

ADDITIONAL PROTOCOL IMPLEMENTATION AT NRC- LICENSED LOCATIONS

August 24, 2005

Bruce W. Moran, Senior International Safeguards
Technical Analyst
U.S. Nuclear Regulatory Commission,
Washington, D.C.

Additional Protocol Objective

- General: To detect undeclared nuclear material and activities in non-nuclear weapons states
- U.S.: To promote U.S. nonproliferation goals by demonstrating that the Additional Protocol does not place non-nuclear weapon states at a commercial disadvantage

Additional Protocol Status

- Signed by United States in June 1998
- Approved by Senate on March 31, 2004
- Implementing Legislation
- Regulatory changes
- Ratification by President
- Entry into Force
- Initial declaration on locations to IAEA within 180 days of entry into force

Additional Protocol Scope

- Additional and broader information on nuclear-related activities in United States
 - Declaration of activities without nuclear materials
- Additional and broader IAEA access to nuclear-related activities
 - Verification of scope of declared activities
- Facilitated administrative requirements
 - Enhanced designation of IAEA inspectors
 - Multiple entry visas for IAEA inspectors

U.S. Declared Activities

- Certain nuclear fuel cycle-related R&D
- Activities on sites of certain nuclear facilities
- Certain nuclear fuel cycle-related manufacturing
- Mining, milling, and concentration plants
- Import, export, or possession of materials preceding starting point of IAEA safeguards
- Export of certain nuclear fuel cycle-related equipment, heavy water, and certain graphite
- Location of IAEA-exempted or terminated nuclear materials

Research and Development

Article 2.a(i)

- Government-affected R&D
 - Funded, specifically authorized or controlled by, or carried out on behalf of U.S. Government
 - Includes NRC-licensed activities
- Most fuel cycle-related processes
 - Conversion, enrichment, fuel manufacture, reactors, etc
- Not involving direct use of nuclear material
- Activities related to process or systems development, does not include basic research

B/10

Research and Development (cont)

Category 2: Article 2.b.(i)

- R&D for which U.S. Government has no official knowledge
- Enrichment and irradiated fuel/waste processing only
- Not involving direct use of nuclear material
- Activities related to process or systems development, does not include basic research

Sites of Nuclear Facilities

Article 2.a(iii)

- Facility on current Eligible Facilities List
- Formerly or currently selected facility for which Design Information Questionnaire was submitted to IAEA
- Framatome-ANP (WA and VA), Global Nuclear Fuels (NC), Westinghouse (SC and MO), Salem NPP, Turkey Point NPP, San Onofre NPP, Arkansas I NPP
- BWXT Downblending Facility

Manufacturing Activities

Article 2.a(iv)

- Only active manufacturing, assembly, or construction during reporting year
 - Enrichment technology major components
 - Reactor control rods
 - Zirconium tubing
 - Hot cells
 - Criticality safe vessels for plutonium solutions
 - Casks for irradiated fuel
 - Nuclear grade graphite
 - Heavy water
 - Irradiated fuel chopping machines

Uranium and Thorium Mining, Milling, and Concentration Plants

Article 2.a(v)

- Operating, stand-by, closed, and abandoned locations
- Includes by-product recovery from other ore purification activities
- 50 in-situ leach mines, 70 uranium mills, and 30 other concentration plants

Impure Source Material

Article 2.a(vi)

- Source material preceding the starting point of IAEA safeguards
 - Uranium ore concentrates
 - By-product from other ore processing
- Possession of impure source material
- Import and export of impure source material for non-nuclear end uses

IAEA Exempted or Terminated Nuclear Material

Articles 2.a(vii and viii)

- No IAEA-exempted or terminated nuclear material in IAEA records for the United States
- Exemption of nuclear material may facilitate protection of in-process inventory at centrifuge enrichment facilities

Exports of Equipment and Material

Article 2.a(ix)

- Equipment and non-nuclear materials licensed by NRC for export
- NRC currently collects all information required to be reported
- IAEA may request to verify information on imports of covered equipment and material

NRC Status

- Outreach
- Regulatory revisions
- Reporting forms
- Data collection and management system
- Guidance documents and supporting information

NRC Outreach

- Inform licensees of new requirements and identify affected licensees
- Presentations to NEI in 1997, 1998, 2004
- Technical meetings in 2004
- Meetings/communications with affected licensees after rule change published
- Additional Protocol website
 - NRC website
 - Interagency website

NRC Rulemaking

- Draft rulemaking has been submitted for approval
 - Direct final rule
 - Must await OMB approval of reporting forms before formal NRC approval and publication
 - Rule cannot take effect until implementing legislation or treaty approved by the President
- Broadens scope of 10 CFR Part 75
 - Includes all licensees versus only licensed facilities
- Rule changes incorporate Additional Protocol requirements into existing Part 75
 - Additional information to be reported
 - Additional IAEA access

Guidance Document Development

- Who must report
- List of affected licensees
- Reporting guidance and instructions
- Access guidance

Information Collection

- NRC and Commerce developing joint report forms
- Common information placed on separate form to eliminate repetitive entries
- Forms designed to limit entry of free text
- Previously reported information will populate forms to minimize data entry
- Licensees required to use web-based forms

Information Collection, Management and Reporting

- National security agencies will be informed of locations from which information is to be requested
 - NRC reporting activities are not national security activities
- NRC and Commerce will share system for receiving and reviewing reports
 - Web-based forms for data entry
 - NRC review of reported information for acceptability

IAEA Access

- IAEA expected to seek resolution of concern before seeking access
- Safety/Security escort by installation
- NRC escort required, other agencies as can be accommodated by licensee
- Reporting entity will identify to NRC managed access needed to protect proprietary information and to meet safety and security regulations
- U.S.-approved equipment