



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

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The American Association of Physicists in Medicine (AAPM)

51st Annual Meeting

July 28, 2009

Anaheim, California

# 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

# Overview

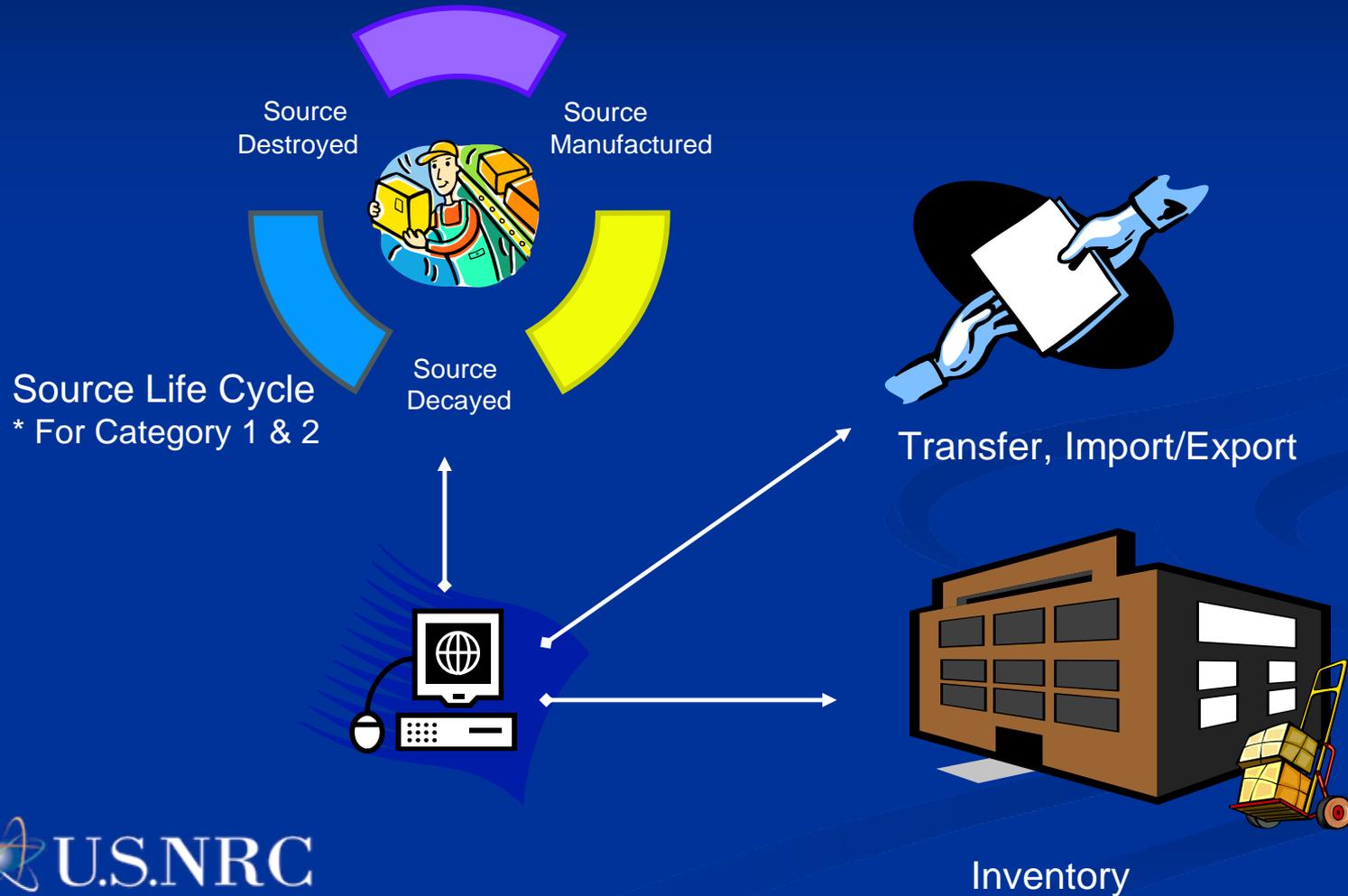
- NRC uses a risk-informed, graded approach to enhance safety and security
- The security and control of radioactive sources has been significantly enhanced
- Integrated and comprehensive program in place for management and control of radioactive sources
- Continuing to work closely with domestic and international partners to improve

