NRC INSPECTION MANUAL

URMDB

INSPECTION PROCEDURE 89030

RADIATION PROTECTION AT URANIUM RECOVERY AND 11e.(2) BYPRODUCT MATERIAL FACILITIES

PROGRAM APPLICABILITY: 2602 and 2801

89030-01 INSPECTION OBJECTIVES

- 01.01 To establish the inspection program for radiation protection at conventional uranium mills, in situ recovery (ISR) uranium mills, 11e.(2) byproduct material disposal sites, and other 11e.(2) byproduct material sites licensed and regulated under Title 10 of the *Code of Federal Regulations* (10 CFR) Part 40.
- 01.02 To ensure that the licensee effectively manages radiation protection to minimize the potential for exposures to workers and the public.
- 01.03 To ensure that licensed radiation protection activities comply with U.S. Nuclear Regulatory Commission (NRC) license and regulatory requirements.

89030-02 INSPECTION REQUIREMENTS

This Inspection Procedure (IP) provides the requirements and guidance for inspections of radiation protection programs at sites licensed under 10 CFR Part 40. Because this IP applies to a variety of licensees, some of the inspection requirements and guidance provided in this IP may not be applicable to all sites.

- 02.01 <u>Inspection Requirements to Meet Objectives</u>. To meet the objectives of this IP, the inspector shall conduct the following minimum inspection activities:
 - a. Prepare for the inspection in the office before the onsite inspection. This effort should include review of the license and license application requirements for radiation protection program-related activities. If the inspection is an announced inspection, the inspector should request electronic copies of the licensee's manuals or procedures prior to the onsite inspection. The inspector should review any incident or event reports involving licensed material that have been submitted since the last inspection. The inspector should also request documentation of significant changes to the program since the last inspection.
 - b. Conduct one or more site tours to verify that the licensee is controlling radiation and radioactivity in accordance with license and regulatory requirements. The observed activities should include area postings, contamination control, access control, and material storage. The inspector should also observe the storage and use of personal protective equipment, including respirators, to verify availability, proper use, and proper

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- storage. The inspector shall conduct independent radiological surveys to verify that the licensee has effectively implemented its radiation protection program.
- c. Observe one or more critical activities such as a radiological survey, sample analysis, equipment release, personnel release, or training session. The inspector should rotate these critical activities during future inspections.
- d. Interview licensee's staff to determine how well employees understand their work activities and ascertain whether qualified staff are available to implement the radiation protection program.
- e. Determine if the licensee's records and work activities indicate that any problems such as excessive surface contamination, measurable uptakes, or elevated exposures have occurred that require additional oversight by licensee management. Ensure the licensee reported radiological events to the NRC as required by the license and regulations.
- f. Verify through a limited records review that the licensee continues to implement the radiation protection program in accordance with license and procedural requirements. These records include occupational exposure records, radiation work permits, dose measurements, surveys, release records, and similar records. The inspector should review only records that were developed since the last inspection.
- g. If there have been significant changes in the radiation protection program, ensure that the changes have been appropriately evaluated and implemented by the licensee through its performance-based license.

02.02 Performance-based/Risk-informed Inspections. In accordance with Commission policy (SECY-98-144), inspectors must conduct performance-based inspections with an emphasis on risk-significant activities that have an impact on safety and the environment. A performance-based inspection emphasizes the observation of activities and results of the licensees' programs over the review of procedures or records. The risk-informed inspection approach considers risk insights together with other factors to focus inspection activities commensurate with the risks associated with the implementation of the licensee's NRC-approved programs.

The higher risk activities that impact radiation protection programs include spill responses and other radiological emergencies, yellowcake dryer operations, and the procedures and training for these risks. Non-routine and unplanned accidents and events involving radioactive material may present the greatest risk to workers

and the public. Inspection experience indicates that inhalation or ingestion of uranium presents significant risks to workers in the uranium recovery industry.

