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Plan

INEEL Radiation Protection Program

Idaho National Engineering and Environmental Laboratory

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INEEL Radiation Protection Program

PLN-260, Rev. 4

APPROVAL SIGNATURES

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I. INEEL Radiation Protection Program Policy

The purpose of the INEEL Radiation Protection Program (RPP) is to implement the requirements of 10 CFR 835. Additionally, the RPP develops and implements the necessary programmatic requirements to ensure that radiological operations are performed in a manner to protect the health and safety of all its employees, contractors and the general public. The INEEL management commitment to this philosophy is in total agreement with the DOE's Radiological Health and Safety Policy. The INEEL RPP shall:

- Ensure that a compliant radiation protection program is established and maintained,
- Ensure personnel responsible for performing radiological work are appropriately trained,
- Ensure the technical competence of personnel responsible for implementing and overseeing the Radiological Controls Program,
- Ensure line management's involvement and accountability for departmental radiological performance,
- Ensure that radiological measurements, analyses, worker monitoring results and estimates of public exposures are accurately and appropriately made,
- Ensure that radiological operations are conducted in a manner that controls the spread of radioactive materials and reduces exposure to the work force and the general public and that a process is utilized that seeks exposure levels as low as reasonably achievable, and
- Ensure that the As Low As Reasonably Achievable (ALARA) process is incorporated into facility design and modifications.

II. Radiation Protection Program

All radiological activities performed by the INEEL Site Contractor under the DOE contract will meet the requirements of this RPP. The RPP was developed following the guidance provided by DOE G 441.1-1 *Management and Administration of Radiation Protection Programs Guide*. The RPP addresses the eleven functional elements contained in DOE G 441.1-1, Section 4.2, RPP Functional Elements, by references to the site radiation protection program. There is also a cross-reference matrix that compares the RPP to the appropriate sections of the INEEL Radiological Control Manual (RCM) and references the INEEL Site Contractor documents that demonstrate compliance with the specific 10 CFR 835 regulatory provisions.

References to the INEEL Site Contractor throughout this document refer to the facilities, their physical locations, and the personnel working at the facilities. The existing facilities, managed by the INEEL site contractor, are as follows: (1) TRA, (2) INTEC/TAN/PBF, (3) RWMC/WROC, and (4) SMC/CFA/IFF. These facilities have the majority of radiological conditions that are encountered in the nuclear industry: (1) waste shipments, (2) hot cell operations, (3) spent fuel pool operations, (4) reactor operation, (5) environmental restoration, (6) uranium fabrication, (7) long term waste storage, (8) laboratory operations, and (9) prototype development. Therefore, the INEEL RCM and procedures cover the entire radiological conditions attendant in these operations, within the controlled areas of the facilities as identified above. Specific statements contained in the INEEL RCM, and enhanced by the INEEL Site Contractor Procedures implement the requirements in this RPP. [Implements 10 CFR 835.101(d)]

Integral to the overall radiation protection program is the radiological review of facility designs and modifications. A part of the RPP is a review of all such designs and modifications to ensure that the facilities can be operated to meet the requirements of 10 CFR 835, Subpart K, as well as to all ALARA program considerations. In addition, it is the site contractor's intent to operate all radiological facilities and areas in such a manner as to meet all radiological dose limits and to meet the goals of the ALARA program.

No exemptions to the requirements of 10 CFR 835 have been requested in this RPP. Subcontractors working for the INEEL Site Contractor shall operate in accordance with the INEEL Site Contractor RPP, RCM and implementing procedures. This is assured by the use of a INEEL site contractor Point of Contact with each subcontractor, the use of site contractor radiological control personnel to control the work and the use of the Radiological Control Information Management System (RCIMS) where applicable to provide access control to the work and to monitor training, worker dose, and respiratory protection. The DOE may direct or make modifications to this RPP. No person, including DOE personnel, shall take or cause to be taken, any action inconsistent with the requirements of this RPP, or any program, plan, schedule, or other process established by this RPP. Nothing in this RPP shall be construed as limiting actions necessary to protect the health and safety of the site personnel. [Implements 10 CFR 835.3]