# Background

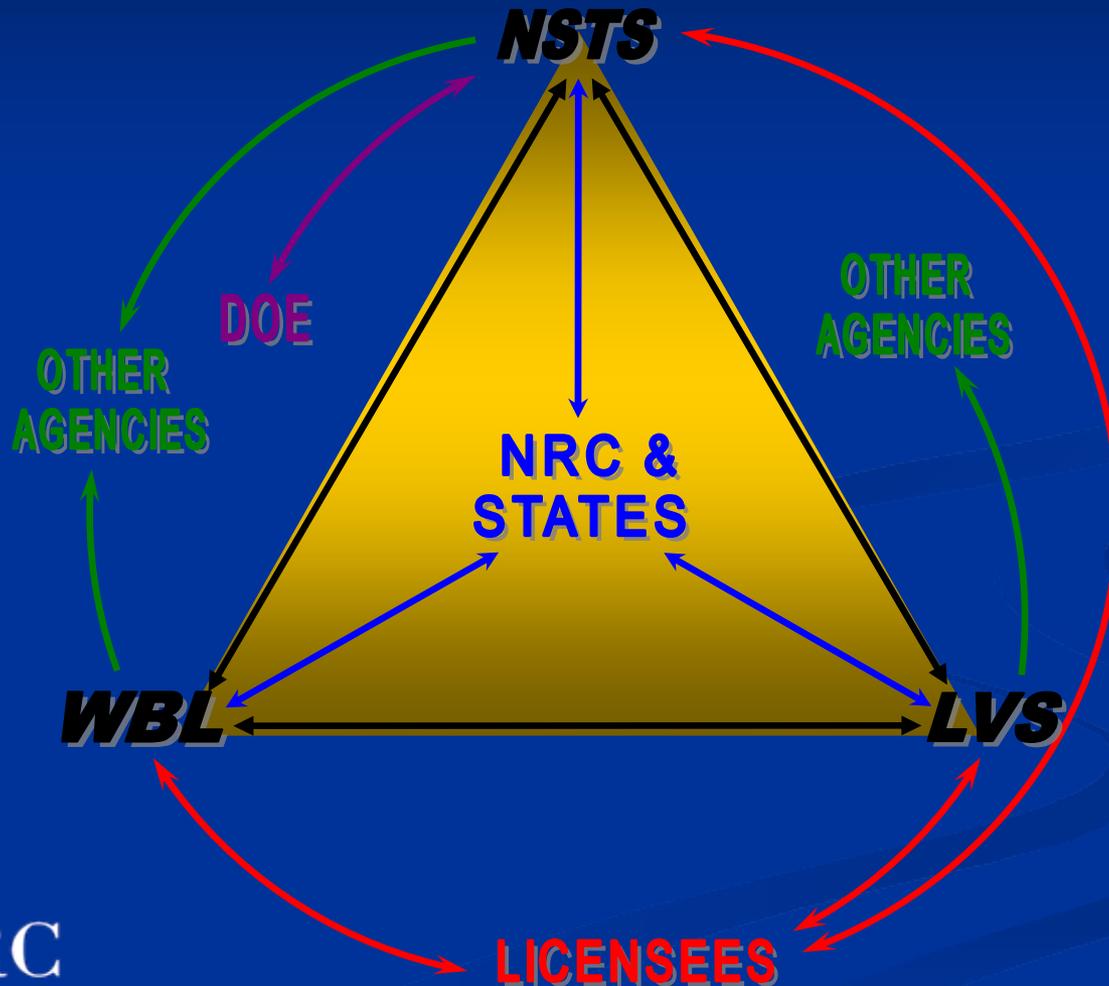
- International/Domestic commitments
- Stakeholder coordination
- System deployed December 2008
- Regulations in 10 CFR 20.2207