In summary, the inspector will verify compliance primarily through observations of site conditions, observations of work activities, interviews with workers, demonstrations by workers, and reviews of critical records. The inspector shall focus attention on the most important, risk-significant activities and the results of the licensee's efforts.

89030-03 INSPECTION GUIDANCE

The emphasis of this inspection effort is to ensure that the licensee has established and implemented critical programs and procedures to manage radiation protection activities. The inspection should include direct observations of activities as much as possible but may include reviews of records as needed. This section includes the inspection guidance for the following areas:

- Regulatory requirements applicable to radiation protection
- Programs and procedures
- Record management
- Site tours
- Routine and non-routine reports
- Routine audits and program reviews

A checklist of industry-wide radiation protection program activities is provided in Appendix A to this IP. These activities include the As Low As Is Reasonably Achievable (ALARA) program, occupational exposure monitoring, particulate air sampling, bioassays, external radiation surveys, surface contamination surveys, equipment releases, personnel and respirator surveys, instrument calibrations, and employee and visitor training. The inspector should review portions of each activity, to ensure that the licensee is implementing its radiation protection program in accordance with license and regulatory requirements.

03.01 <u>Regulatory Requirements</u>. The following regulatory requirements apply to most sites licensed under 10 CFR Part 40:

- 10 CFR Part 19 provides the requirements for notices, instructions, and reports to individuals participating in NRC regulated activities. These requirements include posting of notices, instructions to workers, and notifications and reports to individuals.
- 10 CFR Part 20 establishes the standards for protection against ionizing radiation resulting from activities conducted under licenses issued by the NRC. The purposes of these regulations are to control the receipt, possession, use, transfer, and disposal of licensed material in such a manner that the total dose to an individual does not exceed the standards for protection against radiation as prescribed in this part.
- 10 CFR 40.32(c) states, in part, that an application for a specific license will be approved if the applicant's proposed equipment, facilities, and procedures are adequate to protect health and minimize danger to life or property. For uranium recovery and 11e.(2) byproduct material sites, these proposed equipment, facilities, and procedures include license requirements for radiation protection program procedures, radiation work permits, instructions for how to monitor worker exposures, and similar requirements for site-specific radiation protection programs. These additional requirements may be included in either the license or license application.
- 03.02 <u>Programs and Procedures</u>. Most radiation protection programs are described in the application, and certain license conditions may supplement the application commitments. The goal of this inspection effort is to determine if the licensee continues to implement the radiation protection program and associated procedures in accordance with license and regulatory requirements. The inspector should verify:

- Radiation protection program has been established and implemented in accordance with the requirements specified in 10 CFR Parts 19 and 20.
- Additional requirements specified in the license have been implemented. For example, some licenses include conditions that licensees will implement the guidance provided in Regulatory Guides 8.30, "Health Physics Surveys in Uranium Recovery Facilities," and 8.31, "Information Relevant to Ensuring That Occupational Radiation Exposures at Uranium Recovery Facilities Will Be As Low As Is Reasonably Achievable."
- Site procedures have been developed for all aspects of the radiation protection program. Many licenses include conditions specifying that operational procedures will be developed for all activities involving radioactive material.
- Changes to the program were made in accordance with the performance-based license.
 Ensure that the changes did not require prior NRC approval. Verify that site staff were trained on the program changes.
- Procedures are usable by site staff, equipment specified in the procedures are available, and updated copies of procedures are available for licensee staff use.
- 03.03 Records Management. The inspector should verify that the licensee has established an administrative program for managing radiation protection program records. The retention period for the records will vary, but most licensees maintain all records in hard copy or electronic formats for the life of the license. The inspector should review selected records as needed to support the inspection effort. The inspector should:
 - Review critical records that document occupational exposures including bioassays and dose assessments.
 - Randomly review non-critical records such as equipment release records and routine contamination surveys.
 - Review radiation work permits as needed to supplement the inspection effort. The goal
 of this review is to ensure that radiological controls have been established and
 implemented for non-routine work activities. Cross-reference radiation work permit
 documents against bioassay and air monitoring records.
 - Review selected instrumentation records. These records include calibration and functional test records. The records include portable survey instruments, fixed monitoring equipment, constant air monitors, portable air samplers, and alarming dosimeters. Ensure that the licensee has established a program for managing instrument calibrations and functional tests.
- 03.04 <u>Site Tours</u>. The inspector should conduct site tours, in part, to observe the licensee's implementation of radiation program requirements. The inspector should observe the status of the licensee's implementation of:
 - <u>Area postings</u>. Postings include radiation areas, airborne radioactivity areas, and radioactive material storage areas. Many licenses have conditions that exempt the