An update of this RPP will be submitted to DOE (a) whenever a change or addition to the RPP is made or (b) within 180 days following changes to 10 CFR 835. In instances where changes to 10 CFR 835 are incorporated in the RPP by reference (no modifications are required to the RPP), the INEEL Site Contractor will notify DOE in writing that the changes have been incorporated by reference within 180 days following those changes. Changes, additions, or updates to this plan may become effective without prior DOE approval only if the changes do not decrease the effectiveness of the RPP and the changed program continues to meet the requirements of 10 CFR 835. [Implements 10 CFR 835.101(g)&(h)]

The initial RPP or an update shall be considered approved 180 days after its submission unless rejected by DOE at an earlier date. [Implements 10 CFR 835.101(i)]

As an integral part of the RPP, the INEEL Site Contractor has and will continue to develop and implement written procedures as necessary to maintain compliance with the requirements of 10 CFR 835.104.

III. Requirements

The mandatory requirements to be met for the radiation protection program are contained in 10 CFR 835, *Occupational Radiation Protection.*

IV. RPP Functional Elements

A. Organization and Administration

1. INEEL Site Contractor Radiological Control Organization

   The INEEL Site Contractor Radiological Control Organization is organized into two primary functions. The central radiological control staff and the field radiological control staff. The Radiological Control Director and the central radiological control staff are independent of Operations and Maintenance staff, while the field radiological personnel support each facility directly and report directly to the facility. The Radiological Control Organization provides support to employees and is accountable to the INEEL Radiological Control Director. The facility management personnel, working with the radiological control personnel, assure adherence to the INEEL RPP at the various facilities and operations and provides the required radiological support to the organization. Written procedures shall be developed and implemented as necessary to ensure compliance with 10 CFR 835.104.

   Individuals responsible for developing and implementing measures necessary for ensuring compliance with the requirements of this RPP shall have the appropriate education, training, and skills to discharge these responsibilities. [Implements 10 CFR 835.103]

2. INEEL Radiological Control Director

   The INEEL Radiological Control Director is responsible for setting radiological control policy and for writing and maintaining the resulting implementing procedures. In addition, the Director has the responsibility for planning, administering, and maintaining the INEEL RPP with support from line management at all levels. The Radiological Control Director will ensure that the RPP functional elements are appropriately implemented and

maintained through periodic review, by the central radiological control staff, of INEEL Site Contractor radiological policies, procedures and documents.

3. INEEL Site Contractor Management Commitment

   The responsibility for compliance with radiological control requirements, and for maintaining radiation exposures ALARA, starts with the individual worker and increases as it progresses upward through the organization. INEEL Site Contractor line managers are fully responsible for radiological performance among their personnel, and shall take necessary actions to ensure requirements are implemented and performance is monitored and corrected as necessary. As part of the commitment to the RPP, INEEL Site Contractor senior management ensures the ALARA program is implemented. Line managers will ensure that personnel are properly trained for radiological work.

4. Internal Audits

   Internal audits are the process of providing independent feedback to line managers to indicate the adequacy of the RPP. These audits are performed primarily by the radiological control organization though other groups in the company will occasionally assist. Inspections, audits, reviews, investigations, and self-assessments are part of the numerous checks and balances in the INEEL Site Contractor RPP. Internal audits of the RPP are conducted such that over a 36-month period, all functional elements are assessed for program performance, applicability, content, and implementation. [Implements 10 CFR 835.102]

5. RPP Administration

   One of the primary methods for ensuring compliance of the RPP with the regulatory requirements of 10 CFR 835 is the RCIMS. RCIMS is the repository used to control occupational doses, to ensure current radiation worker training, and to ensure proper use of Radiation Work Permits (RWPs). The system also controls the worker's current radiation exposure, their access into radiological areas, the issuing of radiation dosimeters and the generation of required reports. In areas where there is no access to the database and during periods where the computer system is not available, there is a procedure based paper process.

B. ALARA Program

The INEEL Site Contractor's ALARA program is implemented by procedure. The program includes the following elements:

1. INEEL ALARA Program

   The INEEL Site Contractor's ALARA policy is to use the ALARA program to keep radiation exposures within the regulatory limits and assure that radiation exposures are as low as reasonably achievable. Senior management and all levels of the work force are committed to this policy.

