



Overview of 10 CFR Part 37 & NRC Implementation Experience

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Disclaimer



- The opinions expressed here are my own.
- Only NRC's Office of General Counsel can render an opinion of NRC regulations, and that has to be in writing.



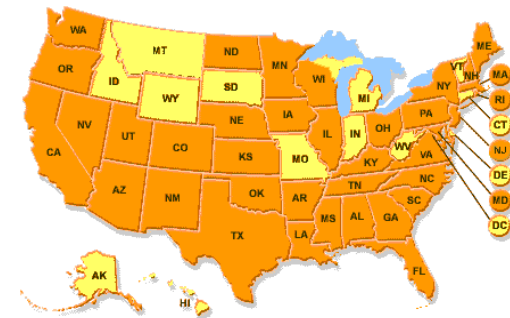
- Physical security requirements are largely the same
 - Have not experienced many issues with physical security
- The majority of findings have been associated with the new administrative requirements

10 CFR Part 37

■ Implementation required by:

– NRC Licensees:

» March 19, 2014



– Agreement States:

» March 19, 2016





Radioactive Material Security

- Following 9/11, the Nuclear Regulatory Commission determined that increased security of radioactive material was necessary
- Increased control of radioactive sources should be implemented through the issuance of orders



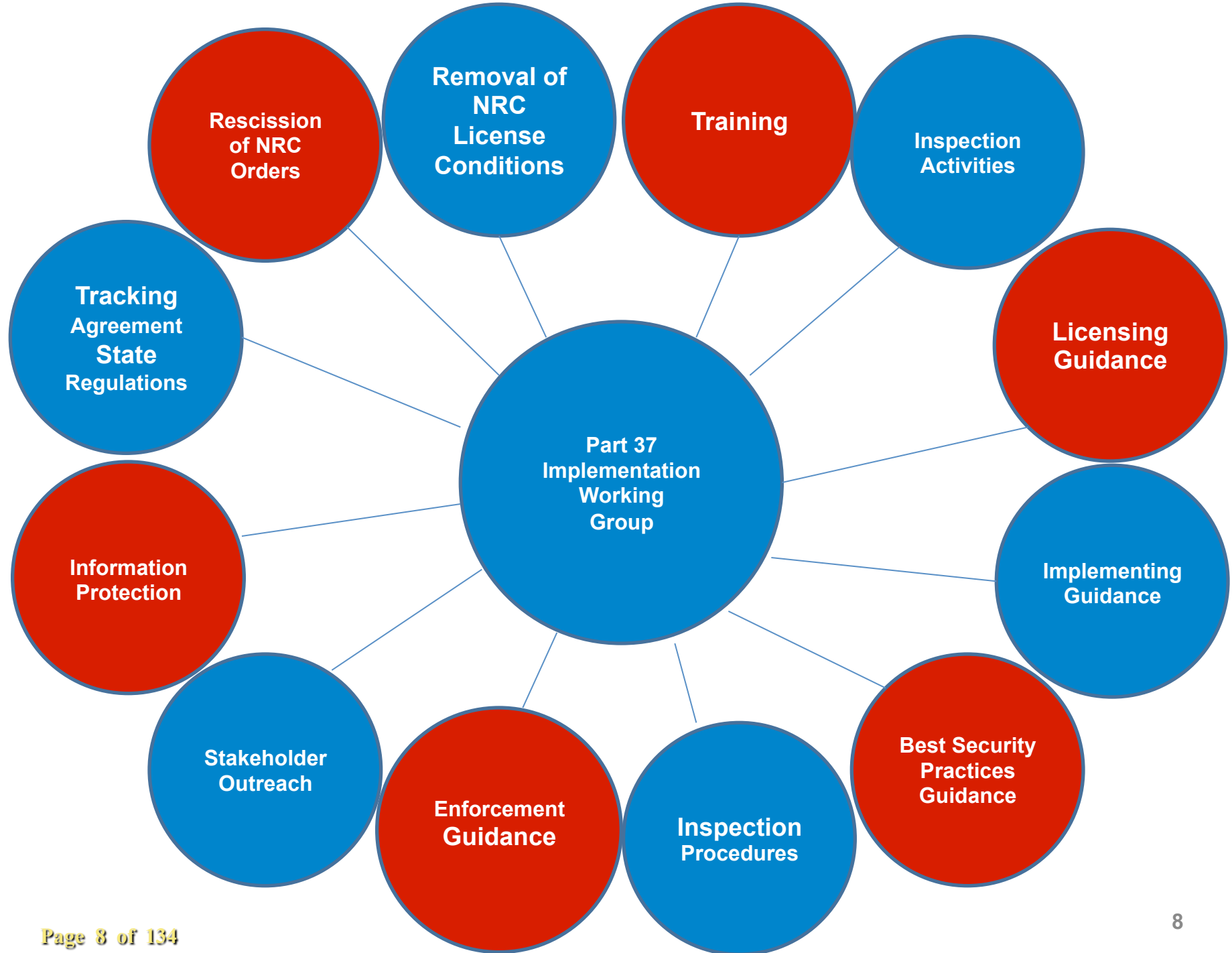
NRC Issued Security Orders

- Panoramic Irradiators
- Manufacturer and Distributor (M&D) Order
- Transportation
- Increased Controls
- Multiple Fingerprint Orders
- Non-M&D Service Provider Orders



NRC Issued 10 CFR Part 37

- Replaces the NRC Orders and adds some new requirements
 - Access authorization procedures
 - Security plan and implementing procedures
 - Training and Self-Assessments
- Security Orders for NRC licensees have been rescinded
 - **Will continue to maintain Orders for Non M&D Service Providers**
- NRC will rescind AS Orders when state implements compatible regulations



10 CFR 37 applies to

what types of sources?

