10 CFR Part 37
Overview

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Disclaimer

- The Opinions Expressed Here Are My Own

- Only NRC’s Office of General Counsel Can Render an Interpretation of NRC Regulations, and That has to be in Writing

- This presentation has not been reviewed or approved by NRC Management
NRC Region I
10 CFR Part 37
Implementation Team

Craig Gordon  Mike Reichard  Randy Ragland
Inspection Guidance

- Inspection Procedure Should be Published in February 2014, and available from NRC’s website.

- Inspection Checklist (Part 37 in Checklist format) will also be available on NRC’s website
Part 37 Guidance

- NUREG-2155
  - Q/A format
  - Nearly 300 pages

- Guidance updates

- Best Practices Document in Draft
Following 9/11, the Nuclear Regulatory Commission determined that Increased Security of Radioactive Material was Necessary

Increased Control of Sources should be Implemented Through the Issuance of Orders
NRC Security Orders

- Panoramic Irradiators > 10,000 Ci Co-60
  - June 6, 2003
- Manufacturer and Distributor (M&D) Order
  - January 12, 2004
- Transportation Order
  - July 19, 2005
- Increased Controls Order
  - December 2006
Having Multiple Orders Was Confusing

We Needed New Radioactive Material Regulations
NRC Developed & Issued New Security Regulations

10 CFR Part 37
10 CFR Part 37

Implementation Required by:

- NRC Licensees:
  - March 19, 2014

- Agreement States:
  - March 19, 2016
Agreement State Compatibility

- Compatibility Category B
  - Program element with significant direct trans-boundary implications. The State program element should be essentially identical to that of NRC.
10 CFR Part 37

- Essentially Codifies previous Orders, **AND**
  adds some New Requirements

- **Entitled:**
  "Physical Protection of
  Category 1 and Category 2 Quantities
  of Radioactive Material"
What the Heck are Cat. 1 & Cat. 2 Sources?
Sources Classified According to IAEA Guidance

- IAEA Code of Conduct on Safety and Security of Radioactive Sources
- "Dangerous" Source "D" Values derived from Dose Criteria
  - Bone Marrow: 1 Gy in 2 days
  - Lung: 6 Gy in 2 days from low LET, and 25 Gy from High LET
  - Thyroid: 5 Gy in 2 days
  - Skin/Tissue: 25 Gy at depth of 2 cm, or 1 cm from hand in 2 hours
  - Bone Marrow: 1 Gy in 100 hours for source too big to be carried
Sources Classified According to IAEA Guidance

Classification Broadly Based on Time to Cause Permanent Injury

- Category 1, $1000 \times D$: Minutes
- Category 2, $10 \times D$: Minutes to Hours
- Category 3, $1 \times D$: Hours
- Category 4, $0.01 \times D$: Weeks
## Cat. 1 & 2 Values

<table>
<thead>
<tr>
<th>Radioactive material</th>
<th>Category 1 (TBq)</th>
<th>Category 1 (Ci)</th>
<th>Category 2 (TBq)</th>
<th>Category 2 (Ci)</th>
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<tr>
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<td>1,620</td>
<td>0.6</td>
<td>16.2</td>
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<td>0.6</td>
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</table>
Examples of Cat. 1 Sources?

Self Shielded Irradiator, If Cs-137 Act. > 2,700 Ci
Examples of Cat. 2 Sources

- Some fixed gauges
Where Can I Find a Copy of 10 CFR 37?


- Can easily find it with a Google search
What Does 10 CFR 37 Replace?

- NRC Orders to Panoramic irradiators, M&D, RAM QC, ICs, And Fingerprint Orders
- Eliminates SGI-M, Existing Documents Will Have to Be Destroyed or Decontrolled
- Documents will be controlled as Official Use Only – Security Related Material
- **Will Maintain Orders for Service Providers**
First,

- Read it
- Read it again
- Read it 5 times
- Read it 10 times
- Keep going through it, and you start to catch on

There are many similarities and some new requirements
10 CFR 37 Subparts

- **B:** Background Investigations and Access Control Program

- **C:** Physical Protection Requirements During Use

- **D:** Physical Protection During Transit
Part 37 Subpart B: Access Authorization (New)

