

# ENDNOTES

## NUCLEAR REACTOR SAFETY

1. The industry safety indicators are derived through complex engineering and scientific analyses by NRC's Office of Nuclear Reactor Regulation, Office of Nuclear Regulatory Research, and contractors. As a result, analysis of some events for FY 2003 and FY 2004 are still ongoing. The performance indicator results are subject to minor variations when licensees submit revisions to the source data. These data may differ slightly from data reported in previous years as a result of refinements in data quality.
2. "Nuclear reactor accidents" are defined in the NRC Severe Accident Policy Statement (50 Federal Register 32138, dated August 8, 1985) as those events that result in substantial damage to the reactor fuel, whether or not serious offsite consequences occur. Data sources and verification: The NRC requires licensees to notify the NRC Operations Center of the declaration of any emergency specified in the licensee's NRC-approved Emergency Plan. Further, the NRC requires notifications for those non-emergency events specified in the regulations. Licensee compliance with notification regulations is periodically evaluated by the NRC. In addition, NRC resident inspectors are aware of the events that occur at nuclear plants.
3. Data sources and verification: The NRC requires licensees to report radiation exposures that exceed limits in the regulation, and NRC periodically evaluates licensee compliance with the reporting regulations. In addition, a resident inspector monitors each facility and would be aware of any deaths resulting from acute radiation exposures.
4. "Significant radiation exposures" are defined as those that result in unintended permanent functional damage to an organ or a physiological system as determined by a physician in accordance with Abnormal Occurrence Criterion I.A.3. Data sources and verification: The NRC requires licensees to report radiation exposures that exceed limits in the regulation, and the NRC periodically assesses licensee compliance with the reporting regulations. In addition, a resident inspector monitors each facility and would be aware of any significant radiation exposures in excess of reporting limits.
5. Data sources and verification: The NRC requires licensees to call to report any breaches of security or other event that may potentially lead to sabotage at a nuclear facility within 1 hour of such an occurrence. The licensee would also file a written report within 30 days of an event. In addition, NRC information assessment teams would follow up on any significant events, and the investigation would verify the accuracy of the information provided by the licensee.

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6. Releases that have the potential to cause “adverse impact” are currently undefined. As a surrogate, we use those that exceed the limits for reporting abnormal occurrences, as given by Abnormal Occurrence Criterion 1.B.1 [normally 5,000 times the limit specified in Table 2 (air and water) of Appendix B to 10 CFR Part 20]. Data sources and verification: The NRC requires licensees to report releases of radioactive materials that exceed limits in the regulation or license, and NRC periodically assesses licensee compliance with the reporting regulations. In addition, a resident inspector monitors each facility and would be aware of any instances in which radiation is released to the environment in excess of reporting limits.
7. The NRC provides oversight of plant safety performance on a plant-specific basis as well as on an industry-wide basis. The specific parameters and criteria for measuring statistically significant adverse trends in industry-wide safety performance include NRC-approved performance indicators, accident sequence precursor results, and other risk-related indicators or measures of industry safety performance. The NRC continues to refine and develop additional, more risk-informed indicators that will be qualified for use in phases. Data sources and verification: The NRC monitors industry safety performance through its reactor oversight process and requires licensees to file reports containing operational and event information. NRC Inspections confirm that these reports are complete and reliable.
8. Such events have a 1 in 1,000 ( $10^{-3}$ ) or greater probability of leading to a nuclear reactor accident. Data sources and verification: The NRC’s Accident Sequence Precursor (ASP) Program systematically evaluates operating experience to identify, document, and rank events that have the potential to cause core damage. These events are identified through computerized screening of licensee event reports or other events designated by the NRC. Selected events then undergo an engineering evaluation to identify, analyze, and document precursor events. Preliminary analysis of potential precursor events are independently verified either by comparison of results from the Reactor Oversight Process or submitted for independent peer review by licensees and NRC to ensure that the plant design and its response to the precursor event are correctly characterized.
9. The regulatory limits used in this measure are those provided by 10 CFR 20.2203(a)(2), excluding instances of overexposures involving a shallow dose equivalent from a discrete radioactive particle in contact with the skin. Data sources and verification: The NRC requires licensees to report radiation exposures that exceed limits in the regulation, and the NRC periodically assesses licensee compliance with the reporting regulations. In addition, a resident inspector monitors each facility and would be aware of any significant radiation exposures in excess of reporting limits.