10 CFR 37 applies to:

Category 1 and Category 2
Sources

What's a
Category 1 or Category 2 source?

Sources Are 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 Are 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

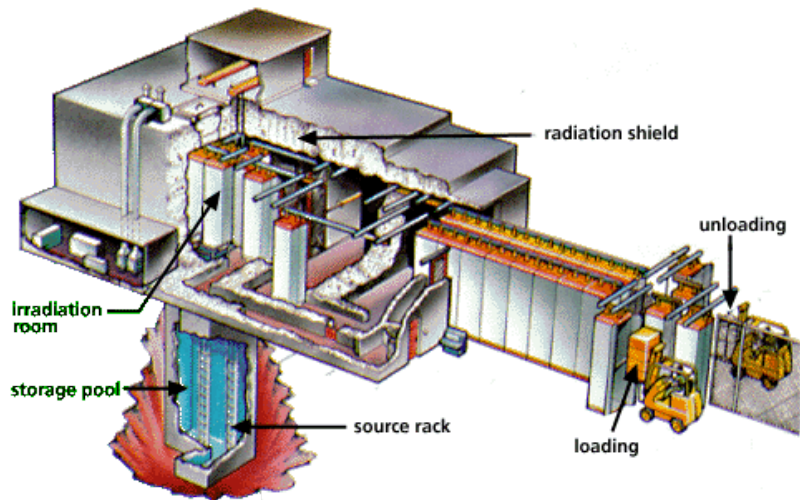
Category 3, $1 \times D$: hours

Category 4, $0.01 \times D$: weeks

Cat. 1 & 2 Values

<u>Radioactive material</u>	<u>Category 1 (TBq)</u>	<u>Category 1 (Ci)</u>	<u>Category 2 (TBq)</u>	<u>Category 2 (Ci)</u>
Americium-241	60	1,620	0.6	16.2
Americium-241/Be	60	1,620	0.6	16.2
Californium-252	20	540	0.2	5.40
Cobalt-60	30	810	0.3	8.10
Curium-244	50	1,350	0.5	13.5
Cesium-137	100	2,700	1	27.0
Gadolinium-153	1,000	27,000	10	270
Iridium-192	80	2,160	0.8	21.6
Plutonium-238	60	1,620	0.6	16.2
Plutonium-239/Be	60	1,620	0.6	16.2
Promethium-147	40,000	1,080,000	400	10,800
Radium-226	40	1,080	0.4	10.8
Selenium-75	200	5,400	2	54.0
Strontium-90	1,000	27,000	10	270
Thulium-170	20,000	540,000	200	5,400
Ytterbium-169	300	8,100	3	81.0

Examples of Cat. 1 Sources/ Quantities



**Self shielded
irradiator, If Cs-137
Act. $\geq 2,700$ Ci**

Examples of Cat. 2 Sources

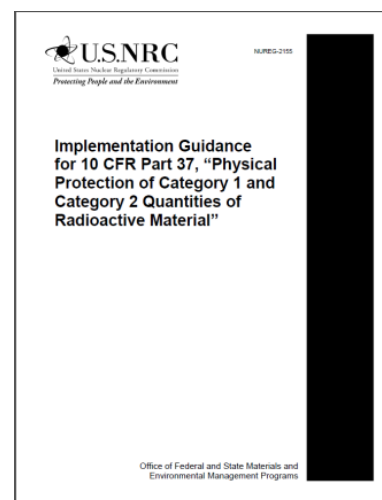


- Some fixed gauges



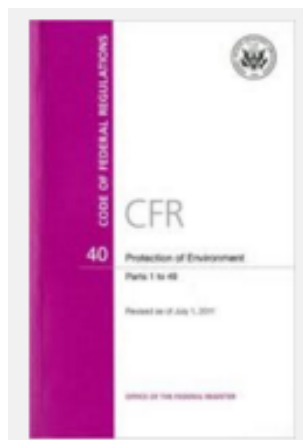
Part 37 Guidance

- MC 2800, Materials Inspection Program
- IP 87137, “10 CFR Part 37 Materials Security Programs.”
- NUREG-2155, Rev. 1,
Implementation Guidance
_ Q/A format
– Nearly 300 pages
- NUREG-2166, Physical Security Best Practices
for the Protection of Risk Significant Radioactive
Material
- RIS 2014-003, Notice of 10 CFR 37
Implementation Deadline for NRC Licensees



What's In Part 37?

- There are many similarities and some new requirements
- First,
 - Read it, read it again, read it 5 times
 - Keep going through it until you start to catch on



10 CFR 37

Major 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)

- §37.21(a): Each licensee must establish, implement, and maintain an access authorization program in accordance with 10 CFR Part 37, Subpart B.
- §37.23(f) Licensee must develop, implement, and maintain access authorization procedures

Most Frequent Violation.....