- Licensee must develop, implement, and maintain access authorization procedures
- Requires signed consent before background investigation
- Procedures Must Notify Individuals
  - If Access Denied, Grounds for Denying Access, and
  - The Refusal to provide information Is Grounds for Denying Access Authorization
- Applicant Allowed Opportunity to Provide Corrected Background Information
- Training required prior to access
- Must perform an Annual Review of the Access Authorization Program Content and Implementation
ANNEX B

SAMPLE CONSENT FORM FOR BACKGROUND INVESTIGATIONS

I authorize and grant my consent to my employer, __ (insert company name)__ (hereinafter _________ or “the company”), to request the U.S. Nuclear Regulatory Commission (NRC), under Section 652 of the Energy Policy Act of 2005, to request criminal record information about me from the U.S. Attorney General, who will refer the request to the Federal Bureau of Investigation. I understand that the purpose of this information is solely to enable the company to determine my trustworthiness and reliability for unescorted access to a Category 2 or greater quantity of radioactive material as defined in the NRC’s regulations in Title 10 of the Code of Federal Regulations (10 CFR) Part 37, “Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material.” I understand that _(insert company name) must obtain my signed consent before any investigation or reinvestigation to determine my trustworthiness and reliability for such unescorted access.

I authorize and grant my consent to any authorized representative of _(insert company name) who is conducting my background investigation or reinvestigation, as defined in 10 CFR 37.25, “Background Investigations,” to obtain any information related to my activities from individuals, schools, residential management agents, previous employers, criminal justice agencies, or other sources of information. This information may include, but is not limited to, my academic, residential, achievement, or performance information and information about my attendance, disciplinary, employment, and criminal history records……………………..
Reviewing Official (RO)

New Term

- RO is Individual who makes T&R determinations for individuals who require access to Cat. 1 and Cat. 2 Quantities
- RO cannot approve other ROs, unless they are a licensing official (Sr. Management)
- Can have Multiple ROs
Reviewing Official

- Subject to full background screening, including fingerprinting and criminal history records check
- Licensee approves RO but still must submit name to Regulatory Authority under Oath or Affirmation
Part 37: Background Investigations (Δ)

- Background Investigations **Must Encompass the last 7 years**
- Must Verify the **True Identity** of applicant, and must certify in writing that the identification was properly reviewed
- Must verify Employment History for most recent **7 years**
- Verify Education for claimed period
- **Character and Reputation Determination**
- To the extent possible, Obtain independent information (e.g., references not supplied by individual)
- Fingerprinting & Criminal History Records Check
Background Screening

- If reference uncooperative or does not provide a timely response, then document that and obtain information from another source ($\Delta$)

- Reinvestigation Every 10 years (New)
  - Fingerprint & Criminal History Records Check
Grandfathering

- Individuals determined to be T&R under NRC Orders can be Grandfathered
- But Subject to Reinvestigation Time Requirement
- Question, what about grandfathering for access to sensitive information?
Fingerprinting & Criminal History Records Check

- Similar to ICs
  - Fingerprints → NRC → FBI → Licensee
  - Exempt individuals
  - Returning Individuals Do not have to re-fingerprint, IF they (∆)
    - Return in <365 days, AND were
    - Terminated under favorable conditions
Documented Basis
Similar to ICs

Licensee Must Document the Basis for Concluding, with Reasonable Assurance, that an Individual is Trustworthy & Reliable (T&R)
What if you T&R someone, and they turn out to be a Bad Guy?
You Will Be Inspected
Properly Document the Basis for Access Authorization

- Verified Applicant’s True Identify
- Applicant Signs Consent Form
- Individual Meets All Background Screening Elements including experience (7 years), education (claimed period), Character & Reputation Determination including Developed References
- Fingerprint & Criminal History Records Received, Reviewed, and Approved
- Documented Basis Documented
- Individual trained
- Placed on Authorized Access List
- Unescorted Access Authorized (E.g., Badges, key codes, etc.)
Part 37 Subpart C
Physical Protection During Use