   The ALARA program is composed of the following components: 1) The INEEL ALARA Committee which is chaired by a senior site executive, 2) Individual Site Area ALARA committees, and 3) an INEEL ALARA program coordinator. A member of the radiological control staff will be appointed as the INEEL ALARA coordinator who will assist the INEEL ALARA Committee chairperson to implement the ALARA program. [Implements 10 CFR 835.101(c)]

2. INEEL ALARA Committee

   The INEEL ALARA Committee has been established to provide a focus and direction for improving the radiological control program across the site. This includes a review of the activities of the site area ALARA committees to ensure the INEEL site contractor facilities are maintaining an effective ALARA program.

   The INEEL ALARA Committee includes the INEEL ALARA chairperson, INEEL ALARA coordinator, the Radiological Control Director, personnel from management, operations, and the technical support organization from the different facilities. Additional Radiological Control personnel act as advisors to the committee. [Implements 10 CFR 835.101(c)]

3. Site Area ALARA Committee

   In addition to the INEEL Site Contractor ALARA Committee, there are individual Site Area ALARA Committees that have the responsibility to assist line management in implementing the ALARA process at each site area. Site area management selects the ALARA Committee chairperson. The site area Radiological Control Manager appoints a site area ALARA Committee coordinator. [Implements 10 CFR 835.101(c)]

4. Facility Design, Modification and Control

   The site area Radiological Control organization reviews the facility designs and modifications to ensure that the requirements of 10 CFR 835.1002 are met and that measures are taken to maintain radiation exposures in controlled areas ALARA through physical design features and

administrative controls, as required in 10 CFR 835.1001. [Implements 10 CFR 835.1001, 1002 and 1003]

C. Administrative Control Levels and Dose Limits

The INEEL Site Contractor's objective is to maintain individual radiation doses ALARA, but in all cases below the regulatory limits contained in Subpart C of 10 CFR 835. To accomplish this objective, administrative control levels are established below the regulatory limits to control individual and collective radiation dose. Management approves these administrative control levels. The control levels are multitiered with increasing levels of authority required to exceed higher administrative control levels. Unless otherwise indicated, all administrative control levels and dose limits are stated in terms of the total effective dose equivalent.

D. The External Exposure Control Program

The INEEL Site Contractor external exposure control program provides the following: dosimeters and their processing, dose determinations, dose record maintenance, dose reporting and records maintenance. The dosimetry program is accredited by the DOE Laboratory Accreditation Program for Personnel Dosimetry (DOELAP). [Implements 10 CFR 835.402 (b)]

The purpose of the external exposure program is to monitor the external dose received by the radiation worker and maintain their dose within regulatory limits. The program is composed of the following components:

- The measurement of the external radiation dose received by INEEL employees by the use of the site standard dosimeter;
- Differentiation between radiation exposure received from medically administered radiopharmaceuticals and occupational radiation exposure received at the INEEL and access restrictions when entering radiologically controlled areas,
- Exposure limits for embryo/fetus [Implements 10 CFR 835.206],
- Planned Special Exposures [Implements 10 CFR 835.204 (a)-(f)],
- Occupational dose limits for minors and limits for members of the general public entering a controlled area [Implements 10 CFR 835.207 & 835.208],
- Non-uniform exposure of the skin [Implements 10 CFR 835.205].

E. Internal Exposure Control Program

The INEEL Site Contractor has established an Internal Dosimetry Program and developed a technical basis to meet the requirements of 10 CFR 835. This program establishes a bioassay program that identifies the non-discretionary sampling requirements. The purpose of this bioassay program is to monitor internal uptakes and determine the quantity of the uptake. A site Internal Dosimetrist and facility Internal Dosimetry Coordinators assist line managers in implementation of the bioassay program. The program is accredited by the DOE Laboratory Accreditation Program for Radiobioassay. The program is composed of the following components:

- The non-discretionary measurement of the internal radiation dose received by INEEL employees using the site bioassay program, for workers who are likely to receive a committed effective dose equivalent to the whole body of greater than 100 mrem in a year,
- Exposure limits for embryo/fetus,
- Occupational dose limits for minors and limits for members of the general public entering a controlled area [Implements 10 CFR 835.202, 835.402(c) & 835.402(d)].

