's license number, bank account information, credit card information, or any information that would make the individual's identity easily traceable.
RSAO	The Regional State Agreements Officer (RSAO) is a designated staff member, in an NRC regional office, who serves as the point of contact for the region and NMSS regarding Agreement State radiation control programs, and who participates in technical reviews of Agreement State radiation control programs.
Rad	Rad is the special unit of absorbed dose. One rad is equal to an absorbed dose of 100 ergs/gram or 0.01 joule/kilogram (0.01 gray).
Rem	Rem is the special unit of any of the quantities expressed as dose equivalent. (1 rem = 0.01 sievert).
SI Units	International System of Units (SI) include becquerel (Bq), gray, and sievert.
SID Report	The HOC has a recipient list for security information database (SID) reports on file. These reports are marked as "Official Use Only-Security Related Information (OUO-SRI)" and have limited distribution. A SID report is issued internally for either a security incident report or a suspicious activity report.
SUNSI	Sensitive unclassified non-safeguards information (SUNSI) refers to any information of which the loss, misuse, modification, or unauthorized access can reasonably be foreseen to harm the public interest, the commercial or financial interests of the entity or individual to whom the information pertains, the conduct of NRC and Federal programs, or the personal privacy of individuals.
Suspicious Activity Report	A suspicious activity report can be called into the HOC by a licensee, Agreement State, or NRC staff member. Upon receiving voluntary or required reports, the HOC will issue a SID report. NSIR staff review these reports and collaborate with law enforcement or the intelligence community, as needed.
Written Report	In some cases, compatible Agreement State regulations require that licensees submit written reports (i.e., 5-day, 15-day, 30-day reports).