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10. The regulatory limits used in this measure are those provided by 10 CFR 20.2203(a)(3).  
Data sources and verification: The NRC requires licensees to report releases of radioactive materials that exceed limits in the regulation or license, and the NRC periodically assesses licensee compliance with the reporting regulations. In addition, a resident inspector monitors each facility and would be aware of any instances in which radiation is released to the environment in excess of reporting limits.
11. Substantial breakdowns of physical security are defined by Abnormal Occurrence Criterion I.C.4. Information pertaining to certain incidents may be either classified or under consideration for classification because of national security implications. Classified information will be withheld when formally reporting these incidents in accordance with Section 208 of the Energy Reorganization Act of 1974, as amended. Any classified details regarding these incidents would be available to the Congress, upon request, under appropriate security arrangements. Data sources and verification: The NRC tracks a variety of security performance data furnished by licensees to identify trends in physical security over time.
12. One event was identified in FY 2002 as having the potential of being a “significant” precursor. This precursor involved a reactor pressure vessel head degradation at Davis-Besse (see page 29 of last year’s report). Preliminary Accident Sequence Precursor analysis shows Davis-Besse as a significant precursor. It will be final after the licensee comments. Based on the screening and engineering evaluation of FY 2002 and FY 2003 events, no other potentially “significant” precursors were identified. Therefore, the second performance measure was not exceeded for FY 2002 and FY 2003. For FY 2004 events occurring before June 1, 2004, screening and engineering evaluation of these events identified no potentially “significant” precursors.
13. A 10 CFR 2.206 petition is a written request filed by any person to institute a proceeding to modify, suspend, or revoke a license, or for any other enforcement action. The petition specifies the requested action and sets forth the facts that constitute the basis for the request. The NRC evaluates the technical merits of the safety concern presented by the petition. Based on the facts determined by the NRC technical evaluation or investigation of the merits of the petition, the Director will issue a decision to grant or deny the petition, in whole or in part. The Director’s Decision explains the bases upon which the petition has been granted or denied and identifies the actions that the NRC has taken or will take in response to the petition.

The start time of the 120 days is the date that the Petition Review Board (PRB) determines that the proposed petition satisfies the criteria of NRC Management Directive 8.11, “Review

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Process for 10 CFR 2.206 Petitions,” and acknowledges by letter the petitioner’s request. For petitions received after October 1, 2000, the end time is the date of the proposed Director’s Decision. Supplements to the petition which require extension of the schedule will reset the beginning of the metric to the date of a new acknowledgment letter.

## NUCLEAR MATERIALS SAFETY

14. Data source and verification: Events resulting in deaths could be reported to the NRC and/or Agreement States through a number of sources, but primarily through required licensee notifications. These events are summarized in event notifications and preliminary notifications, which are used to disseminate the information widely to the appropriate managers and staff. For Nuclear Materials Safety program activities, the Nuclear Materials Event Database (NMED) is an essential system for collecting information on such events. For fuel cycle activities, this extends to other hazardous materials used with, or produced from, licensed material consistent with 10 CFR Part 70. The decision on whether to ascribe the cause of a death to conditions related to acute radiation exposures or other hazardous materials will be made by NRC or Agreement State technical specialists or our consultants. The Fuel Cycle and Materials Inspection Programs are key elements in verifying the completeness and accuracy of licensee reports. The Integrated Materials Performance Evaluation Program (IMPEP) also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events and entering them into NMED as received from the licensees.
  
15. “Significant radiation exposures” are defined as those that result in unintended permanent functional damage to an organ or a physiological system as determined by a physician in accordance with Abnormal Occurrence Criterion I.A.3. Exposures to hazardous material (as defined by the Occupational Safety and Health Administration) apply only to fuel cycle and uranium recovery activities in the Nuclear Materials Safety program. Data source and verification: Events meeting this threshold could be reported to the NRC and/or Agreement States through a number of sources, but primarily through required licensee notifications. The NRC summarizes these events in event notifications and preliminary notifications, which are used to communicate this information internally to the appropriate managers and staff. For Nuclear Materials Safety program activities, the NMED is an essential system for collecting information on such events. For fuel cycle activities, this extends to other hazardous materials used with, or produced from, licensed material consistent with 10 CFR Part 70. The Fuel Cycle and Materials Inspection Programs are key elements in verifying the completeness and accuracy of licensee reports. The IMPEP also provides a



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mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events and entering them into NMED as received from the licensees.