F. Area Monitoring and Control

1. Area Monitoring

   Area monitoring in the workplace is routinely performed, as necessary, to identify and control potential sources of personnel exposure to radiation and/or radioactive material. [Implements 10 CFR 835.401(a)]

   In general, workplace monitoring is performed to:

   - Document radiological conditions in the workplace,
   - Detect changes in radiological conditions,
   - Detect the gradual buildup of radioactive material in the workplace,
   - Verify the effectiveness of engineering and process controls in containing radioactive material and reducing radiation exposure,
   - Identify and control potential sources of individual exposure to radiation and/or radioactive material,
   - Demonstrate compliance with the requirements of 10 CFR 835.

2. Airborne Radioactivity Monitoring

The INEEL Site Contractor has implemented an air monitoring program that meets the requirements of 10 CFR 835.209(a) and 835.403. The program uses fixed and portable air samplers as well as real-time air monitoring and usage is based on the working conditions. The air monitoring program, as implemented, is designed to reduce the internal dose to the radiation workers and is a part of the overall ALARA program. Air samples shall be taken as necessary to detect and evaluate the level of airborne radioactivity at the work locations. Monitoring of airborne radioactivity shall be performed where an individual is likely to receive an exposure of 40 or more DAC-hours per year. Real-time air monitoring shall be performed as necessary to detect and provide warning of airborne radioactivity concentrations that warrant immediate action to terminate inhalation of airborne radioactive material. The estimation of internal dose shall be based on bioassay data rather than air concentration values unless bioassay data are: (1) unavailable; (2) inadequate; or (3) internal dose estimates based on air concentration values are demonstrated to be as or more accurate. [Implements 10 CFR 835.209, 835.403]

3. Contamination Monitoring and Control

The INEEL Site Contractor has a program of contamination monitoring and control. This program is designed to prevent the movement of radioactive contamination from controlled areas to uncontrolled areas and to monitor personnel and equipment leaving contamination and airborne radioactivity areas.

Control of radioactive contamination is achieved by using engineering controls, by containing contamination at the source, and by monitoring and promptly decontaminating areas that become unintentionally contaminated.

The program requires surveying of contamination and airborne radioactivity areas to determine the current levels of contamination. The survey results are also used to determine if postings are correct and if additional controls are required. The survey results also are used to determine the appropriate personal protective equipment required on RWPs. [Implements 10 CFR 835.401(a) and 835 Subpart L]

4. Instrument Calibration and Maintenance

   The INEEL Site Contractor has a program in place to calibrate, maintain, and routinely test for operability the fixed and portable radiological control instrumentation. Calibration of portable instrumentation is coordinated through the Health Physics Instrument Laboratory's program. This program ensures that the instruments used at the INEEL are appropriate for existing environmental conditions and the types, levels, and energies of the radiations encountered. [Implements 10 CFR 835.401(b)]

G. Radiological Controls In the Workplace

The primary methods used to control workplace exposure are facility and equipment design features. These controls are augmented with the use of area entry/exit requirements to control access to and from radiological areas and radiation work permits and approved work control documents to control radiological work. Proposed maintenance and modification plans are reviewed to identify and incorporate radiological control requirements.

All employees have the authority and responsibility to stop radiological work activities suspected of being unsafe as specified in the INEEL Site Contractor safety program.

1. Radiological Work Planning

   Performance of work planning is the responsibility of INEEL Site Contractor line management, with support from the INEEL Site Contractor Radiological Control organization. The radiological review requirements are contained in the program the site contractor has in place to plan radiological work. The results of various radiological surveys are used with work documents to determine the radiological controls required and are inserted in the RWPs. A formal ALARA review is performed for work that exceeds established planning thresholds. [Implements 10 CFR 835.501(d), 835.1001(b), and 835.1003]