- Procedures should address how to:
 - Conduct a background investigation
 - Develop and document the basis for certifying an individual as T&R

Reviewing Official (RO) §37.23(b) **New Term**

- Trustworthiness & Reliability (T&R) Official is now the Reviewing Official (RO)
- **RO** is individual who makes T&R determinations for individuals who require access to Cat. 1 and Cat. 2 Quantities
- **Subject to full background screening**, including fingerprinting and criminal history records check
- Must be eligible for unescorted access, but does not have to actually have badge access



§37.23(b) Reviewing Official (RO) (Change)

- **Licensee approves RO but still must provide name to the regulatory authority under oath or affirmation**
- **For NJ it should be sent to:**
 - ATTN: Cathy Biel, Supervisor Industrial Section OR
Rich Peros, Supervisor Medical Section
 - State of New Jersey
 - Department of Environmental Protection
 - Bureau of Environmental Protection
 - Mail Code 25-01, P.O. Box 420
 - Trenton, NJ 08625-0420
- RO cannot approve other ROs, unless they are a licensing official (e.g., Sr. Management)
- Can have multiple ROs

Goal of Background Screening

- To
 - Verify the information provided by the applicant, AND
 - Evaluate discrepancies
- Not simply to collect records



§37.25(b) Grandfathering



- Individuals determined to be T&R for unescorted access under NRC Orders can be Grandfathered
 - But subject to reinvestigation time requirement, AND
 - LICENSEE MUST OBTAIN SIGNED CONSENT FOR A RE-INVESTIGATION

§37.25: Background Investigations **(Change)**

- Background **investigations must encompass the last 7 years**, or since 18th birthday (whichever is shorter)
- Verification of **true identity**, must certify in writing that the identification was properly reviewed
- Must verify **employment history**
- Verify **education** for claimed period
- **Character and Reputation Determination:** NUREG 2155, Rev. 1, Annex A
- To the extent possible, obtain independent information (e.g., references not supplied by individual)
- fingerprinting & criminal history records check



True Identity

- Applicant provides their name, THEN
- Applicant provides official documentation
 - Driver's license
 - Passport
 - Certificate of birth
- Compare the official documentation to name given by the applicant
- Document or photocopy the type, expiration, and ID Number, AND
- Certify, in writing, how True Identify was verified



Signed Consent Required to Conduct Background Investigation

- Requires a signed consent before initiating a background investigation (Sample Form: NUREG 2155, Rev. 1, Annex B).

- Must
 - Notify individuals if access denied and the grounds for denying access, and
 - The refusal to provide information is grounds for denying access authorization
 - Allow applicant opportunity to provide corrected background information



Sample Consent Form

NUREG 2155, Rev. 1 Annex B

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.....

Employment History

- Verify employment history with employer(s) for most the most recent 7 years
 - Or since the 18th birthday, whichever is shorter
- Should verify periods of unemployment



Verify Education & References

- Education for the claimed period
 - Should be an independent verification
- Personal references (note reference is plural)
- To the extent possible, obtain independent information (e.g., references not supplied by individual)



Character & Reputation Review

- Would the organization rehire the individual?
- Would it trust the individual with company assets?
- Does it consider the individual to be trustworthy and reliable?
- Has it ever witnessed anything in the individual's behavior that would cause it to question his or her reliability?



Character Determination Questions

- Evidence of false or deceitful statements;
- Loss of a driver's license; repeated high-speed traffic or other violations indicating a reckless disregard for the safety or security of others;
- Recent bankruptcy, foreclosure, repossession, or garnishment of income; repeated nonpayment of alimony, child support, or lawfully incurred financial obligations for periods of months;
- Repeated instances of personal harassment; or
- conduct or behavior that would violate any of the licensee's corporate or professional code of ethics or workplace conduct.

Unresponsive Reference

- IF previous employer, educational institution, or reference does not respond in a timely manner (e.g., 10 business days),
- THEN can document that and obtain information from an alternate source.



§ 37.27 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 (change)



Relief from Background Screening

- §37.29(a) Relief from FP, ID, and Criminal History Records Check AND other elements of background screening
 - Executive Branch
 - Member of Congress
 - Gov. of State or designee
 - LLEA or emergency responders
 - Agreement State inspectors under a 274i agreement performing security inspections**
 - Individual with active Federal security clearance
 - Commercial vehicle driver or package handler
 - Service provider with documentation



§37.29(b) Relief ONLY From Fingerprinting

- §37.29(b) Provides relief ONLY from fingerprinting and criminal history records check
- If have favorably adjudicated US Gov. criminal history check that included FP and Criminal History records check within the last 5 years. Examples
 - National Agency Check
 - Transportation Worker Identity Credentials (TWIC)
 - Bureau of ATF and explosives
 - HHS security risk assessment
 - CBP's FAST program, etc.

CAUTION

- TWIC, National Agency Check, and others
 - Provides relief ONLY from fingerprinting requirement.
 - Must still perform background screening including:
 - Signed consent
 - True ID
 - Employment history
 - Character & reputation determination
 - Documented basis for T&R judgment



Reinvestigation

- Reinvestigation every 10 years (New)
 - Fingerprint & criminal history records check
 - 10 Years from T&R certification date

Training* § 37.43(c)

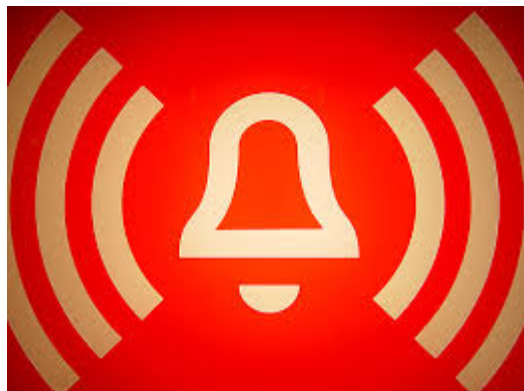
- Training required prior to access (knowledge, skills, and abilities, to carry out their assigned responsibilities, e.g., escort, response to alarms, etc.)