16. Releases that have the potential to cause “adverse impact” are currently undefined. As a surrogate, we use those that exceed the limits for reporting abnormal occurrences as given by Abnormal Occurrence Criterion 1.B.1 [normally 5,000 times the limit specified in Table 2 (air and water) of Appendix B to 10 CFR Part 20]. This information is available in NUREG-0090, “Abnormal Occurrence (AO) Report to Congress,” on NRC Web site <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0090/v25/index.html>. Data source and verification: Events meeting this threshold could be reported to the NRC and/or Agreement States through a number of sources, but primarily through required licensee notifications. The NRC summarizes these events in event notifications and preliminary notifications, which are used to communicate this information internally to the appropriate managers and staff. For Nuclear Materials Safety Arena activities, the NMED is an essential system for collecting information on such events. The Fuel Cycle and Materials Inspection Programs are key elements in verifying the completeness and accuracy of licensee reports. The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events and entering them into NMED as received from the licensees.
17. Data source and verification: In accordance with Appendix G to 10 CFR Part 73 and 10 CFR 74.11(a), licensees are required to report events that involve losses, thefts, or diversions of formula quantities of strategic special nuclear material; radiological sabotages; or unauthorized enrichment of special nuclear material regulated by the NRC. Licensees must report such events to the NRC Headquarters Operations Center within 1 hour of their occurrence. Licensees are also required to file a followup written report with the NRC within 30 days of the event. The report must include sufficient information for NRC analysis and evaluation. The NRC then enters and tracks the events in NMED and initiates independent investigations to verify the reliability of the reported information. NRC investigation teams evaluate the validity of materials event data, in order to ensure that the licensees are collecting and reporting the proper event data. As a result, the NRC’s routine inspection program would discover any failures of appropriate licensee reporting. In addition, the NRC holds periodic meetings to validate previously screened events.
18. Data source and verification: In accordance with the requirements of 10 CFR 95.57, licensees are required to report any alleged or suspected violations of the Atomic Energy Act, Espionage Act, or other Federal statutes related to classified information. However, for

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performance reporting, the NRC only counts those disclosures or compromises that actually cause damage to national security. Such events are reported to the cognizant security agency (i.e., the security agency with jurisdiction) and the regional administrator of the appropriate NRC Regional Office, as listed in Appendix A to 10 CFR Part 73. The regional administrator then contacts the Division of Facilities and Security at NRC headquarters. The Division of Facilities and Security assesses the violation and notifies other offices at the NRC, as well as other Government agencies, as appropriate. A determination is then made as to whether the compromise caused damage to national security. Any unauthorized disclosures or compromises of classified information causing damage to national security would result in immediate investigation and followup by the NRC.

19. Performance targets have changed from FY 2000 to FY 2002 to reflect additional historical data. (Targets were as follows: FY 2000-356; FY 2001-350; FY 2002-300)
20. Events of material entering the public domain in an uncontrolled manner are reported under 10 CFR 20.2201(a)(1)(i) and (ii). The NMED lists these events as reported by NRC licensees and, through the Agreement States, the Agreement State licensees. Data sources and verification: Events meeting this threshold could be reported to the NRC and/or Agreement States through a number of sources but primarily through licensee notifications. The Materials Inspection Program is a key element in verifying the completeness and accuracy of licensee reports.
21. Data sources and verification: Licensees are required to immediately report any criticality event to the NRC Operations Center by telephone. Licensees must then submit followup written reports to the NRC within 30 days of the initial report. These reports must contain specific information describing the event, as required by NRC regulations. The NRC may dispatch an augmented or incident inspection team (depending on the severity of accident) to verify the completeness and accuracy of the licensee's report. An event of this nature is immediately investigated and followed up.
22. Performance targets have changed from FY 2000 to FY 2002 to reflect additional historical data. (Targets were as follows: FY 2000-19; FY 2001-40; FY 2002-30)
23. Overexposures are those that exceed the dose limits specified in 10 CFR 20.2203(a)(2) as tracked in NMED. For fuel cycle activities, this extends to other hazardous materials used with, or produced from, licensed material, consistent with 10 CFR Part 70. Reportable chemical exposures are those that exceed license commitments. Such events would also include chemical exposures involving uranium recovery activities under the Uranium Mill



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Tailings Radiation Control Act. Multiple people may be affected by a single causal event. Data sources and verification: Events meeting this threshold could be reported to the NRC and/or Agreement States through a number of sources, but primarily through licensee notifications. The Materials Inspection Program is a key element in verifying the completeness and accuracy of licensee reports. The IMPEP also verifies the accuracy of the event reports.