licensee from the posting requirements of 10 CFR 20.1902(e) for areas within the mill provided that all entrances to the mill are conspicuously posted in accordance with 10 CFR 20.1902(e) with the statement that "any area within the mill may contain radioactive material."

- Storage of wastes and access control measures. Access control includes signs, ropes, physical boundaries, and other barriers used to control access to radioactive material, in compliance with 10 CFR 20.1801 and 1802 requirements.
- Workers' use of radiological measuring and sampling equipment. The inspector should ensure that the licensee's staff demonstrates knowledge and understanding of measuring equipment lapel air samplers and self-frisking stations.
- <u>Storage and use of personnel protective equipment</u>. The licensee should have developed and implemented a program to manage equipment including personnel air samplers and respirators in accordance with license and procedural requirements.
- <u>Housekeeping</u>. The licensee should have a program to maintain a level of cleanliness that minimizes the potential for the spread of contamination.
- Posting of notices to workers. According to 10 CFR 19.11(f), notices to workers shall
 appear in a sufficient number of places to permit individuals engaged in NRC-licensed
 or regulated activities to observe them on the way to or from any licensed or regulated
 locations to which the document applies, shall be conspicuous, and shall be replaced if
 defaced or altered. The inspector should verify that the licensee's posting of notices to
 workers meets regulatory requirements.

The inspector should conduct independent confirmatory surveys during site tours, to verify that the licensee has posted areas in compliance with regulatory and license conditions. The inspector should also independently verify that contamination on surfaces and equipment being released are within licensed limits.

03.05 Routine and Non-Routine Reports. Various license conditions require that certain routine reports be submitted to the NRC. The routine reports may include annual ALARA reports, annual program reviews, and public dose assessments. Non-routine reports include formal notifications as required by 10 CFR 20.2201 through 20.2203. The inspector should verify that all routine and non-routine reports and the required data are submitted to the NRC as stipulated in the license and regulations. During the onsite inspection, the inspector should ensure that any non-reportable event did not require formal reporting to the NRC.

The licensee may be required to submit routine reports to workers including occupational exposure records per 10 CFR 19.13. Some licensees may determine that routine reporting to workers is unnecessary, based on the results of the occupational monitoring program, unless requested by the worker. The inspector should ensure that the licensee submitted reports to workers, if required by regulation or if requested by the worker.

03.06 Routine Audits and Program Reviews. The routine audit and program review requirements vary by site. At a minimum, 10 CFR 20.1101(c) requires licensees to conduct annual program reviews. The license application and specific license conditions may provide additional audit and program review requirements. For example, some sites may commit to

conduct routine quality assurance reviews, although these reviews are uncommon in the uranium recovery industry.

Guidance for annual ALARA audits is provided in Regulatory Guide 8.31, Section 2.3.3. The ALARA audit may be required by license for some uranium recovery facilities. The report may be included with the annual or semi-annual effluent reports.

89030-04 RESOURCE ESTIMATE

Inspections of the radiation protection program depends on the complexity of the licensee's program and would typically involve one inspector and would require one half to one day (4-8 hours) to complete.