2. Entry and Exit Control

   The INEEL Site Contractor has established procedures that contain the specific requirements for entering and exiting radiological areas. Radiation safety training commensurate with the hazards in the area and the required controls is required before unescorted access to controlled areas is permitted. The primary control for entry into radiological areas is the RWP and training, signs and barricades augment this control. For access to High and Very High Radiation Areas, the procedure meets the requirements of 10 CFR 835.502 and employs one or more control devices, which include

conspicuous visual and/or audible alarms, and locked entrances as well as egress requirements and administrative controls as required. [Implements 10 CFR 835 Subpart F]

The INEEL utilizes RCIMS to electronically log workers in and out of the controlling RWP for most work activities. Workers are issued electronic dosimetry and individual radiological training and current dose are checked to ensure that the training is current and that the worker's dose is within current limits. During worker egress the system reads the electronic dosimeter and adds the dosimeter results to the worker's current dose total. The worker is also logged out of the RWP. In case of system outages, a standby paper system is used until the system is operational.

3. Radiological Work Controls

The INEEL Site Contractor has a process that ensures only trained and qualified personnel are allowed to enter radiologically controlled areas to perform work and that these workers have the information available to understand and respond to the radiological conditions that they will encounter during the work. The process includes the appropriate training, the use of RWPs, the use of electronic dosimeters as applicable, and the use of an automated entry system at most facilities that confirms the dose and training status of each employee prior to entry into radiological areas. A paper backup system is used when the automated system is unavailable.

The RWP is the administrative mechanism used to establish radiological controls for intended work activities. The RWP informs employees of area radiological conditions and entry requirements and provides a mechanism to relate employee dose to specific work activities. [Implements 10 CFR 835 Subpart F]

4. Posting and Labeling

The INEEL Site Contractor has a program to ensure the proper posting and labeling of radioactive material areas, radiological areas, and items and containers of radioactive material. The purpose of this program is to alert personnel about the radiological status of the item or area and to prevent any inadvertent dose to the worker. This program includes the use of the standard radiological posting and labeling and meets the requirements of 10 CFR 835 Subpart G. The program also controls posting of signs so they are clearly and conspicuously posted. [Implements 10 CFR 835 Subpart G]

5. Control of Materials and Equipment

The INEEL Site Contractor has a program to control material and equipment that are contaminated or potentially contaminated. Materials and equipment

in contamination or airborne radioactivity areas are considered contaminated until surveyed and released. This program has been implemented to assure that no material or equipment above the contamination values specified in 10 CFR 835 Appendix D are released to a controlled area. [Implements 10 CFR 835.1101]

6. Sealed Radioactive Source Accountability and Control

   The INEEL Site Contractor has a program to control the use of sealed radioactive sources. The purpose of this program is to control how radioactive sealed sources are to be used, handled, and stored in a manner commensurate with the hazards associated with operations involving these sources. The program sets the accountability requirements for sources and monitoring requirements. [Implements 10 CFR 835 Subpart M]

7. Receipt of packages containing radioactive material

   The INEEL Site Contractor transportation program controls the receipt of packages containing radioactive materials as defined in 10 CFR 71.4. The purpose of this program is to ensure that the site contractor properly controls all such packages from the time of receipt, from the carrier. This will prevent any unauthorized access to the packages and any subsequent radiation dose will be maintained ALARA. The requirements of 10 CFR 835.405 are contained in this program. The program has timing requirements for receipt surveys and interim storage.

H. Emergency Exposure Situations

The INEEL Site Contractor Emergency Plan will control all emergency exposure situations.

The INEEL Site Contractor has installed nuclear accident dosimeters in areas where it has been determined possible to have a nuclear criticality. There is a program in place to collect the required dose information in the event of a criticality. [Implements 10 CFR 835.1304]

I. Records

The INEEL Site Contractor's policy is to generate and maintain complete and accurate radiation protection records of INEEL Site Contractor facilities including the records of individuals who work in or visit them. Records are recorded and maintained in accordance with 10 CFR 835 Subpart H.

The INEEL Site Contractor uses these records to document the radiation doses of individuals, makes these records available as prescribed by the Privacy Act of 1974, and uses these records to document compliance with 10 CFR 835.701(a).

