

The U.S. Nuclear Regulatory Commission's Implementation of the U.S./IAEA Additional Protocol

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INTRODUCTION

On January 6, 2009, the United States of America (U.S.) submitted the instrument of ratification for the "Protocol Additional to the Agreement between the U.S. and the International Atomic Energy Agency (IAEA) for the Application of Safeguards in the United States of America" (U.S./IAEA Additional Protocol) to the IAEA, bringing the U.S./IAEA Additional Protocol treaty into force. The U.S. Nuclear Regulatory Commission (NRC) is responsible for overseeing the implementation of the U.S./IAEA Additional Protocol at the NRC and Agreement State licensed locations, except at those licensees for which the U.S. Department of Energy (DOE) or Department of Defense (DOD) are assigned Lead Agency responsibility. DOE or DOD serves as Lead Agency at locations located on a DOE or DOD owned, operated or leased facility or property. On December 23, 2008, the NRC issued revisions to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 75, "Safeguards on Nuclear Material-Implementation of U.S./IAEA Agreement" and 10 CFR Part 110, "Export and Import of Nuclear Equipment and Material," incorporating the new requirements necessary to ensure compliance with the U.S./IAEA Additional Protocol. The NRC and the U.S. Department of Commerce (DOC) have jointly developed and coordinated the regulations and information collection process for the U.S./IAEA Additional Protocol to ensure consistent implementation for all commercial entities.

IMPLICATIONS FOR LICENSEES

The NRC is responsible for ensuring compliance with the U.S./IAEA Safeguards Agreement and the Additional Protocol at those facilities licensed by the NRC and its Agreement States. These include the approximately 4,000 NRC licensees and approximately 18,000 Agreement State licensees. Licensees conducting the following activities must report information under the U.S./IAEA Additional Protocol:

1. Research and development activities are reportable under Articles 2.a (i) and 2.b (i): This includes nuclear fuel cycle-related research and development not involving the direct use of nuclear material.
2. Article 2.a (ii) covers information specifically requested by IAEA, that the U.S. agrees to provide, that would allow the IAEA to enhance the effectiveness or efficiency of safeguards inspections at a U.S. facility.
3. Under Article 2.a (iii) facilities of licensees currently on the U.S. Eligible Facilities List and whose Design Information for the facility was submitted to the IAEA must provide basic information related to each building within the site as declared to the IAEA.
4. Article 2.a (iv) addresses manufacturing activities including the manufacture, assemble, or construct key equipment and materials used in the nuclear fuel cycle. The majority of these activities are expected to include gas centrifuge manufacture or assembly, reactor control rod manufacture, hot cell construction, and irradiated fuel cask manufacture.
5. Mines and concentration plants are covered in Article 2.a (v). This article includes in-situ leach facilities, uranium ore mills, uranium and thorium recovery plants, and plants that recover uranium or thorium from the processing of other types of ores and materials, including mines and plants that are closed but that have not been decommissioned.
6. Licensees required to report under Article 2.a (vi) the possession, import, or export of source material preceding the starting point of IAEA safeguards. These nuclear materials are

predominantly uranium ore concentrates and by-product materials containing uranium or thorium resulting from purification of non-nuclear materials.

7. Article 2.a (vii) and 2.a (viii) deal with exempted and terminated nuclear material: these articles cover nuclear materials on which the IAEA has approved termination of safeguards or exemption from safeguards. There are currently no materials present in the U.S. that fall under these articles.
8. The import or export nuclear fuel cycle-related equipment and non-nuclear materials are reported under Article 2.a (ix). These exports were already subject to U.S. export controls, however the U.S. Additional Protocol requires licensees to report this information on a quarterly basis.

REPORTED INFORMATION

Information for the initial U.S. declaration under the U.S./IAEA Additional Protocol and the first quarterly report of export activities has been collected and submitted to the IAEA. Table 1 shows the numbers of licensees and related entries included in declarations. (Note: Some licensees reported under multiple articles.)

Article 2.a (i)	Research and Development Activities	2 Licensees	4 Entries
Article 2.a (iii)	Buildings at Nuclear Sites ¹	8 Licensees	118 Entries
Article 2.a (iv)	Manufacturing Activities	2 Licensees	3 Entries
Article 2.a (v)	Mines and Concentration Plants	12 Licensees	12 Entries
Article 2.a (vi)	Pre-Safeguards Source Material	1 Licensee	1 Entries
Article 2.a (ix)	Equipment Imports and Exports	2 Licensees	47 Entries

SUMMARY

The NRC has updated its regulations to incorporate reporting requirements necessary to allow the U.S. to fulfill its obligations under the U.S./IAEA Additional Protocol. The expanded scope and reporting obligations established by the U.S./IAEA Additional Protocol significantly increases the amount of information and number of licensees involved in reporting information to the IAEA. The NRC and DOC have worked closely together to simplify the reporting process and minimize the burden on industry.

¹ The facilities of these licensees are currently on the U.S. Eligible Facilities List and had Design Information for the facility submitted to the IAEA.