89030-05 PROCEDURE COMPLETION

This IP is complete when the inspection staff observe the activities, interview site staff, and review records as needed to satisfy the objectives of this IP. This IP should be completed at least once a year or at other frequencies as established in the Master Inspection Schedule.

89030-06 REFERENCES

Inspection Manual Chapter 2801, "Uranium Recovery and 11e.(2) Byproduct Material Facility Inspection Program," October 8, 2021

NUREG-1736, "Consolidated Guidance: 10 CFR Part 20-Standards for Protection Against Radiation," October 2001

Regulatory Guide 4.22, "Decommissioning Planning During Operations," December 2012

Regulatory Guide 8.9, "Acceptable Concepts, Models, Equations, and Assumptions for a Bioassay Program," Revision 1, July 1993

Regulatory Guide 8.13, "Instruction Concerning Prenatal Radiation Exposure," Revision 3, June 1999

Regulatory Guide 8.15, "Acceptable Programs for Respiratory Protection," Revision 1, October 1999

Regulatory Guide 8.22, "Bioassay at Uranium Mills," Revision 2, May 2014

Regulatory Guide 8.30, "Health Physics Surveys in Uranium Recovery Facilities," Revision 1, May 2002

Regulatory Guide 8.31, "Information Relevant to Ensuring That Occupational Radiation Exposures at Uranium Recovery Facilities Will Be As Low As Is Reasonably Achievable," Revision 1, May 2002

Staff Requirements SECY-98-144, "White Paper on Risk-informed and Performance-based Regulation," March 1, 1999

END

Appendix A: Key Radiation Protection Program Areas Applicable to Uranium Recovery and 11e.(2) Byproduct Material Facilities

Attachment 1: Revision History for IP 89030

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INSPECTION PROCEDURE 89030 APPENDIX A

KEY RADIATION PROTECTION PROGRAM AREAS APPLICABLE TO URANIUM RECOVERY AND 11e.(2) BYPRODUCT MATERIAL FACILITIES

PROGRAM APPLICABILITY: 2602 and 2801

89030-01 PURPOSE

This appendix provides a summary of key radiation program areas that should be reviewed during U.S. Nuclear Regulatory Commission (NRC) inspections at uranium recovery and 11e.(2) byproduct material sites.

89030-02 PROGRAM AREAS TO BE REVIEWED DURING NRC INSPECTIONS

This appendix provides a summary of key program areas that are applicable to most facilities licensed under Title 10 to the *Code of Federal Regulations* (10 CFR) Part 40. Title 10 CFR 20.1101(a) states that each licensee shall develop, document, and implement a radiation protection program commensurate with the scope and extent of licensed activities and sufficient to ensure compliance with the provisions of this part. The site-specific, NRC-approved program requirements are provided in the license and license application.

Depending on the complexity of the licensee's program, not all program areas may be in effect at the time of the inspection. For example, a mill in long-term standby may indefinitely suspend some radiation protection program attributes.

02.01 As Low As Is Reasonably Achievable (ALARA) Program.

- 10 CFR 20.1101(b) states that the licensee shall use, to the extent practical, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are ALARA
- Details of licensee's ALARA program are provided in the license application
- Additional guidance is provided in Section 1 of Regulatory Guide (RG) 8.31,
 "Information Relevant to Ensuring that Occupational Radiation Exposures at Uranium Recovery Facilities Will Be As Low As Is Reasonably Achievable"
- Depth of ALARA programs will depend on quantities of radioactive materials possessed and used, and whether the potential for radiation exposures can be significant; at a minimum, the licensee should always consider methods to minimize exposures