- Must develop a Security Plan specific to facilities (New)
  - Describes measures and strategies, & security resources including equipment and technology
  - Approved by individual responsible for security program
  - Revised as Necessary & Training Provided as Necessary
- Annual Review of Security Program Content and Implementation
Part 37 Security Program Procedures (New)

- Must develop and maintain written security procedures
- Documents how physical protection requirements (i.e., Subpart C) and security plan will be met
Security Program Training (New)

- Must conduct training to ensure individuals can carry out responsibilities effectively
  - Commensurate with duties
  - Frequency not to exceed 12 months
General Requirement (Change)

- Maintain List(s) of Approved Individuals
  - Unescorted Access to the Security Zones, and
  - Access to the Security Plan or Implementing Procedures
What is Sensitive Information?

- Sensitive Information
- Security Plan
- Implementing Procedures
- List of Individuals Approved for Unescorted Access
Must Develop Procedures & Access List

New

- 37.43(d)(2) Licensees must develop, implement, and maintain written policies and procedures for controlling access to, and for proper handling and protection against unauthorized disclosure of, the security plan and implementing procedures.

- 36.43(d)(6) Licensees shall maintain a list of persons currently approved for access to the security plan or implementing procedures.
Access to Sensitive Information

- Need to Know
- Full Background Screening
  - Without Finger Printing
- Documented Basis
- Placed on a List of Individuals with Access to Sensitive Information
LLEA Coordination (Change)

- Relaxes requirement for Prearranged plan
- Licensee must provide LLEA with
  - Description of facility
  - Quantities of RAM
  - Description of security measures, and
  - Notification that a timely response will be requested as necessary
- Requires coordination annually
- Panoramic Irradiators Not required to notify LLEA of source changes
Security Zones: (New Term)

- Cat. 1 or Cat. 2 material used or stored only in a Security Zone
  - Permanent or Temporary
- Rule contains descriptive phrase: “Continuous Physical Barrier.”
- Isolation of Cat. 1 or Cat. 2 achieved with use of Continuous Physical Barriers
  - Provide access only through established access control points, or direct control by approved individuals
New Requirement for Detection

- Detection system
  - Must be capable of detecting All unauthorized access to the security zone
  - including breaches of barriers used to isolate and control access to the protected radioactive material.
Monitoring & Detection (Change)

- Must maintain capability to continuously monitor and detect without delay all unauthorized entries into its security zones.”

- Monitored video surveillance allowable

- Attempts to remove material must be
  - Cat. 1: Detected immediately
  - Cat. 2: Verified on a weekly basis through physical checks, tamper indicating devices, etc.
Monitoring, Detection, & Assessment (New)

- Must implement Maintenance, Testing, and Calibration Program to ensure operability of:
  - Alarms
  - Communications Systems
- Tested and Inspected at manufacturer’s suggested frequency
- Annually, if no frequency provided
Response To Unauthorized Access

- Immediate response to any actual or attempted unauthorized access, theft, sabotage, or diversion of material

- Requests, without delay, an armed response from the LLEA
Mobile Devices
(Change)

- Rule allows Relief from vehicle disabling mechanism
  - E.g., where health and safety requirements prevent disabling vehicle
10 CFR Part 37
Subpart D

- Physical Protection in Transit
- Replaces RAM QC for Category 1 Materials
New Transportation Terms

- License Verification System (LVS)
  - System established by license authority,
  - Maintains current list of licenses
  - Designed to be used by Shipping Licensees to Verify that a Transferee’s license authorizes the type, form, and quantity of RAM
System Overview
§ 37.71 Additional requirements for transfer of category 1 and category 2 quantities of radioactive material.

Any licensee transferring Category 1 or 2 quantities of radioactive material, prior to conducting the transfer shall verify with the NRC's license verification system or the license issuing authority that the transferee's license authorizes the receipt of the type, form, and quantity of radioactive material to be transferred and for Cat. 1 transfers, that the licensee is authorized to receive radioactive material at the location requested for delivery.

