U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

U.S. NRC Regulatory Initiatives in Enhancing Accountability of Radioactive Material:
U.S. National Source Tracking System

Andrew Mauer & Angela Randall
The American Association of Physicists in Medicine (AAPM)
51st Annual Meeting
July 28, 2009
Anaheim, California

1

Agenda

1. Overview/Background
2. Credentialing Process for Access to NSTS
3. Experience with NSTS
4. Potential Expansion of the System
5. System Illustration
6. User Feedback/Questions

2

Overview

- NRC uses a risk-informed, graded approach to enhance safety and security

- The security and control of radioactive sources has been significantly enhanced

- Integrated and comprehensive program in place for management and control of radioactive sources

- Continuing to work closely with domestic and international partners to improve

3

Background

- International/Domestic commitments
- Stakeholder coordination
- System deployed December 2008
- Regulations in 10 CFR 20.2207

CODE OF CONDUCT ON
THE SAFETY AND SECURITY OF
RADIOACTIVE SOURCES

U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

IAEA

4

What is NSTS?

Source Life Cycle
* For Category 1 & 2

Source Destroyed
Source Manufactured
Source Decayed

Transfer, Import/Export

Inventory

US.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

5

Integrated Source Management

NSTS
DOE
OTHER AGENCIES
OTHER AGENCIES
NRC & STATES
WBL
LVS
LICENSEES

US.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

6

NSTS Overview

- Reporting by approximately 1,300 licensees with over 50,000 sources
- Source Transaction Reporting
  - Manufacture, import, export, transfer, receipt, disassembly, disposal
- User training
- System easy to use

US.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

7

NSTS Security

- High level of system security
- NRC is a pioneer agency
- Access requirements
- Access controls

US.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

8

Credentialing Process for Access to NSTS

Step 1
Applicant enrolls online http://pki.nrc.gov

Step 2
Online application is reviewed and approved

Step 3
A paper identity proofing packet is mailed to the applicant

Step 4
The paper packet is completed by the applicant, notarized, and mailed back

Step 5
The paper packet and online application are reviewed, anomalies are resolved with the applicant, employment is verified and the enrollment is approved

Step 6
A smart card and reader are mailed to the applicant

Step 7
Reader is installed and used to download the applicant's certificate to the smart card

Note: Entire process is expected to take less than 30 days with prompt applicant responses

US.NRC

9

Where We Are Today

- Reconciling data
- Increasing online usage

US.NRC

10

Upcoming Activities

2011

2009

Version 2

Renew Certificates

NSTS Software Enhancements

Annual Inventory Reconciliation

Enhance Communication & Outreach
Revision of NSTS Website, Updating 748 Form, NSTS Newsletter, Additional Training

NSTS Expansion

1. April 11, 2008: Proposed rule published for public comment to expand NSTS to **1/10 of Category 3**

2. June 10, 2009: Final rule provided to Commission to expand NSTS to **Category 3**

3. June 30, 2009: Commission was unable to reach a decision => **no expansion at this time**

US.NRC

12

National Source Tracking
System Illustration

US.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

13

Main Menu options vary depending on the user type

Filters allow for quick search of sources in own inventory

Choose source to transfer

Red asterisks indicate required field

Receiving licensee clicks on "receive sources" link on its profile to accept the transfer

Comments & Suggestions

NSTS Website:

http://www.nrc.gov/security/byproduct/nsts.html

NSTS Help Desk:

NSTS.Help@nrc.gov

1-877-671-6787

Questions