02.02 Occupational Exposures.

- Regulatory requirements for occupational dose limits are provided in 10 CFR Part 20, Subpart C, and include limits for workers, minors, embryo/fetus, and members of the public
- 10 CFR 20.1201(c) provides a limit for soluble uranium intake by an individual to 10 milligrams in a week; exceeding this limit is extremely rare and is usually caused by an accidental intake as a result of dryer failure or yellowcake release
- Occupational exposure limits are summarized in RG 8.30, "Health Physics Surveys in Uranium Recovery Facilities"
- Additional details about the licensee's program are provided in the license application
- Occupational exposures are summation of internal and external doses; external doses are usually measured using optically stimulated dosimeters, while internal doses are usually calculated based on air monitoring data
- Some licensees may calculate external exposures based on time spent in an area with a known exposure rate
- 10 CFR 20.1501(d) specifies, in part, that dosimeter processors have accreditation from the National Voluntary Laboratory Accreditation Program (NVLAP); does not apply to pocket ion chambers, extremity dosimeters, and environmental dosimeters
- Some office workers may be considered as members of the public and their potential doses should be monitored accordingly
- Some sites have "man-camps" where workers will spend time when not working; these individuals are considered members of the public and should be monitored as such
- Occupational exposure records are critical records that should be reviewed at least once per year; most inspectors review records for a calendar year and compare the annual results to regulatory limits
- Air sampling records should be randomly reviewed, and pertinent staff interviewed, to
 ensure that licensee has developed and implemented a program to accurately measure
 airborne concentrations and convert the filter radioactivity to an internal dose
- Inspector should review documentation of evaluations performed as a result of unplanned exposures; verify the appropriateness of preventive measures implemented following an unplanned exposure

02.03 Bioassays.

Regulatory requirement for bioassays is provided in 10 CFR 20.1204(a) which states, in part, that each licensee shall take suitable and timely measurements of:
 (1) concentrations of radioactive materials in air in work areas; or (2) quantities of

radionuclides in the body; or (3) quantities of radionuclides excreted from the body; or (4) combinations of these measurements

- Additional guidance for bioassays is provided in RG 8.22, "Bioassay at Uranium Mills"
- Details of bioassay sampling program are usually provided in license application
- Some licenses include special conditions that specify the action levels for bioassay sample results; a common response to an exceedance of the action level is to conduct an investigation
- Inspector should review bioassay results to ensure that no action levels were exceeded; discuss any exceedances with radiation safety officer and ensure that corrective actions were appropriate
- Bioassay results resulting from work conducted under a radiation work permit should be reviewed and correlated back to the relevant radiation work permit
- In rare situations, licensee may estimate or calculate dose based on bioassay results; details for interpretation of bioassay measurements are provided in RG 8.9, "Acceptable Concepts, Models, Equations, and Assumptions for a Bioassay Program"

02.04 External Radiation Surveys.

- External radiation surveys and external dose monitoring are required by 10 CFR
 20.1501 and 20.1502; additional requirements may be specified in the license or license application
- Additional guidance for these surveys is provided in RG 8.30
- Surveys are usually conducted at some interval such as monthly or quarterly and should include all areas of the facility
- Licensee's survey results are used to verify radiation area postings
- RG 8.30 recommends licensees conduct beta surveys of areas where yellowcake operations occur
- Inspector should review random survey results to verify that the surveys are being conducted at the required interval
- Inspector should conduct independent radiological surveys to verify the licensee's measurements and/or observe the licensee's staff conducting these surveys

02.05 <u>Air Sampling/Internal Dose Assessments</u>.

- Air sampling and internal dose monitoring are required by 10 CFR 20.1501 and 20.1502
- Additional requirements are included in the license and license application

- Guidance is provided in RG 8.30
- Air sampling includes measurements of concentrations of airborne uranium ore dust, yellowcake, radon-222, and radon progeny (or thorium and its progeny at sites licensed primarily for thorium)
- Air sampling may be conducted on a routine or as-needed basis, depending on the work assignment
- Air sampling may be conducted using general area and/or individual breathing zone sampling; licensee will use air sample results to calculate internal dose
- Ensure licensee is using the correct respiratory protection factor in its dose calculations, if respirators are assigned to workers
- At end of year, the internal doses are summarized for assignment to an individual
- Inspector should observe licensee's collection of air samples to verify the techniques are consistent with guidance and industry standards
- Inspector should independently verify that the licensee's calculations are accurately translating the air sample results into a dose assignment; pay attention to the spreadsheet algorithms used in the calculation of dose