# What is NSTS?

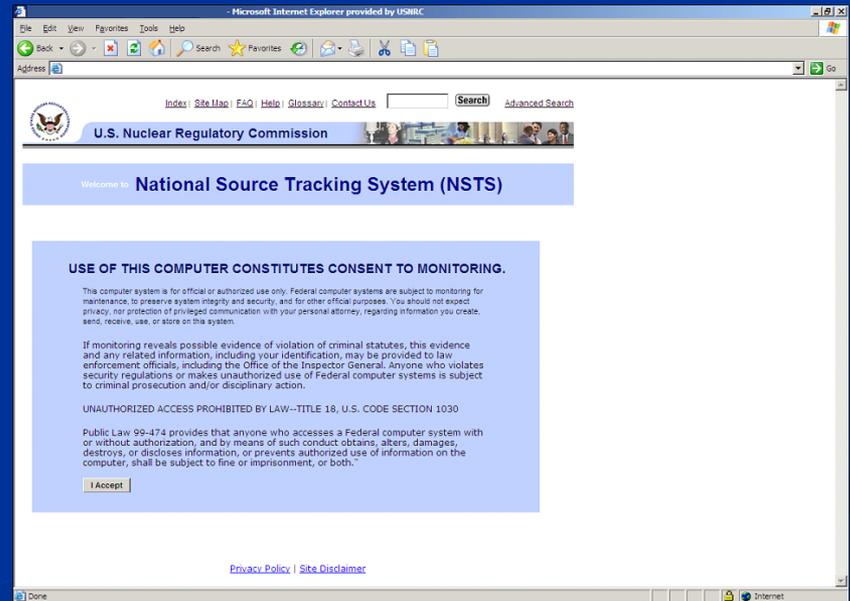


# Integrated Source Management



# 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



# NSTS Security

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



# 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

# Where We Are Today

- Reconciling data
- Increasing online usage



# 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

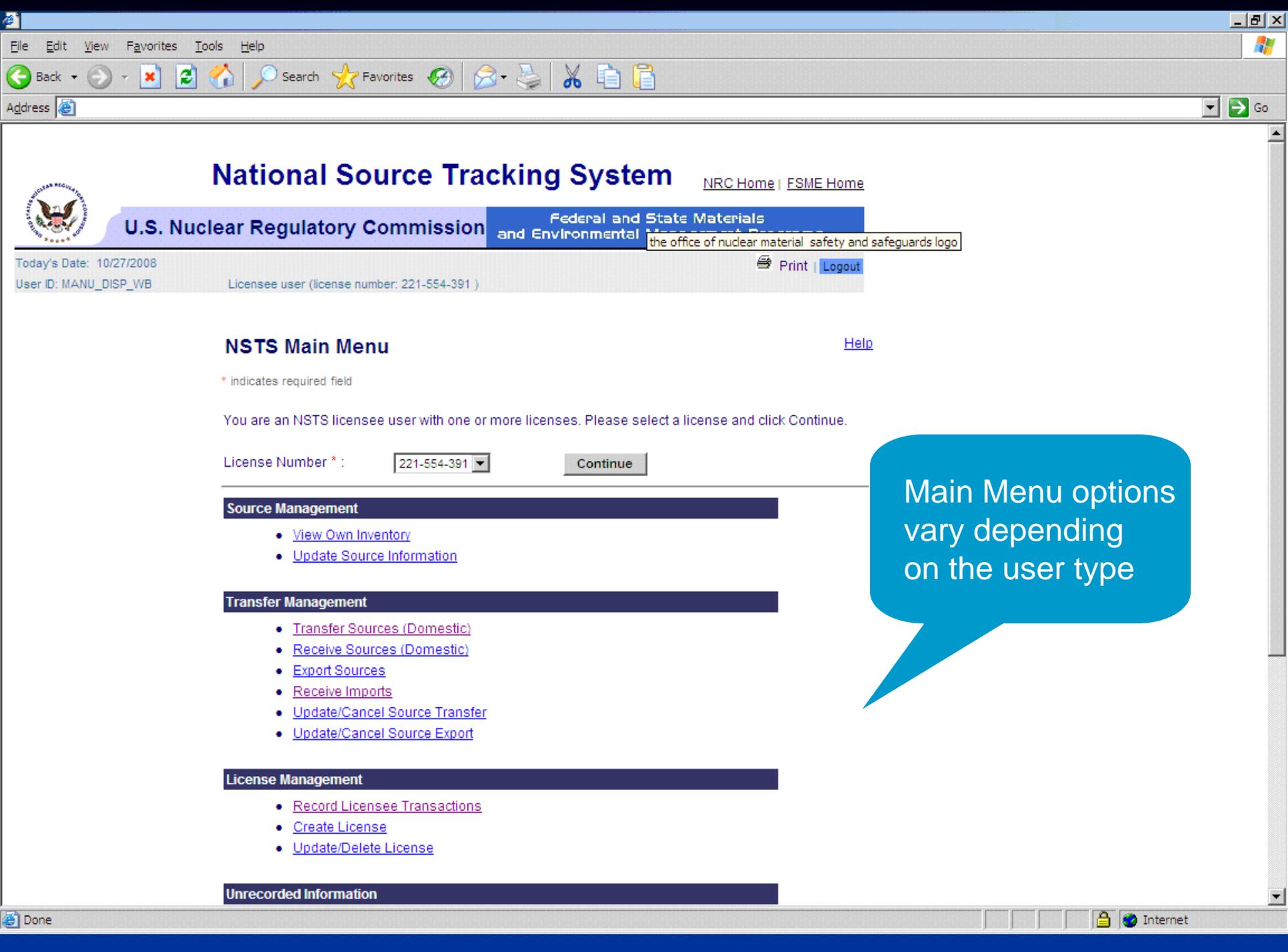
# NSTS Expansion

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**



# National Source Tracking System Illustration





# National Source Tracking System

[NRC Home](#) | [FSME Home](#)



