



Source Security

Joint STC-NTC HPS Meeting
September 16, 2006



Peter H. Myers, MS, Manager
Radioactive Material Licensing Group
Radiation Safety Licensing Branch
Department of State Health Services



Four Efforts

Pre-licensing verification of intended use

Increased controls

Due diligence in transferring sources

National Source Tracking System



Pre-licensing Verification

- Applicants will use requested ram as intended



- New applicant?
- Type use requires site visit?
- For a Risk Significant Quantity?



Pre-licensing Verification

- Applicants will use requested ram as intended



- New applicant?
- Type use requires site visit?
- For a Risk Significant Quantity?

• If “Yes” to any 1 of the above, identify inconsistencies between safety-related information in the application and additional sources of information.



Increased Controls

Cat ¹	Practices ¹	A/D ¹	⁶⁰ Co (Ci)	Perm Inj ²	Death ²
1	RTG, Irr, TTx, GK	>1000	810	Mins	Mins - Hrs
2	IR, M&HDR	1000↔10	8.1	Mins - Hrs	Hrs - Dys
3	↑FxGauge, WLog↑	10↔1	0.81	Hrs - Dys	Dys - Wks
4	↑LDR, T/Fill Gauge,↑ ↑M/D Gauge↑	1↔0.01	0.0081		
5	Eye Plq, PImplant, ECD, PET Trans	<0.01			

¹ IAEA-TECDOC-1344 (Categorization of Radioactive Sources); ² IAEA Code of Conduct



Increased Controls

Nuclide	Quantity of Concern (Ci)
Am-241	16
Cf-252	5.4
Cm-244	14
Co-60	8.1
Cs-137	27
Gd-153	270
Ir-192	22
Pm-147	11,000
Pu-238 or Pu-239	16
Se-75	54
Sr-90 or Y-90	270
Tm-170	5,400
Yb-169	81

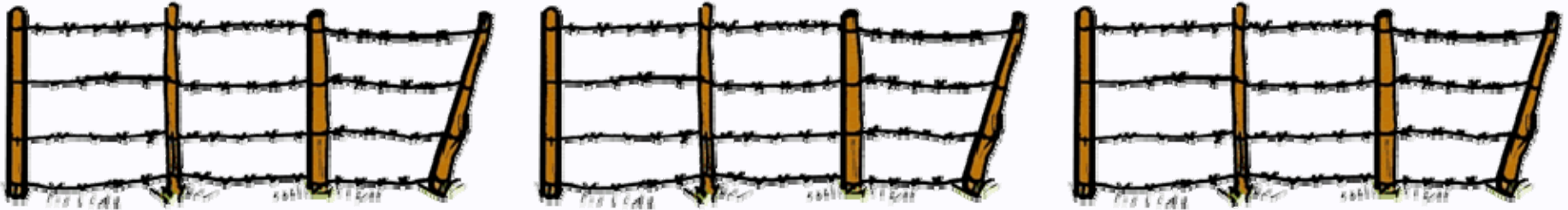
Increased Controls

- **Co-located RAM \geq Table 1 (risk significant quantities)**
- **Deadline for implementation of controls June 2, 2006**
- **Controls involve:**
 - 1. Access controls**
 - 2. Intrusion Detection**
 - 3. Transportation**
 - 4. Mobile/Portable Devices**
 - 5. Documentation**
 - 6. Information Security**