02.06 Surface and Subsurface Contamination Surveys.

- Surface and subsurface monitoring is required by 10 CFR 20.1501
- Additional guidance is provided in RG 8.30, and details of these surveys should be provided in license application
- Areas surveyed include restricted area surfaces, lunchrooms, offices, bathrooms, and change rooms; action levels are commonly provided in site procedures
- Surveys are conducted at some specified interval such as weekly and in response to spills within the restricted area
- Surveys may include both alpha and beta-gamma contamination
- Subsurface surveys may be required to comply with the 2011 Decommissioning Planning Rule; see RG 4.22, "Decommissioning Planning During Operations," for details
- Subsurface surveys may be required to estimate decommissioning costs; areas that
 may require subsurface surveys include areas underneath structures and outdoor areas
 with known leaks of radioactive material
- Leak tests may be required at some interval, commonly every 6 months, to demonstrate that sealed sources are not leaking; details may be provided in the license application

- Inspector should randomly review routine survey records to ensure these surveys are being conducted at the required intervals
- Inspector should verify that no widespread contamination exists at the facility and any action level exceedance is promptly cleaned up by licensee staff
- If possible, the inspector should observe the licensee conducting these routine surveys or conduct independent radiological surveys to verify the licensee's results

02.07 Equipment and Personnel Surveys and Releases.

- Basic survey requirements are provided in 10 CFR 20.1501
- Program details are provided in the license application; some licenses may include additional conditions for equipment releases
- Guidance is provided in RG 8.30 including total and removable release limits
- Inspector should randomly review equipment release records to ensure that the items have been released with contamination levels below the release limits and verify that licensee used correct meter for the survey
- Inspector should perform a confirmatory survey on equipment staged for release, to verify that the equipment can be released
- Inspector should observe workers surveying out of restricted areas to ensure they use scanning techniques and demonstrate good health physics practices
- Inspector should ensure that personnel friskers appear operable, meters have been functional checked on a daily basis, and alarm setpoints are established per procedures

02.08 Respiratory Protection Program.

- Regulatory requirements for the respiratory protection program are provided in 10 CFR Part 20, Subpart H
- Guidance for respiratory protection programs is provided in RG 8.15, "Acceptable Programs for Respiratory Protection"
- Guidance for surveying respirators after cleaning is provided in RG 8.30
- Additional requirements should be provided in the license application
- Typical program requirements include training, fit-testing, medical exam, storage, issuance, and cleaning
- Equipment is commonly certified by NIOSH/MSHA
- Inspector should observe the storage of respirators and replacement cartridges to ensure that the equipment is properly stored, dated, and ready for issuance

• Through interviews with site staff, inspector should verify that staff understand how to use the respirators and conduct operational tests prior to each use

02.09 Radiation Work Permits (RWPs).

- Most licenses have conditions that require use of RWPs for all work or non-routine maintenance jobs where the potential for significant exposure to radioactive material exists and for which no standard written procedure already exists
- Additional program details are provided in the license application
- Guidance is provided in RG 8.31
- Inspector should review RWPs issued since last inspection to verify compliance with license requirements as well as the results of any bioassay or air sampling conducted under the RWP
- Inspector should observe work in progress using an RWP to ensure that workers comply with the restrictions provided in the RWP