If the verification is conducted by contacting the license issuing authority, the transferor shall document the verification. For transfers within the same organization, the licensee does not need to verify the transfer.
To Access LVS, You will Need to Be Credentialed For the National Source Tracking System With a Smart Card

Request a user account by contacting the help desk: LVSHelp.Resource@nrc.gov

Then

--Go to nrc.gov
--Click on Nuclear Security
--Click on Radioactive Material Security
--Under Integrated Source Management Portfolio (ISMP)
--Click on License Verification System
License Verification System (LVS)

As a key component of the Integrated Source Management Portfolio (ISMP), the License Verification System (LVS) is envisioned as a “national verification system” that will ensure that only authorized licensees obtain radioactive materials in authorized amounts. Scheduled to be deployed in May 2013, LVS will be an integrated service designed to provide access to license information maintained by the U.S. Nuclear Regulatory Commission (NRC) and Agreement States. Specifically, this system will broker information stored in the Web-Based Licensing (WBL) System and National Source Tracking System (NSTS). In so doing, LVS will enable authorized government authorities and authorized licensees to verify certain information about licensees authorized to possess, use, or ship radioactive materials. In that way, the system will help authorities to confirm that (1) a license is valid and accurate, (2) a licensee is authorized to acquire quantities and types of radioactive materials, and (3) the licensee’s Category 1 or 2 inventories do not exceed the possession limits. For additional details, see the following pages:

- Concept of Operations
- Conceptual Overview of the License Verification Process
- License Verification System User Guide
- Manual License Verification Procedure
- Manual License Verification Form

Request a user account by contacting the help desk: LVSHelp.Resource@nrc.gov
System Features (All Roles)

User Interface Conventions

LVS Login using Smart Card

Login button. When clicked, logs the user in after entering PIN.
LVS Main Menu

- Check for Changed Receiver's License
- Check for Changed Receiver's License - Batch Process
- Verify Receiver's License
- Verify Receiver's License - Batch Process
- Query Verification Activity
Enter information for the license you are verifying and click “Verify”
The license will be displayed. Verify the quantity, form, and location of use. Then click submit.
LVS Helpdesk – 1-877-671-6787
LVSHelp.Resource@nrc.gov
http://www.nrc.gov/security/byproduct/ismp/lvs.html

User Guide and Additional Information on the Webpage!
New Transportation Term For Cat. 1
Movement Control Center

- Remote operations center that:
  - Maintains position information
  - Receives reports of attempted attack or threats
  - Provides a means of reporting to appropriate agencies
  - Can request and coordinate aid
New Term for Cat. 1 Shipments

Safe Haven

- Readily recognizable & accessible site
- Security Present, OR from which, in the event of an emergency, a Transport Crew Can Notify and Wait for LLEA response
- Well lit, adequate parking, can be used for emergency repair
- Telephone facilities available
Examples of Safe Havens

- Federal sites that have significant security assets, such as military-base gates or guarded agency parking lots;
- Secure company terminals; State weigh stations; State welcome stations or rest areas (typical rest area would not be adequate);
- Scenic overlooks (typically not lit with no communications, therefore not adequate) or visitors’ centers; secure truck stops; and LLEA sites, including State police barracks.
New Term for Cat. 2 Shipments
No Later Than Arrival Time

- Date & Time Established by Shipping and Receiving Licensee to Initiate an Investigation if Shipment is Late
- May not be > 6 hours after estimated arrival time
Cat. 1 Transfers
Preplanning & Coordination

- Preplan & Coordinate Departure and arrival times (Advance Notification) with:
  - Receiving licensees
  - NRC
  - Governors of all states
- Discuss State’s Intention to Provide Law Enforcement Escort
- Document Preplanning and Coordination Activities
Cat. 2 Transfers

Preplanning & Coordination

- Preplan and Coordinate RAM arrival times with receiving licensee:
  - Expected time
  - No later than arrival time
- Document preplanning and coordination
- Receiver confirms receipt with originator
- Receiver notifies originator if shipment not received by no-later-than-arrival-time
- If Shipment Delayed, Originator notifies receiver
Schedule Information

- Individuals who receive schedule information of the kind specified in § 37.77(b) (Cat. 1) shall protect that information against unauthorized disclosure as specified in § 73.21 of this chapter.

What?

