

## **APPENDIX IV: VERIFICATION AND VALIDATION OF NRC MEASURES AND METRICS**

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### **INTERNATIONAL NUCLEAR SAFETY SUPPORT**

**STRATEGIC GOAL:** Support U.S. interests in the safe and secure use of nuclear materials and in nuclear non-proliferation.

**Measures:**

- *Fulfills 100 percent of the significant obligations over which the NRC has regulatory authority arising from statutes, treaties, conventions, and Agreements for Cooperation.*

**Verification:** At the beginning of the fiscal year, the NRC prepares a list of its significant obligations. The list is coordinated with the NRC International Council (IC) and forwarded to the Commission for review and comment. The NRC monitors activities it undertakes during the year in regard to these obligations. A year-end status report is forwarded to the Department of State (DOS) Office of Nuclear Energy Affairs for their information and as a means of external confirmation.

**Validation:** The obligations to be tracked are those that, if unfulfilled, could undermine U.S. interests in the safe and secure use of nuclear materials and in nuclear non-proliferation. The circumstances surrounding any such failures of the NRC, their implications and recovery plans, are reported to the Commission and separately described in DOS or International Atomic Energy Agency (IAEA) reports, confirming their national and international significance.

**Illustrative Examples of "significant obligations over which the NRC has regulatory authority arising from statutes, treaties, conventions, and Agreements for Cooperation."**

**Nuclear Non-Proliferation Treaty - [1969] and the U.S. Nuclear Non-Proliferation Act - [1978]**

NRC is obliged to carry out procedures to facilitate the timely processing of requests for export licenses in order to enhance the reliability of the U.S. in meeting its commitments to supply nuclear reactors and fuel to countries that adhere to effective non-proliferation policies. NRC is also obliged to provide timely views to the Executive Branch when consulted regarding proposed Agreements for Cooperation in the Peaceful Uses of Nuclear Energy, subsequent arrangements and transfers of nuclear technology.

**Convention on Early Notification of a Nuclear Accident - [1986]**

The U.S. Government is obliged to report to the IAEA and affected countries any U.S. nuclear accidents which have the potential for international trans-boundary release of radioactive material

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that could be of safety significance to another country. In that context, NRC must report such accidents within its purview to Executive Branch contacts, following established U.S. Government procedures.

### **Convention on Assistance in the Case of Nuclear Accident or Radiological Emergency - [1987]**

The U.S. Government is obliged to cooperate in order to facilitate prompt assistance and support in the event of nuclear accidents or radiological emergencies. The U.S. Government is required to notify the IAEA of its available experts, equipment and other materials for providing assistance and would decide whether it can render requested assistance and on what terms. In that context, NRC must advise Executive Branch contacts of its assistance capabilities, following established U.S. Government procedures.

### **Convention on the Physical Protection of Nuclear Material - [1987]**

NRC is obliged to require U.S. licensees to meet mandatory criteria for the physical protection of nuclear material during international transport.

### **Convention on Nuclear Safety (CNS) - [1996]**

NRC is obliged to take regulatory and administrative measures to implement obligations under the CNS as they apply to NRC-licensed nuclear facilities, including provisions for Reporting, Existing Nuclear Installations, Legislative and Regulatory Framework, Regulatory Body, Responsibility of the License Holder, Priority to Safety, Financial and Human Resources, Human Factors, Quality Assurance, Assessment and Verification of Safety, Radiation. Significant obligations of the CNS which may require NRC actions beyond those inherent in our domestic regulatory program, are in the areas of Reporting, Emergency Preparedness and Siting, as follows.

Reporting - NRC has the lead responsibility within the U.S. Government to prepare, prior to each meeting of the Parties, a report on the measures taken to implement each of the obligations of the Convention.

Emergency Response - NRC must ensure that the competent authorities of Canada and Mexico are provided with appropriate information for emergency planning and response for any licensed nuclear facilities in their vicinities.

Siting - NRC must ensure that appropriate procedures are established and implemented for consulting the competent authorities of other Parties to the Convention in the vicinity of a proposed nuclear installation, insofar as they are likely to be affected by that installation and,

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upon request, providing the necessary information in order to enable them to evaluate and make their own assessment of the likely safety impact on their own territory of the nuclear installation.

##### The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management- [Opened for Signature, 1997]

When the Convention is ratified by the U.S. and comes into force, NRC will be obliged to take certain regulatory and administrative measures to implement its provisions. These obligations are comparable to those described above for the CNS, except that NRC would support, not lead, preparation of the U.S. reports.

- *No significant proliferation incidents attributable to some failure of the NRC.*

**Verification:** The NRC monitors State Department and Central Intelligence Agency reports, as well as newspapers, nuclear journals and other open sources of information, for reports of significant proliferation incidents. Such incidents would include: the detonation of a nuclear explosive device by any country other than the U.S., U.K., Russia, France and China; refusal by any non-nuclear weapon state with which the U.S. has an Agreement for Cooperation to accept IAEA safeguards on all its nuclear activities; refusal by any such country not to give specific assurances that they will not manufacture or otherwise acquire any nuclear explosive device; engagement of any such country in activities involving source or special nuclear material and having direct significance for the manufacture or acquisition of nuclear explosive devices; or the theft or diversion from authorized peaceful use by any country, sub-national group or individual of 1 kilogram or more of U.S. supplied or obligated highly enriched uranium or plutonium-239.

The NRC prepares an analysis of any reported significant incidents to determine if some failure of the NRC contributed to its occurrence. This information is reported to the IC and, as appropriate, to the Commission.

**Validation:** The proliferation incidents of interest are those of such significance that they would be reported to the Congress by DOS. NRC would necessarily consider whether the incident was abetted by some action or inaction on our part. If so, the incident would represent an NRC performance failure.

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- *No significant safety or safeguards events that result from the NRC's failure to implement its international commitments.*

**Verification:** Significant safety events are those events which are rated 2 or above on the International Nuclear Events Scale. Significant safeguards events are those events which are judged by the IAEA Director General and staff to require notification to the IAEA Board of Governors. The NRC monitors INES reports and IAEA Board of Governors documents to identify any/all significant events during the fiscal year.

The NRC staff specialists prepare a quick-look analysis of each significant event to determine if some failure of the NRC may have materially contributed to its occurrence. This information will be promptly reported to the IC and, as appropriate, to the Commission.

**Validation:** Significant safety and safeguards events usually raise questions from Congressional oversight committees and the trade press, if not the major news media. NRC would necessarily consider whether the incident was abetted by some action or inaction on our part. If so, the incident would represent an NRC performance failure.