*Compatibility Category C: Must adopt the essential objectives, but the manner in which the objectives are met need not be the same.

§ 37.23(e)(3): Documented Basis Similar to ICs

- Licensee must document the basis for concluding, with reasonable assurance, that an individual is trustworthy & reliable (T&R)



What documentation is necessary to certify an individual as T&R?





Documentation Required to Certify an Individual as T&R

- ☒ Certification of applicant's true identity
§37.25(a)(2)
- ☒ Signed consent form §37.23(c)
- ☒ Verification of Bkg. screening elements §37.25(a)(3-6)
 - ☒ Experience (7 years) §37.25(a)(3)
 - ☒ Education (claimed period) §37.25(a)(4)
 - ☒ Character & reputation determination §37.25(a)(5)
 - ☒ Developed references
- ☒ Criminal history records received, reviewed, and approved §37.27
- ☒ Documented basis for T&R judgment §37.23(e)(3)
- ☒ Training record §37.43(c)(4)
- ☒ Individual's name on Unescorted Access list with date
§37.23(e)(5)

Reviewing Official

- Is the key to the success of the Access Authorization program
- May be RSO, May be Human Resources, May be a Supervisor responsible for hiring
- The Reviewing Official has significant responsibilities

What if a Reviewing Official T&R's a Bad Guy?

What if a licensee T&R's a Bad Guy?



Reviewing Official's Chair

What if a licensee T&R's a Bad Guy?



**Reviewing
Official's Chair**



**Regulator's
Chair**



Documentation Required to Certify an Individual as T&R

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- ☒ Training record §37.43(c)(4)
- ☒ Individual's name on Unescorted Access list with date
§37.23(e)(5)

List(s)

- Maintain List(s) of approved individuals
 - Unescorted access to the security zones, and §37.23(e)(5) & 37.23(h)
 - Access to the security plan or implementing procedures §37.43(d)(6) (New)



Access to Security Plan & Implementing Procedures

- Need to know
- Full background screening
 - Without finger printing
 - 10 CFR 37.25(a)(2) – (7)
- Documented basis for T&R judgment
- Placed on a list of individuals with access to protected information





U.S.NRC
UNITED STATES NUCLEAR REGULATORY COMMISSION
Protecting People and the Environment

Annual AA Program Review*

§37.33

- Each licensee must review the elements of the Access Authorization (AA) program content and implementation on an annual basis. **(NEW)**
- The review includes:
 - Conditions adverse to proper performance (if identified)
 - Cause of the adverse condition;
 - Corrective actions recommended and taken; and
 - Preventative actions.
- Annual AA review records are maintained for three years.



*Compatibility Category C: Must adopt the essential objectives, but the manner in which the objectives are met need not be the same.

10 CFR 37, Subpart C

Physical Protection Requirements During Use



Security Plan

§ 37.43(a) (NEW)

- Must develop a Security Plan specific to facilities that describes measures and strategies, & security resources including equipment and technology
 - Approved by individual responsible for security program
 - Revised as necessary & training Provided as Necessary



Security Procedures

- § 37.41 Establishment of a security program.
- § 37.43 General security program requirements (Development and maintenance of a plan, implementing procedures, training, protection of information)
- § 37.45 LLEA coordination and notification
- § 37.47 Establishment of security zones (Permanent and temporary, access control, Category 1 quantities)
- § 37.49 Monitoring, detection, assessment, and response.
- § 37.51 Maintenance, testing, and calibration. (Intrusion alarms, communication equipment, other components)
- § 37.53 Requirements for mobile devices.
- § 37.55 Security program review.
- § 37.57 Reporting of events (LLEA, NRC Operations Center)

Protection of Information

- Must protect from unauthorized access: §37.43(d)
 - Security plan
 - Implementing procedures and
 - List of individuals approved for unescorted access
 - & T&R records §37.31(a)

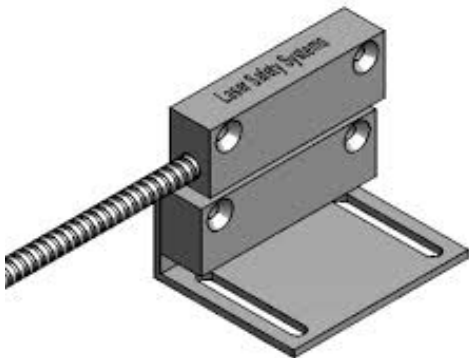


§ 37.47 Security Zones (New Term for IC Licensees)

- Cat. 1 or Cat. 2 material is used or stored only in a **Security Zone**
 - Permanent or Temporary
- 37.47(c): Security Zone must allow unescorted access only to approved individuals through:
 - (1) **“Continuous physical barriers”**
 - (2) Direct control, or
 - (3) A combination of continuous physical barriers and direct control

§ 37.49 Monitoring & Detection

- Must maintain capability to continuously monitor and detect without delay all unauthorized entries into its security zones.
 - This has been interpreted to mean the licensee must be able to “detect **all reasonably foreseeable** means to gain unauthorized access.”



§ 37.51 Maintenance and Testing **(New)**

- Must implement a 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 to Security Zone § 37.49(d)

- Immediate response to any actual or attempted unauthorized access, theft, sabotage, or diversion of material
- Requests, without delay, an armed response from the LLEA



Attempts to Remove Materials § 37.49

- Unauthorized attempts to remove material must be
 - Cat. 1: Detected immediately
 - Cat. 2: Verified on a weekly basis through physical checks, tamper indicating devices, etc.