U.S. Nuclear Regulatory Commission

Federal and State Materials  
and Environmental

the office of nuclear material safety and safeguards logo

Today's Date: 10/27/2008

User ID: MANU\_DISP\_WB

Licensee user (license number: 221-554-391 )

Print | [Logout](#)

## NSTS Main Menu

[Help](#)

\* indicates required field

You are an NSTS licensee user with one or more licenses. Please select a license and click Continue.

License Number \* :

221-554-391

### Source Management

- [View Own Inventory](#)
- [Update Source Information](#)

### Transfer Management

- [Transfer Sources \(Domestic\)](#)
- [Receive Sources \(Domestic\)](#)
- [Export Sources](#)
- [Receive Imports](#)
- [Update/Cancel Source Transfer](#)
- [Update/Cancel Source Export](#)

### License Management

- [Record Licensee Transactions](#)
- [Create License](#)
- [Update/Delete License](#)

### Unrecorded Information

Main Menu options vary depending on the user type

Search Criteria:

The wildcard (\*) can appear at the start, middle or end of the search text.

Make:	<input type="text" value="Please select Make"/>	Device Make:	<input type="text"/>
Model:	<input type="text" value="First choose Make"/>	Device Model:	<input type="text"/>
Serial Number:	<input type="text"/>	Device Serial Number:	<input type="text"/>
Source ID:	<input type="text"/>	Alternate Source ID:	<input type="text"/>
Isotope:	<input type="text" value="Select Isotope"/>	Operator:	<input type="text" value="Select Opera"/>
		Activity:	<input type="text"/>
		Unit:	<input type="text" value="Select U"/>

Include Sources Below Threshold:  Yes

[Set current sort](#)

Filters allow for quick search of sources in own inventory

Choose source to transfer

20 items found, displaying 1 to 10.

[\[First/Prev\]](#) 1, 2 [\[Next/Last\]](#)

Select	Make	Model	Serial Number	Source ID	Alternate Source ID	Isotope Name	Activity	Activity Unit	Activity Date	Source Status
<input type="checkbox"/>	Amersham Health	RAM-TYPE FOIL	AH-010808-1	23		Radium-226	653.0	Ci	01/01/2008	Above Threshold
<input type="checkbox"/>	Amersham Health	RAM-TYPE FOIL	AH-010808-2	24		Radium-226	650.0	Ci	01/14/2008	Above Threshold
<input checked="" type="checkbox"/>	Amersham Health	RAM-TYPE FOIL	AH-010808-3	25		Radium-226	65.0	Ci	01/14/2008	Above Threshold
<input type="checkbox"/>	Amersham Health	RAM-TYPE FOIL	AH-010808-4	26		Radium-226	650.0	Ci	01/01/2008	Above Threshold
<input type="checkbox"/>	Amersham Health	RAM-TYPE FOIL	AH-010808-5	27		Radium-226	650.0	Ci	01/01/2008	Above Threshold
<input type="checkbox"/>	Amersham Health	RAM-TYPE FOIL	AH-010808-6	28		Radium-226	650.0	Ci	01/14/2008	Above Threshold
<input type="checkbox"/>	Avis Laboratories	M-650	AL-M650-2	32	AL-1	Thulium-170	900.0	Ci	01/10/2006	Above Threshold
<input type="checkbox"/>	Avis Laboratories	M-650	AL-M650-3	33	AL-1	Thulium-170	0.024324324	Ci	01/01/2008	Above Threshold
<input type="checkbox"/>	Avis Laboratories	M-650	AL-M650-4	34	AL-1	Thulium-170	900.0	Ci	01/10/2006	Above Threshold
<input checked="" type="checkbox"/>	Campbell Industries	X-360	CI-X-002	36		Americium-241	420.0	Ci	05/02/2007	Above Threshold

# National Source Tracking System

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U.S. Nuclear Regulatory Commission

Federal and State Materials  
and Environmental Management Programs

Today's Date: 10/27/2008

User ID: MANU\_DISP\_WB

Licensee user (license number: 221-554-391 )

Print | [Logout](#)

[Back to Main Menu](#)

## Search and Choose Receiving Licensee

[Help](#)

Search Criteria:

The wildcard (\*) can appear at the start, middle or end of the search text.