Increased Controls

1. Access controls a. Security





Increased Controls

1. Access controls
 - a. Security
 - b. Trustworthy and Reliable





Increased Controls

2. Intrusion Detection

a. Alarms

- 24/7
- Security Center





Increased Controls

2. Intrusion Detection

a. Alarms

- 24/7
- Security Center

b. Coordination with Local Law Enforcement





Increased Controls

3. Transportation a. Security





Increased Controls

- 3. Transportation**
 - a. Security**
 - b. Tracking**





Increased Controls

3. Transportation

a. Security

b. Tracking

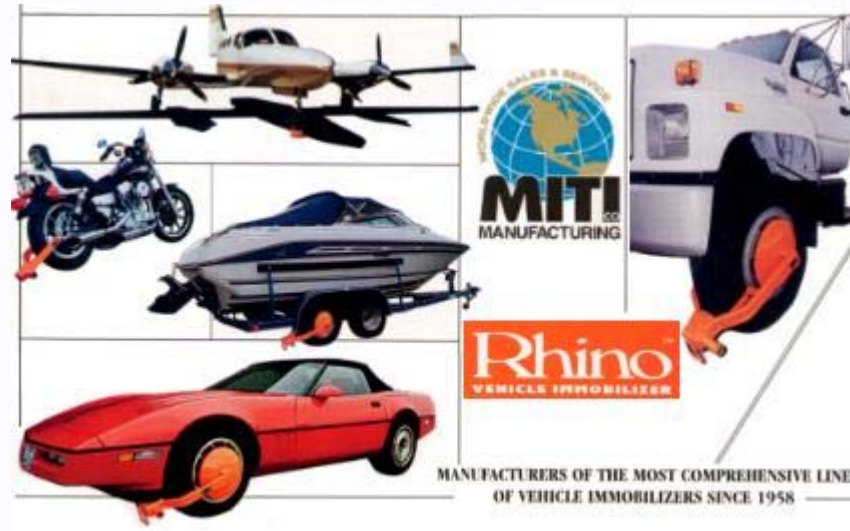
c. Trustworthy and Reliable



Girl Scouts of America

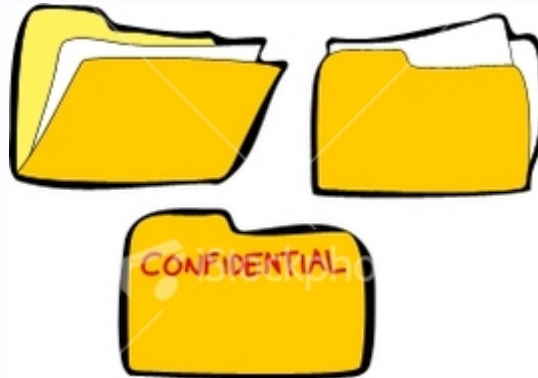
Increased Controls

- 4. Portable/Mobile Devices
 - a. Two independent physical barriers
 - b. Disabled vehicle/trailer



Increased Controls

- 5. Documentation (3 years)**
 - a. Trustworthy and Reliable Checks**
 - b. Commercial Carriers**
 - c. Shipment coordinations, notifications**





Increased Controls

6. Protection of Sensitive Information





Increased Controls

- **Adequacy of implemented controls is determined by inspectors; to assist licensees, they:**
 - **Received:**
 - **Implementing guidance,**
 - **Inspection checklist, and they**
 - **Have access to:**
 - **201 Brain-stormed Qs & As, and**
 - **Supplemental Qs & As.**
- **www.dshs.state.tx.us/radiation/announce.shtm**



Due Diligence

- **When transferring RAM, Licensees shall:**
 - **Verify recipients' license authorizations**
 - **Type, form, quantity**



Due Diligence

- **When transferring RAM, Licensees shall:**
 - **Verify recipients license authorizations**
 - **Type, form, quantity**
 - **If question, call Regulatory Authority**





Due Diligence

- **When transferring RAM, Licensees shall:**
 - **Verify recipients license authorizations**
 - **Type, form, quantity**
 - **If question, call Regulatory Authority**
 - **Extra care when:**
 - **Significant increase in quantity**
 - **Change in location**
 - **Change in type or form**
 - **Change in key personnel**





National Source Tracking System

Cat	Practices ¹	A/D ¹	⁶⁰ Co Ci	Perm Inj ²	Death ²
1	RTG, Irr, TTx, GK	>1000	810	Mins	Mins - Hrs
2	IR, M&HDR	1000↔10	8.1	Mins - Hrs	Hrs - Dys
3	FxGauge, WLog	10↔1	0.81	Hrs - Dys	Dys - Wks
3.5 ³		1↔0.1	0.081		
4	LDR, T/Fill Gauge, M/D Gauge	0.1↔0.01	0.0081		
5	Eye Plq, PImplant, ECD, PET Trans	<0.01			

¹ IAEA-TECDOC-1344; ² IAEA Code of Conduct; ³ NRC



National Source Tracking System

Nuclide	Quantity of Concern	Source Tracking
Am-241	16	0.16
Cf-252	5.4	0.054
Cm-244	14	0.14
Co-60	8.1	0.081
Cs-137	27	0.27
Gd-153	270	2.7
Ir-192	22	0.22
Pm-147	11,000	110
Pu-238 or Pu-239	16	0.16
Se-75	54	0.54
Sr-90 or Y-90	270	2.7
Tm-170	5,400	54
Yb-169	81	0.81



National Source Tracking System

- **Currently:**
 - **NRC is maintaining an “interim database” of licensees authorized to possess Cat 1&2 sources**





National Source Tracking System

- **Currently:**
 - **NRC is maintaining an “interim database” of licensees authorized to possess Cat 1&2 sources**



- **Effective sometime latter-2008:**
 - **NRC will activate the NSTS database.**
 - **Rules will be written or Licenses authorizing Cat 1-3.5 sources will be conditioned to require:**



National Source Tracking System

- **Information on the Manufacture, Transfer, Receipt, Disposal, or Disassembly of Cat 1-3.5 sources**
- **By the close of the next business day:**
 - **on-line, web-based system,**
 - **electronically by data CD,**
 - **facsimile,**
 - **mail, or**
 - **telephone**





Discussion





Discussion





Discussion





Discussion



Discussion



Discussion



Discussion



