



Chemical Security

**Office of Nuclear Security and Incident Response
U.S. Nuclear Regulatory Commission**

June 13, 2012

Topics

- MOU with DHS
- SRM Actions
- Data Collection
- Data Analysis
- Interaction with Industry

Memorandum of Understanding (MOU) with DHS

- Discusses interaction between NRC and DHS related to chemical security
- Identifies which NRC regulated facilities are exempt, either in whole or in part
- Identifies that fuel cycle facilities are exempt from DHS CFATS
- NRC is responsible for regulating the security of chemicals within the OCA

SRM-11-0108 Actions

- Collect data from fuel cycle facilities related to chemicals and associated security
- Consider safety/security interface, to include security derived from safety measures
- Determine tiering of facilities based on potential consequences of chemicals (similar to DHS tiering)
- Determine if security gaps exist for chemicals
- Interact with licensees at a workshop to identify security measures to fill gaps
- Brief TAs and prepare a Commission Paper

Path Forward

- Collect data
- Analyze data to determine if security gaps exist
- Inform Commission of results of analysis
- Interact with industry to identify approaches to fill security gaps
- Provide Commission with Notation Vote Paper

Data Collection

- Information on Chemicals
 - ✦ Inventory of chemicals of interest
 - ✦ Locations, quantities and concentrations
- Existing Security
 - ✦ Security required by NRC
 - ✦ Additional security measures that may exist at facility
- Safety Measures that Contribute to Security

Chemicals Identified in Previous Study at Fuel Cycle Facilities

- Ammonia
- Ammonium Hydroxide
- Chlorine
- Chlorine Trifluoride
- Fluorine
- Hydrogen
- Hydrogen Chloride
- Hydrogen Fluoride
- Hydrogen Peroxide
- Iodine Pentafluoride
- Natural gas (methane)
- Nitric Acid
- Sulfur Dioxide
- Triethanolamine
- UF₆
- Sulfuric Acid

DHS:18 Risk-Based Performance Standards (RBPS)

1. Restrict Area Perimeter
2. Secure Site Assets
3. Screen and Control Access
4. Deter, Detect, and Delay
5. Shipping, Receipt, and Storage
6. Theft or Diversion
7. Sabotage
8. Cyber
9. Response
10. Monitoring
11. Training
12. Personnel Surety
13. Elevated Threats
14. Specific Threats, Vulnerabilities, and Risks
15. Reporting Significant Security Events
16. Significant Security Incidents and Suspicious Activities
17. Officials and Organization
18. Records

Data Collection Approach

- ✦ NRC collection of information via site visits
 - Compile information already at HQ
 - Chemical inventory information
 - Latest site security plan
 - Develop data checklist
 - Conduct site visit to gather information (< 1 day)
 - Compile data and prepare report of observations
 - Provide report of observations to licensee for comment

Data Analysis

- Potential “tiering” of facility/chemicals – informed by DHS methods
- Identify security measures that afford protection of chemicals
- Assess adequacy of security for chemicals
 - ⊕ Compare against CFATS RBPS
 - ⊕ Consider measures DHS has approved for chemical facilities
- Identify general performance measures that would increase security to adequate levels
 - ⊕ Consider how they would fit into facility’s overall security program

Inform Commission

- Briefing to Commission Technical Assistants or Commissioner Assistants Note
 - ⊕ Summarize data collection and analysis
 - ⊕ Provide a summary of the results
 - ⊕ Inform regarding any security gaps identified
 - ⊕ Inform regarding the status of DHS' implementation of CFATS
- Following industry interaction, Commission Paper
 - ⊕ Describe staff's assessment of the security measures needed to provide adequate protection of chemicals
 - ⊕ Propose security measures that would fill existing gaps at NRC licensed facilities
 - ⊕ Identify potential regulatory approaches to address chemical security

Industry Interaction

- Conduct a workshop with NEI and licensees
 - ✦ Discuss the results of the data collection and analysis
 - ✦ Discuss general performance measures identified by NRC staff
 - ✦ Seek feedback from industry regarding alternate approaches
 - ✦ Present potential approaches for implementation

Tentative Schedule

- Site Visits – July – November 2012
- Commissioner TA Briefing – January 2013
- Workshop with Industry – March 2013
- Commission Paper – July 2013