Licensing Agency:

Licensee Name:

License Number:

Docket Number:

License Category:

Address: City:  State:

[Set current sort](#)

Search Results:

2 items found, displaying all items.

Select	License ID	Licensing Agency	License Number	Docket Number	License Name	License Category	MML Indicator	Additional License Information
<input checked="" type="radio"/>	32	U.S. Nuclear Regulatory Commission	221-554-380	50665280	Minnesota Mining and Manufacturing		N	<a href="#">Additional License Information</a>
<input type="radio"/>	5	U.S. Nuclear Regulatory Commission	221-554-346	50665322	Minnesota Mining and Manufacturing		N	<a href="#">Additional License Information</a>

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# Enter Transfer Information (Domestic)

[Help](#)

\* indicates required field

## Sources to Transfer:

Source No.	Make	Model	Serial Number	Source ID	Alternate Source ID	Isotope	Activity	Activity Unit	Activity Date	Source S
1	Campbell Industries	X-360	CI-X-002	36		Americium-241	420.0	CI	05/02/2007	Above Th
2	Amersham Health	RAM-TYPE FOIL	AH-010808-3	25		Radium-226	65.0	CI	01/14/2008	Above Th

## Receiving Licensee:

Licensing Agency	License Number	Docket Number	Licensee Name	Additional License Information	Change Receiving Licensee
U.S. Nuclear Regulatory Commission	221-554-380	50665280	Minnesota Mining and Manufacturing	<a href="#">Additional License Information</a>	<a href="#">Change Receiving Licensee</a>

Location Address:

the Ship-to Address the same as the selected Location Address  Yes

Line1 \* :

Line2:

City \* :

State \* :

Zip \* :

Sending Date \* :

Carrier:

Tracking Number:

Estimated Arrival Date \* :

Alternate Shipment ID:

Manifest Number:

Comment:

Red asterisks indicate required field

# National Source Tracking System

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\* indicates required field

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License Number \* :

### Source Management

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- [Receive Sources \(Domestic\)](#)
- [Export Sources](#)
- [Receive Imports](#)
- [Update/Cancel Source Transfer](#)
- [Update/Cancel Source Export](#)

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

### License Management

- [Record Licensee Transactions](#)
- [Create License](#)
- [Update/Delete License](#)

### Unrecorded Information

# National Source Tracking System

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**Federal and State Materials  
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Today's Date: 10/27/2008

User ID: AGNS1

Surrogate For: 221-554-380 [Return to Login user's Main Menu](#)

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[Back to Main Menu](#)

## View and Choose Open Shipments (Domestic)

[Help](#)

Open Shipments/Sending  
Licensee:

One item found.

1

Select	Shipment ID	Licensing Agency	License Number	Docket Number	Licensee Name	Carrier	Tracking Number	Sending Date	Manifest Number
<input type="radio"/>	5	U.S. Nuclear Regulatory Commission	221-554-391	50665972	George Washington University Hospital			10/27/2008	200 St. P

Notes

If the received shipment is not on the shipment listing, contact the sending licensee to resolve.  
Or, click on the "Enter Unrecorded Shipment/Transfers" button to enter it.

[Continue](#)

[Enter Unrecorded Shipment/transfers](#)

[Cancel](#)

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# Comments & Suggestions

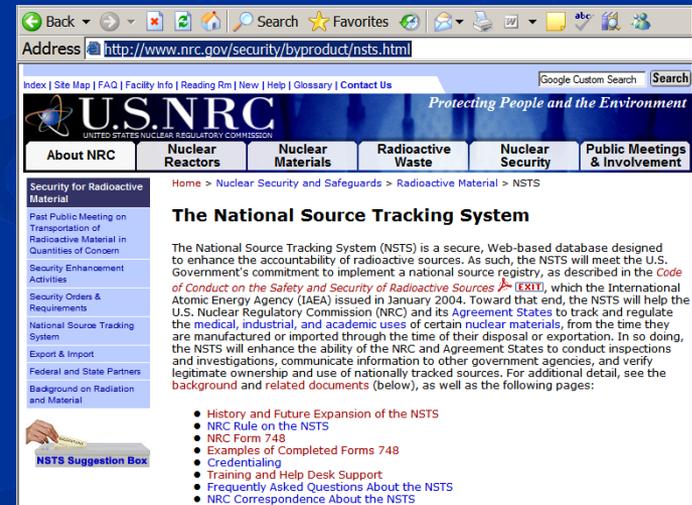
NSTS Website:

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

NSTS Help Desk:

[NSTS.Help@nrc.gov](mailto:NSTS.Help@nrc.gov)

1-877-671-6787



# Questions