(Change)

§ 37.45 LLEA Coordination (Change)

- Relaxes requirement for a 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 or when significant changes occur
- Document the coordination and retain for 3 years





§ 37.57(b) Reporting (Change)

- The licensee shall assess any suspicious activity related to possible theft, sabotage, or diversion of category 1 or category 2 quantities of radioactive material and **notify the LLEA** as appropriate. As soon as possible but not later than 4 hours after notifying the LLEA, the licensee shall notify the State Regulatory Authority or for NRC licensees, the NRC's Operations Center (301–816–5100).

§ 37.57(b) Reporting Change

- NUREG 2155, Rev. 1 Annex C
- Includes examples of reportable suspicious activities under 10 CFR 37.57(b)
 - Unauthorized pictures or videotapes
 - Unusual interest
 - Loitering



§37.55, Security Program Review*

- Each licensee shall periodically (at least annually) review the security program content and implementation. To include
 - Identify conditions adverse to proper performance of the security program,
 - Document
 - Causes
 - Corrective actions
 - Preventative actions



*Compatibility Category C: Must adopt the essential objectives, but the manner in which the objectives are met need not be the same.

§ 37.53 Mobile devices

- Mobile Device Definition: material mounted on wheels, casters, or equipped for moving without disassembly (e.g., designated to be hand carried)
- Must employ two independent physical controls that form tangible barriers to secure the material from unauthorized removal when the device is not under direct control and constant surveillance by the licensee and
- For devices in or on a vehicle or trailer, licensee disables the vehicle or trailer when not under direct surveillance by licensee (unless site safety requirements prohibit the disabling of the vehicle).



10 CFR Part 37

Subpart D

- Physical Protection in Transit
- Applies to any licensee that transports, or delivers to a carrier for transport, a category 1 or category 2 quantity of radioactive material.

Part 37 License Verification Requirements

§ 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.



New Transportation Terms

■ License Verification System (LVS)

- System established by license authority
- Maintains current list of licenses
- Designed to be used by Material Supplier (e.g., Shipping Licensee) to verify that a Receiving licensee's license authorizes the type, form, and quantity of RAM that will be shipped/received.



System Overview
Angela Randall
Project Manager USNRC

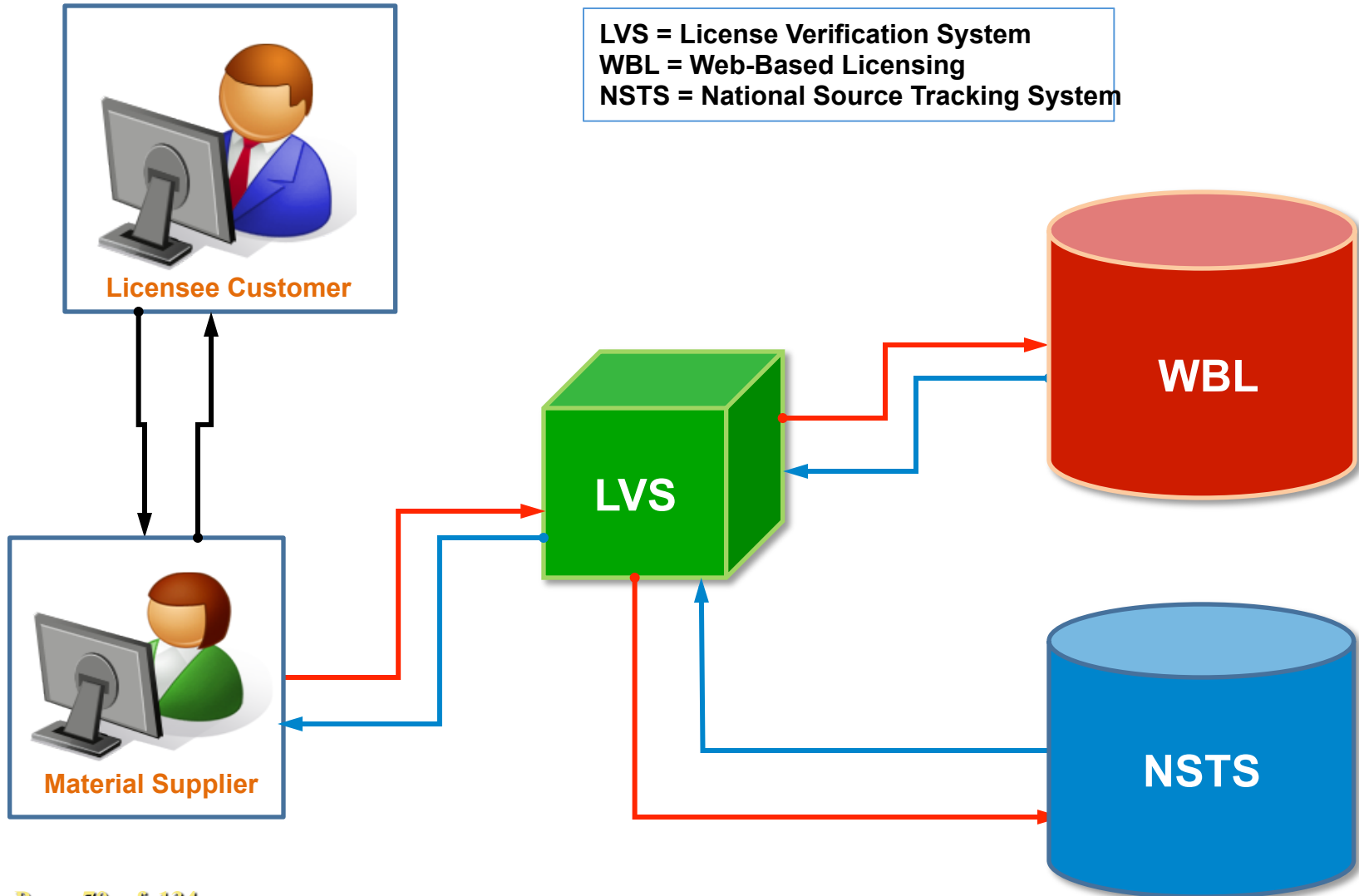


Components of the Integrated Source Management Portfolio (ISMP)