24. Medical events (misadministrations), as reported under 10 CFR Part 35, are tracked in NMED. Multiple patients may be affected by a single causal event. Data sources and verification: Events meeting this threshold could be reported to the NRC and/or Agreement States through a number of sources, but primarily through licensee notifications. The Materials Inspection Program is a key element in verifying the completeness and accuracy of licensee reports.
25. Performance targets have changed from FY 2000 to FY 2002 to reflect additional historical data (Targets were as follows: FY 2000-39; FY 2001-6; FY 2002-5)
26. Events that meet this measure are reportable under 10 CFR 20.2203(a)(3)(ii). Reports of such events must document actual releases of material; reportable events involving radiation fields are not counted under this measure. This measure also includes chemical releases from regulated activity under the Uranium Mill Tailings Radiation Control Act. Data sources and verification: Events meeting this threshold could be reported to the NRC and/or Agreement States through a number of sources, but primarily through licensee notifications. The Materials Inspection Program is a key element in verifying the completeness and accuracy of licensee reports.
27. “Malevolent use” is defined as the deliberate misuse of radioactive materials with the intent to cause physical or psychological harm to a person or persons, or to cause physical damage to a facility or the environment. The NRC evaluates intentional violations and deliberate acts against this definition. Data sources and verification: Events meeting this threshold could be reported to the NRC and/or Agreement States through a number of sources, but primarily through licensee notifications. The NRC responds to licensee reports or allegations by initiating an independent investigation to verify the completeness and accuracy of the data.
28. The NRC recognizes that no explicit reporting requirements exist for substantiated breakdowns of programs. The NRC relies on its safeguards inspection findings and licensee notifications. Data sources and verification: Such events must be recorded within 24 hours

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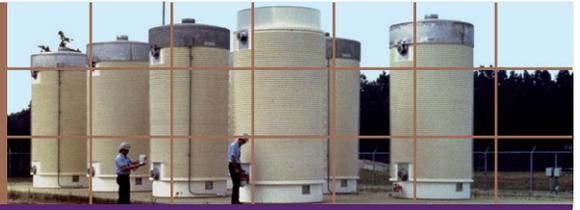
in a safeguards log maintained by the licensee. The NRC relies on its safeguards inspection program to help validate the reliability of the recorded data and determine whether a breakdown of a physical protection or material control and accounting system has, in actuality, resulted in a vulnerability. The NRC also evaluates the data in order to ensure that licensees are collecting and reporting the proper event data.

29. This involves chemical releases from NRC-regulated activities under the Uranium Mill Tailings Radiation Control Act. Data sources and verification: Events meeting this threshold could be reported to the NRC and/or Agreement States through a number of sources, but primarily through licensee notifications. The Materials Inspection Program is a key element in verifying the completeness and accuracy of licensee reports. Releases that cause impacts to the environment that cannot be mitigated within applicable regulatory limits using reasonably available methods are not readily defined. The expert judgement of NRC personnel and that of other agencies, such as the Environmental Protection Agency, are relied upon to make that determination. Events of this magnitude would result in prompt and thorough investigation.

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30. The decision on whether to ascribe the cause of a death to conditions related to acute radiation exposures will be made by NRC or Agreement State technical specialists or our consultants. Data sources and verification: Events meeting this threshold are reported to the NRC and/or Agreement States primarily through required licensee notifications, although other sources may also report such events. The NRC summarizes these events in event notifications and preliminary notifications, which are used to communicate this information internally to the appropriate managers and staff. The NRC then enters the reports into the Nuclear Materials Event Database (NMED), which is an essential system for collecting, tracking, and evaluating information on such events. The Integrated Materials Performance Evaluation Program (IMPEP) also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events and entering them into NMED as received from the licensees.

Determining whether any deaths result from acute radiation exposures is valid and fundamentally essential to protecting public health and safety. Events of this magnitude are not expected and would be rare. If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions by the licensee and NRC to mitigate the situation and prevent recurrence. In addition to these immediate actions, the NRC holds periodic meetings where staff and management validate previously screened events.