02.10 Posting Requirements.

- Inspector should ensure licensee has established and maintained posting of notices to workers as required by 10 CFR 19.11; question workers to determine if they are aware of the posting of notices
- Radiological posting requirements are provided in 10 CFR Part 20, Subpart J
- Postings may include radioactive caution signs (20.1901), radiation area postings (20.1902), airborne radioactivity area postings (20.1902), and areas or room postings where licensed material is used or stored (20.1903)
- During site tours, inspector should verify that licensee has posted radiation areas, airborne radioactivity areas, and areas with licensed material in accordance with license and regulatory requirements
- Inspector should conduct independent radiological surveys to verify that area postings are accurate
- Exceptions to the posting requirements are provided in 10 CFR 20.1903; for example, if an area is under constant surveillance and control by the licensee's staff
- Guidance for postings is provided in RG 8.30 and NUREG-1736, "Consolidated Guidance: 10 CFR Part 20-Standards for Protection Against Radiation"
- Most licenses include exceptions to certain regulatory required postings, to allow licensees to post entries into a facility without having to post individual areas and rooms within the facility

 Since some licensees may choose to conservatively over-post areas, the inspector should note that RG 8.30 states that licensees should avoid posting radiation area and airborne radioactivity area signs in areas that do not require them; instead, the signs should be posted as needed to specifically warn workers where additional precautions are needed to avoid unnecessary radiation exposure and posting all areas defeats this purpose

02.11 Security and Control.

- Regulatory requirements for storage and control of licensed material is provided in 10 CFR Part 20, Subpart I
- 10 CFR 20.1801 provides requirements for security of stored material, while 10 CFR 20.1802 provides requirements for control of material not in storage
- License application may provide additional requirements for security and control of licensed material
- General guidance for security and control of radioactive material is provided in NUREG-1736
- Common security measures include monitored cameras, locked doors, locked gates, fences, and routine site tours by licensee staff
- During site tours, inspector should observe security status of areas where radioactive material is located or stored in restricted areas and unrestricted areas

02.12 Instrument Calibrations.

- 10 CFR 20.1501(c) states that the licensee shall ensure that instruments and equipment used for quantitative radiation measurements are calibrated periodically for the radiation measured
- Details of instrument calibrations are provided in the license application
- Guidance for calibration of survey instruments is provided in RG 8.30
- Instrument calibrations apply to air samplers and radiological measuring devices
- The most common calibration frequency is 1 year, although licensee may commit to other frequencies
- Following calibration, licensees are typically required to functionally test the equipment upon arrival and daily during use
- Inspector should randomly review certain survey meters in use to verify that they have been properly calibrated and functionally checked

 Inspector should verify that licensee has sufficient instruments for the types of measurements needed to support the radiation protection program without gaps of coverage

02.13 Worker and Visitor Training.

- Training requirements are provided in 10 CFR 19.12 and the license application
- Training guidance is provided in RG 8.31 including emergency procedure training
- Training will include new worker, respiratory protection, radiation work permit, visitor, and refresher training
- Training should include review of special requirements for pregnant workers and workers considering pregnancy; refer to RG 8.13, "Instruction Concerning Prenatal Radiation Exposure"
- Inspector should verify that the licensee has established and implemented training in accordance with license requirements
- Inspector should interview selected staff, especially new workers and contractors, to ensure these workers understand the radiological aspects of their work assignments

02.14 Records.

- Record requirements for the radiation protection program are provided in 10 CFR Part 20, Subpart L
- Most licenses and license applications provide additional record development and
 retention requirements; for example, a commonly used license condition includes a list
 of activities, including radiation protection program activities, that require certain types
 of records and how long these records should be retained
- Retention periods for records will vary, from short duration (several years) to the life of the license; most licensees maintain hard copies or electronic copies of most records indefinitely
- Inspector should review records as part of the inspection to verify that the licensee has established and implemented the radiation protection program

END

Attachment 1: Revision History for IP 89030

Commitment	Accession	Description of Change	Description of	Comment Resolution
Tracking	Number		Training Required and	and Closed Feedback
Number	Issue Date		Completion Date	Form Accession
	Change Notice			Number
n/a	ML21196A307	Initial issuance	n/a	ML21196A309
	10/08/21			
	CN 21-034			