License Verification Process

LVS = License Verification System
WBL = Web-Based Licensing
NSTS = National Source Tracking System





Part 37 License Verification Requirements

Two Methods of License Verification:

- **Using the Online License Verification System (LVS)**
- **Manually using the Manual License Verification Process – Form 749 via LVS Help Desk**

To Access LVS, You will Need to Be Credentialed For the National Source Tracking System With a Smart Card, Token, Mobile Phone, etc.

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

LVS Webpage on www.nrc.gov

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



By clicking the Login button, you are agreeing to follow the ISMP Rules of Behavior: [ISMP RULES OF BEHAVIOR](#)

LVS LOGIN



Insert Smart Card and Click

Login



One Time Password Login

Login





RSA SecurID SD600



RSA SecurID SID700



RSA SecurID SD200



RSA SecurID SID800



RSA SecurID SD520




BlackBerry with
RSA SecurID software token

The One Time Passwords can come in different hardware forms:

- Token
- Card
- Mobile Phone

LVS Main Menu

**U.S.NRC**
United States Nuclear Regulatory Commission
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LVS
License Verification System

Today's Date: March 19, 2013Version: 1.0HomeLogout

User ID: lvssuprSL01License Number: 555-300-678Help

[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](#)

Privacy Policy | Site Disclaimer

Enter information for the license you are verifying and click “Verify”

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

LVS
License Verification System

Today's Date: March 19, 2013Version: 1.0HomeLogout

User ID: lvssuprml01License Number: 123-456-789Help

Verify Receiver's License

* indicates required field

Receiver Agency * :

Select Agency

Receiver License Number * :

Amendment Number :

Issue Date : (mm/dd/yyyy)

Verify

Reset

Cancel

Privacy Policy | Site Disclaimer

Verify Receiver's License

Page 1 of 3 100% [Icons]

NRC FORM 374 U.S. NUCLEAR REGULATORY COMMISSION PAGE 1 OF 3 PAGES
Amendment No. 06

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below, to use such material for the purpose(s) and at the place(s) designated below, to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

1. Licensee 1. mxxxx, Inc. (USA) 2. P. O. Box 1111 City, State 14120	2. In accordance with application dated February 21, 2003, 3. License number xxx-xxxxx is amended in its entirety to read as follows: 4. Expiration date September 30, 2013 5. Docket No. xxx-xxxxx Reference No.
6. Byproduct, source, and/or special nuclear material A. & B. Hydrogen-3	7. Chemical and/or physical form A. & B. Sealed light sources (mxxx-tec Models 400/1, 400/2, and 400/3)
8. Maximum amount that licensee may possess at any one time under this license A. & B. Not Applicable (See Condition 12)	
9. Authorized use: A. Pursuant to Section 32.14, 10 CFR Part 32, "Specific Domestic Licenses to Manufacture or Transfer Certain Items Containing Byproduct Material," the licensee is authorized to distribute timepieces, hands and dials containing gaseous tritium light sources to persons exempt from licensing pursuant to Section 30.15, 10 CFR Part 30, or equivalent provisions of the regulations of any Agreement State. B. Pursuant to Section 32.22, 10 CFR Part 32, "Specific Domestic Licenses to Manufacture or Transfer Certain Items Containing Byproduct Material," the licensee is authorized to distribute timepieces containing gaseous tritium light sources as specified in Condition 10 of this license to persons exempt from licensing pursuant to Section 30.19, 10 CFR Part 30, or equivalent provisions of the regulations of any Agreement State.	

CONDITIONS

10. Luminous timepieces may be distributed pursuant to Condition 9.B of this license provided the amount of hydrogen-3 contained in each timepiece does not exceed the amount specified in the following table:

Under Timely Renewal:

- ☒ Complete Verification
- ☐ Unauthorized Request

Reason Code:

Select Reason Code

Submit

Save / Print PDF

Cancel

The license will be displayed. Verify the quantity, form, and location of use. Then click submit.



The Verification Confirmation is Displayed (Licensee Could print this for a record)

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

LVS
License Verification System

Today's Date: March 19, 2013Version: 1.0HomeLogout
User ID: lvssuprml01License Number: 123-456-789Help

Verification Activity

Supplier Agency	Supplier License Number
Maryland Department of the Environment	123-456-789

Receiver Agency	Receiver License Number	Amendment Number	Issue Date
California Department of Public Health	322371201E	1	

Verification Date	Verification Result	Reason Code
03/19/2013	Verification Completed	

Save / Print PDF

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Unauthorized Request



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



LVS
License Verification System

Today's Date: April 29, 2013 Version: 1.0 Home Logout

User ID: hvsupr5L01 License Number: 555-300-678 Help

Verify Receiver's License

Page 1 of 3 100% [Icons]

NRC FORM 374

U.S. NUCLEAR REGULATORY COMMISSION

PAGE 1 OF 3 PAGES

Amendment No. 06

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below, to use such material for the purposes(s) and at the place(s) designated below, to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