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31. “Significant radiation exposures” are defined as those that result in unintended permanent functional damage to an organ or a physiological system as determined by a physician in accordance with Abnormal Occurrence Criterion I.A.3. Data sources and verification: Events meeting this threshold are reported to the NRC and/or Agreement States primarily through required licensee notifications, although other sources may also report such events. The NRC summarizes these events in event notifications and preliminary notifications, which are used to communicate this information internally to the appropriate managers and staff. The NRC then enters the reports into NMED, which is an essential system for collecting, tracking, and evaluating information on such events. The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events and entering them into NMED as received from the licensees.

Any event resulting in an unintended permanent function damage to an organ or physiological system compromises public health and safety. Events of this magnitude are not expected and would be rare. If such an event were to occur, it would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions by the licensee and NRC to mitigate the situation and prevent recurrence. In addition to these immediate actions, the NRC holds periodic meetings where staff and management validate previously screened events.

32. Releases that have the potential to cause “adverse impact” are currently undefined. As a surrogate, we use those that exceed the limits for reporting abnormal occurrences as given by Abnormal Occurrence criterion 1.B.1 [normally 5,000 times the limit specified in Table 2 (air and water) of Appendix B to 10 CFR Part 20]. This information is available in NUREG-0090, the “Abnormal Occurrence Report to Congress,” which is available on the NRC’s Web site at [www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0090/index.html](http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0090/index.html) Data sources and verification: Events meeting this threshold are reported to the NRC and/or Agreement States primarily through required licensee notifications, although other sources may also report such events. The NRC summarizes these events in event notifications and preliminary notifications, which are used to communicate this information internally to the appropriate managers and staff. The NRC then enters the reports into NMED, which is an essential system for collecting, tracking, and evaluating information on such events. The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events and entering them into NMED as received from the licensees.

The events reported under this measure are those that threaten the environment. Events of this magnitude are not expected and would be rare. If such an event were to occur, it

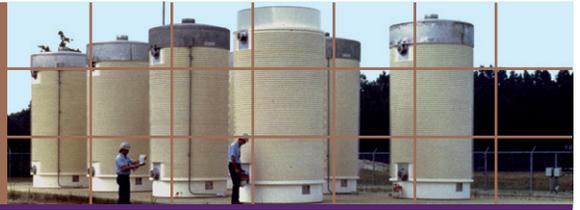
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would result in prompt and thorough investigation of the event, its consequences, its root causes, and the necessary actions by the licensee and NRC to mitigate the situation and prevent recurrence. In addition to these immediate actions, the NRC holds periodic meetings where staff and management validate previously screened events.

33. Data sources and verification: In accordance with Appendix G to 10 CFR Part 73 and 10 CFR 74.11(a), licensees report events that entail losses, thefts, diversions, or radiological sabotage of special nuclear material or radioactive waste. Licensees must report such events to the NRC Headquarters Operations Center within 1 hour of their occurrence. Licensees are also required to file a followup written report with the NRC within 30 days of the event. The report must include sufficient information for NRC analysis and evaluation. The NRC then enters and tracks the events in NMED and initiates an independent investigation to verify the reliability of the reported information. Any Strategic Plan failure results in immediate investigation and followup, and is tracked in the Safeguards Summary Event List Database. Any lack of appropriate licensee reporting would be discovered through the routine inspection program. In addition to these immediate actions, the NRC holds periodic meetings where staff and management validate previously screened events.

This measure only applies to actual losses, thefts, diversions, or radiological sabotage. Attempts to steal, divert, or conduct sabotage using special nuclear material or radioactive waste are covered by a parallel measure at the performance goal level. Such events could compromise public health and safety, the environment, and the common defense and security.

34. Overexposures are those that exceed the dose limits specified in 10 CFR 20.2203(a)(2) as tracked in NMED. Data sources and verification: Events meeting this threshold are reported to the NRC and/or Agreement States primarily through required licensee notifications, although other sources may also report such events. The NRC summarizes these events in event notifications and preliminary notifications, which are used to communicate this information internally to the appropriate managers and staff. The NRC then enters the reports into NMED, which is an essential system for collecting, tracking, and evaluating information about such events. The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events, and entering them into NMED as received from the licensees.
35. The NRC recognizes that no explicit reporting requirements exist for substantiated breakdowns of physical protection. The NRC relies on its safeguards inspection findings and licensee notifications. Data sources and verification: Events such as those described above must be recorded within 24 hours in a safeguards log maintained by the licensee. No



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explicit reporting requirements exist for substantiated breakdowns of physical protection. The NRC relies on its safeguards inspection program to help validate the reliability of the recorded data and determine whether a breakdown of a physical protection system has, in actuality, resulted in a vulnerability. The NRC also evaluates the event data in order to ensure that licensees are collecting and reporting the proper event data.