Protect IAW Safeguards? You have got to be kidding?
Good Point

- Part 73 and Part 37 are both expected to be revised on March 19, 2014. This will eliminate the SGI-M category, AND shipping schedule information will simply need to be controlled in accordance with 37.43(d)
Cat. 1 Shipments by Road

- Licensee establishes MCC
  - Maintain position information
  - Monitors 24/7
  - Has ability to immediately communicate with LLEA
  - Redundant communication ability
  - Telemetry
  - MCC prepared to promptly implement procedures
Cat. 2 Shipments By Road

- Licensee maintains constant control and surveillance during shipment
- Carrier:
  - Tracking system, requires signature
  - Maintains constant control and surveillance
10 CFR Part 37

- Reminders
- &
- Time References
10 CFR Part 37
New Procedures & Documents

- Access Authorization Procedures
- Security Plan
- Implementing Security Procedures
- Procedures for the Protection of Sensitive Information
- Access List(s) for Unescorted Access and Sensitive Information
- LLEA Information
- Procedures for Shipping (e.g., Notifications and Coordination)
Time Requirement: Immediate

- Must maintain capability to continuously monitor and detect without delay all unauthorized entries into security zones.”

- Immediately Detect Attempts to remove Cat. 1 Material

- Prompt measures must be taken to ensure an individual who no longer needs unescorted access is prevented from gaining access

- Individuals who no longer require access must be removed ASAP from access authorization list.
Time Requirement
3 Days

- Notify NRC within 3 days, if
  - LLEA has not responded to a coordination request in 60 days
  - LLEA notifies licensee that the LLEA does not plan to participate in coordination activities.
Time Requirement: 4 Days & 7 Days

- Advanced Notification to NRC & Governors of Cat. 1 Shipment:
  - 4 Days – Phone or Email
  - 7 Days if Mailed

- When no longer required, Remove individual from access authorization list ASAP, but no later than 7 working days
Cat. 2 Time Requirement
Weekly

- Perform **Weekly** Verifications to ensure Cat. 2 Material is Present
  - Verification through physical checks, tamper indicating devices, etc.
Time Requirement: 10 Days

- Time licensee allows individual to challenge FBI & Criminal History Records Check: **10 days**

- If a previous employer, educational institution, etc. fails to provide information within **10 business days** (or unwilling or unable), licensee can document that and attempt to obtain the information from an alternate source.
Time Requirements
12 Months

- Security Refresher training (or when significant changes occur)
- LLEA Coordination (or when significant changes occur)
- Alarm Testing (If there is no manufacturer’s suggested frequency)
Each licensee shall periodically (at least annually) review:

- The access control program content and implementation, **AND**
- The security program content and implementation.
Time Requirement: 365 Days

- Fingerprinting not required if individual returns to same facility within 365 days, and termination was under favorable conditions.

- 1 Year – Prior to Background Screening Adverse Action, Must Notify Individual and Provide Opportunity to Correct Record. Record of Confirmation of receipt Must be Maintained by Licensee for 1 Year
Record Time Requirements: 3 Years

- Maintain for 3 Years:
  - Implementing Security Procedures after no longer needed, and superseded portions
  - Training, Initial and Refresher
  - Information protection procedures
  - List of individuals approved for access to the security plan or implementing procedures.
Record Time Requirements: 3 Years

- Maintain Records for 3 Years
  - Alarm System maintenance and testing activities
  - Results of annual review of the security program
  - Efforts to verify that a receiving licensee is authorized to receive material
  - Transportation: documentation for preplanning and coordination
  - Copy of the advance notifications and revisions
Fingerprinting, and the identification and criminal history records checks not required for individual favorably adjudicated under comparable U.S. Government criminal history records check within the last 5 years
Time Requirement
7 Years

- Background Investigations – 7 Years, or time since 18th Birthday, whichever is shorter
Time Requirement
10 Years

- Reviewing Official Recertification
- T&R Recertification
Good News

- Because 10 CFR Part 37 largely codifies previous Orders, NRC does not expect a large number of significant violations.

- Likely Violations
  - Procedures not fully documented
  - Missed Annual Reviews
  - Exceeded 12 month training requirement
  - Radiography truck monitoring
Questions