<p>Licensee</p> <p>1. mxxxx, Inc. (USA)</p> <p>2. P. O. Box 1111 City, State 14120</p>	<p>In accordance with application dated February 21, 2003,</p> <p>3. License number xxx-xxxx-xx, amended in its entirety to read as follows:</p> <p>4. Expiration date September 30, 2013</p> <p>5. Docket No. xxx-xxx-xxx Reference No. _____</p>
<p>6. Byproduct, source, and/or special nuclear material</p> <p>A. & B. Hydrogen-3</p>	<p>7. Chemical and/or physical form</p> <p>A. & B. Sealed light sources (mxxxx-tec Models 40001, 40002, and 40003)</p> <p>8. Maximum amount that licensee may possess at any one time under this license</p> <p>A. & B. Not Applicable (See Condition 12)</p>
<p>9. Authorized use:</p> <p>A. Pursuant to Section 32.14, 10 CFR Part 32, "Specific Domestic Licenses to Manufacture or Transfer Certain Items Containing Byproduct Material," the licensee is authorized to distribute timepieces, hands and dials containing tritium light sources to persons exempt from licensing pursuant to Section 30.15, 10 CFR Part 30, or equivalent provisions of the regulations of any Agreement State.</p> <p>B. Pursuant to Section 32.22, 10 CFR Part 32, "Specific Domestic Licenses to Manufacture or Transfer Certain Items Containing Byproduct Material," the licensee is authorized to distribute timepieces containing sealed tritium light sources as specified in Condition 10 of this license to persons exempt from licensing pursuant to Section 30.19, 10 CFR Part 30, or equivalent provisions of the regulations of any Agreement State.</p>	
<p>CONDITIONS</p> <p>10. Luminous timepieces may be distributed pursuant to Condition 9.B of this license provided the amount of hydrogen-3 contained in each timepiece does not exceed the amount specified in the following table:</p>	

Under Timely Renewal:

☒ Complete Verification

☐ Unauthorized Request

Reason Code:

Select Reason Code

Submit

Save / Print PDF Cancel



Cannot Verify the License

The screenshot shows the LVS web application interface. At the top, there is a header with the U.S. NRC logo and the text 'U.S. NRC United States Nuclear Regulatory Commission Protecting People and the Environment'. To the right of the header is the 'LVS License Verification System' logo. Below the header, there is a navigation bar with links for 'Home', 'Logout', 'Help', 'Today's Date: March 19, 2013', 'Version: 1.0', 'User ID: lvssuprml01', and 'License Number: 123-456-789'. The main content area is titled 'Verify Receiver's License'. Below this title, there is a form with fields for 'Receiver A', 'Receiver L', 'Amendme', and 'Issue Date'. A 'Verify' button is located below the form. A red-bordered dialog box is overlaid on the form, titled 'Contact Agency Alert'. The dialog box contains the text 'System cannot verify request at this time. Contact the Regulatory Agency.' and an 'OK' button. A small asterisk icon with the text '* indicates required field' is located to the left of the form fields. At the bottom of the page, there are links for 'Privacy Policy' and 'Site Disclaimer'.



Manual Verification

Manual License Verification Procedure

Home > Nuclear Security and Safeguards > Radioactive Material > ISMP > LVS > Manual License Verification Procedure

Manual License Verification Procedure

The purpose of this procedure is to guide licensees transferring Category 1 and/or Category 2 quantities of radioactive materials to verify licenses outside of the License Verification System (LVS), and for Regulatory Agencies to respond to such requests.

Steps for Licensees:


1. Contact the LVS Help Desk by phone at 1-877-671-6787 or by email at LVSHelp.Resource@nrc.gov.
2. Be prepared to provide the following information to the LVS Help Desk representative:

Transferring Licensee information:

- a. License-issuing Agency
- b. Licensee name
- c. License number
- d. Contact name and title
- e. Contact phone
- f. Contact email
- g. Contact fax number



Manual Verification

OFFICIAL USE ONLY - SECURITY-RELATED INFORMATION		Submit by E-mail
NRC FORM 749 (MM/YYYY)		U.S. NUCLEAR REGULATORY COMMISSION
		APPROVED BY OMB: NO. 3160-JXXX
MANUAL LICENSE VERIFICATION REPORT		EXPIRES: (MM/DD/YYYY)
<small>Estimated burden per response to comply with this mandatory collection request: XX minutes. This notification is required. xxxxxxxxxxxxxxxxxxxxxxxxxxxx. Send comments regarding burden estimate to the FOIA, Privacy, and Information Collections Branch (7-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to info@nrc.gov, Resource.nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEGB-10202, (3155-0028), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.</small>		
Sections A-B to be completed by LVS Help Desk. Sections C-D Instructions (licensee to provide): Complete sections C and D below for NRC or Agreement State licensees needing to verify a licensee outside of the License Verification System. For issues with submitting this form, please contact the LVS Help Desk: 1-877-671-6787.		
A. CONTACTED VIA <input type="checkbox"/> Phone <input type="checkbox"/> E-mail		B. DATE (MM/DD/YYYY)
C. TRANSFERRING LICENSEE INFORMATION		
C.1 Agency (issuing Agency for license)		
C.2 Licensee Name		
C.3 License Number		
C.4 Contact Name and Title		
C.5 Contact Telephone Number	C.7 Contact Fax Telephone Number	
C.6 Contact E-mail Address		
D. RECEIVING LICENSEE INFORMATION		
D.1 Agency (issuing Agency for license)		
D.2 Licensee Name		
D.3 License Number	D.4 Amendment Number	
D.5 Issue Date		
D.6 Authorized Location		
D.7 Material(s) of concern being requested	D.8 Chemical/Physical Form	D.9 Quantity/Activity/Unit (being requested)
1. <input type="text"/>	1. <input type="text"/>	1. <input type="text"/>
2. <input type="text"/>	2. <input type="text"/>	2. <input type="text"/>
3. <input type="text"/>	3. <input type="text"/>	3. <input type="text"/>
4. <input type="text"/>	4. <input type="text"/>	4. <input type="text"/>
Sections E-F Instructions (Agency representative to provide): Verify the information in Section D above and make sure that all information provided is valid and the authorized location, materials and quantities being requested are authorized on the recipient's license. Record the verification outcome below. Return the filled form via e-mail to the LVS Help Desk.		
E. VERIFIER'S INFORMATION		
E.1 Verifier's Name		
E.2 Verifier's Telephone Number	E.3 Verifier's Fax Telephone Number	
E.4 Verifier's E-mail Address		
F. VERIFICATION OUTCOME		
F.1 Verification Date		
F.2 Verification Outcome	<input type="checkbox"/> Requested materials, quantities, and authorized location are authorized on the license <input type="checkbox"/> Requested materials, quantities, and authorized location are not authorized on the license	
		<input type="checkbox"/> Other
F.3 If other, please explain:		