36. A 30-day reporting requirement applies to such releases under 10 CFR 20.2203(a)(3).11. Data sources and verification: Under 10 CFR 20.2203(a)(3), the NRC requires licensees to report any radiological release to the environment within 30 days of occurrence, when such a release occurs as a result of operational activities and exceeds the regulatory limits. Events meeting this threshold are reported to the NRC and/or Agreement States primarily through required licensee notifications, although other sources may also report such events. The NRC summarizes these events in event notifications and preliminary notifications, which are used to communicate this information internally to the appropriate managers and staff. The NRC then enters the reports into NMED, which is an essential system for collecting, tracking, and evaluating information about such events. The IMPEP also provides a mechanism to verify that Agreement States and NRC regions are properly collecting and reporting such events and entering them into NMED as received from the licensees.
37. Measuring the protection of future generations over the planning period of the next 5 years is a unique challenge, which the Commission is continuing to evaluate. Data sources and verification: The NRC monitors events and issues related to the safe handling, use, transportation, storage, and disposal of radioactive waste and materials that are reported to the Commission in accordance with existing regulations. The NRC monitors events that might indicate a current or future inability of licensee or licensee's contractor's to perform a required function or activity in a safe manner. Any event, condition or substantiated allegation that is formally reported to the NRC is evaluated for safety impact and potential generic implications.
38. A 10 CFR 2.206 petition is a written request filed by any person to institute a proceeding to modify, suspend, or revoke a license, or for any other enforcement action. The petition specifies the requested action and sets forth the facts that constitute the basis for the request. The NRC evaluates the technical merits of the safety concern presented by the petition. Based on the facts determined by the NRC technical evaluation or investigation of the merits of the petition, the Director will issue a decision to grant or deny the petition, in whole or in part. The Director's Decision explains the bases upon which the agency has granted or denied the petition and identifies the actions that the NRC has taken (or will take) in response to the petition.

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39. The start time of the 120 days is the date that the Petition Review Board (PRB) determines that the proposed petition satisfies the criteria of NRC Management Directive 8.11, “Review Process for 10 CFR 2.206 Petitions,” and acknowledges the petitioner’s request with a formal letter. The end time is the date of the proposed Director’s Decision. Supplements to the petition that require extension of the schedule will reset the beginning of the metric to the date of a new acknowledgment letter.

## INTERNATIONAL NUCLEAR SAFETY SUPPORT

40. “Domestic safeguards” are those nuclear material control and accounting measures and physical protection measures implemented by and within any country, including the United States, to prevent sabotage of nuclear materials or facilities or theft or diversion of nuclear materials by an individual or group within that country. Secure use of nuclear materials is achieved through the successful implementation of domestic safeguards. “International safeguards” are the independent verifications performed by the IAEA of a country’s “peaceful use” declarations on nuclear materials and nuclear facilities.
41. Section 123 of the Atomic Energy Act, as amended, requires agreements for Cooperation in the Civil/Peaceful Use of Nuclear Energy to establish the legal framework for technical cooperation in the production and use of special nuclear material, as well as for the supply of such material or fuel cycle equipment, or related sensitive information, to another country or international organization. These Agreements for Cooperation (or Section 123 Agreements, as they are also known) include such nonproliferation conditions and controls as safeguards commitments; a guarantee of no explosive or military use; a guarantee of adequate physical protection; and U.S. rights to approve retransfers, enrichment, reprocessing, other alterations in form or content, and storage of U.S.-supplied or derived material. They must be in effect before the NRC can issue an export license.
42. “Significant incidents” are incidents that include a loss (by theft or diversion) of 1 or more kilograms of weapons-grade uranium or plutonium, the detonation by a non-nuclear weapon state of a nuclear explosive device, or the abrogation of Nuclear Nonproliferation Treaty safeguard commitments by a non-nuclear weapon state.

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