The Licensee Must Keep a Copy of the Verification Outcome from the Help Desk



LVS Helpdesk – 1-877-671-6787

LVSHelp.Resource@nrc.gov

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

User Guide and Additional Information on the Webpage!

- **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 Transportation Term For Cat. 1 Source Transfers

■ 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



Examples of Safe Havens

- Federal sites that have significant security assets, such as military-base gates or guarded agency parking lots
- Secure truck stops
- Secure company terminals; State weigh stations; State welcome stations or rest areas (typical rest area would not be adequate)
- Scenic overlooks or visitors' centers, and LLEA sites, including State police barracks.
- Not a school or hospital parking lot

Cat. 1 Transfers

Preplanning & Coordination

- Preplan & coordinate departure and arrival times (Advance Notification) with:
 - Receiving licensees
 - NRC or Agreement State regulatory agency
 - Governors of all states
- Discuss State's intention to provide law enforcement escort
- Document preplanning and coordination activities

Cat. 1 Shipments by Road

- Licensee establishes Movement Control Center (MCC)
 - Maintain position information
 - Monitors 24/7
 - Has ability to immediately communicate with LLEA
 - Redundant communication ability (not subject to same failure mechanism such as cell phones)
 - Telemetric monitoring system (e.g., GPS)
 - MCC prepared to promptly implement procedures



Cat. 2 shipments

- Contract carrier must include package tracking
- Coordinate arrival times with recipient.
- Radiographers routinely use FedEx to transport Cat. 2 shipments.
- Use of LVS not required when licensee ships to themselves

Cat. 2 Transfers

Preplanning & Coordination

- Preplan and coordinate RAM arrival times with receiving licensee:
 - Expected shipment arrival 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



New Term for Cat. 2 Shipments

- “No Later Than Arrival Time”
- Date & time established by shipping and receiving licensees to initiate an investigation if shipment is late
 - May not be > 6 hours after estimated arrival time

Cat. 2 Shipments By Road

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



Cat. 1 Rail Shipments

- No Shipment has been transported by rail since 2005
- Requires monitoring by Telemetric position monitoring or alternate system. Reports to
 - Licensee,
 - Third-party, or
 - Railroad
- Rail Communications Center (RCC) provides positive confirmation of location and status
- RCC implements procedures in response to any deviations including contacting LLEA
- Requires periodic reports to the RCC



Cat. 2 Rail Shipments

- Carrier established package tracking system
- Carrier maintains constant surveillance and has capability for immediate communications.
- Requires signature to release package
- Requires immediate investigation if package not received by the no-later-than arrival time.

Enforcement



Enforcement

- The majority of Part 37 changes are administrative in nature and do not affect physical security
- BECAUSE 10 CFR Part 37 largely codifies previous Orders,
- AND licensees have already implemented security programs,
- THEN NRC does not expect a large number of significant violations (e.g., SL III).



NRC Enforcement Policy Examples

■ SL III - Programmatic Failure

- Failure to establish a program to immediately detect, assess, and respond
- Failure to respond to an attempted theft
- Failure to initiate an investigation when a shipment does not arrive by the expected time
- Failure to determine T&R



NRC Enforcement Policy Examples

- **SL IV Violations – Isolated failures that are neither easily nor likely exploitable and documentation deficiencies**
 - Failure to fully document procedures
 - Failure to maintain a list of individuals approved for unescorted access
 - Isolated failure of the designed operation of a dependable means to transmit information
 - Isolated failure to limit access to sensitive information

Minor Violation?

- Some documentation violations might be considered minor in nature and not subject to formal enforcement.
 - Missed procedural element without consequences.
 - Individual's training not documented
 - Individual had background screening but not on list of individuals with access to the security plan
 - Coordination with LLEA completed, but not documented

Required Documents

- _____ Access Authorization Procedures
- _____ Security Plan
- _____ Implementing Security Procedures
- _____ Procedures for the Protection of Information
- _____ Access List(s) for Unescorted Access and Protected Information
- _____ LLEA coordination efforts
- _____ Procedures for Shipping (e.g., Notifications and Coordination)