The INEEL Site Contractor maintains dose records sufficient to evaluate compliance with all applicable dose limits, monitoring and reporting requirements. [Implements 10 CFR 835.702(c)(1) & (2), 835.703(a)-(d)]

J. Reports to Individuals

The site contractor is responsible for the production and distribution of reports to individuals as specified in 10 CFR 835 Subpart I. As a minimum, the INEEL Site Contractor provides exposure reports to individuals under the following conditions:

1. Upon request from an individual terminating employment, records of exposure are provided to that individual as soon as the data are available, but not later than 90 days after termination. In some cases, internal dosimetry data may not be available within 90 days due to the analytical requirements of the laboratory procedures, but will be reported as soon as it becomes available. [Implements 10 CFR 835.801(b)]

2. If requested, a written estimate of radiation dose based on available information at the time of termination is provided. [Implements 10 CFR 835.801(b)]

3. Annual radiation dose reports to individuals monitored during the year. [Implements 10 CFR 835.801(c)]

4. If requested, detailed exposure information. [Implements 10 CFR 835.801(d)]

5. Reports to individuals when the INEEL Site Contractor is required to report to DOE pursuant to occurrence reporting and processing, or planned special exposures. [Implements 10 CFR 835.801(e)].

K. Radiation Safety Training

The INEEL Site Contractor radiation safety training is commensurate with the employee's duties. INEEL Site Contractor radiation safety training is performed to meet the requirements of 10 CFR 835 Subpart J (Radiation Safety Training).

The INEEL Site Contractor uses DOE standardized core courses to the extent practicable and supplements these with INEEL Site Contractor site-specific information. These standardized core courses are referred to as General Employee Radiological Training, Radiological Worker Training (I and II), and Radiological Control Technician Training.

The INEEL Site Contractor facility-specific instruction is commensurate with the nature of the activities performed at each facility.

V. Cross Reference Matrix

Note: The shaded area denotes that an item is not applicable, is not addressed, or is addressed by another item.

10 CFR 835	RPP	INEEL RCM	Site Contractor Program
Subpart A General Provisions			
§835.1 Scope (a) General. The rules in this part establish radiation protection standards, limits, and program requirements for protecting individuals from ionizing radiation resulting from the conduct of DOE activities. (b) Exclusion. Except as discussed in paragraph (c) of this section, the requirements in this part do not apply to: (1) Activities that are regulated through a license by the Nuclear Regulatory Commission or a State under an Agreement with the NRC, including activities certified by the NRC under section 1701 of the Atomic Energy Act; (2) Activities conducted under the authority of the Director, Naval Nuclear Propulsion Program, as described in Public Law 98; (3) Activities conducted under the Nuclear Explosives and Weapons Surety Program relating to the prevention of accidental or unauthorized nuclear detonations. (4) Radioactive material transportation as defined in this part; (5) DOE activities conducted outside the US on territory under the jurisdiction of a foreign government to the extent governed by occupational radiation protection requirements agreed to between the US and the cognizant government; or	RPP III		

10 CFR 835	RPP	INEEL RCM	Site Contractor Program
(6) Background radiation, radiation doses received as a patient for the purposes of medical diagnosis or therapy, or radiation doses received from participation as a subject in medical research programs. (c) Occupational doses received as a result of excluded activities and radioactive material transportation, as listed in paragraphs (b)(1) through (b)(5) of this section, shall be considered when determining compliance with the occupational dose limits at §§835.202 and 835.207, and with the limits for the embryo/fetus of §835.206. Occupational doses resulting from authorized emergency exposures and planned special exposures shall not be considered when determining compliance with the dose limits at §§835.202 and 835.207.			
§835.2 Definitions As written	The RPP will use these definitions.	The definition section of this part is contained in the RCM.	The site procedures will use the definitions as necessary.
§835.3 General Rule (a) No person or DOE personnel shall take or cause to be taken any action inconsistent with the requirements of: (1) This part; or (2) Any program, plan, schedule, or other process established by this part. (b) With respect to a particular DOE activity, contractor management shall be responsible for compliance with the requirements of this part. (c) Where there is no contractor for a DOE activity, DOE shall ensure implementation of and compliance with the requirements of this part. (d) Nothing in this part shall be construed as limiting actions that may be necessary to protect health and safety.	RPP III		

10 CFR 835	RPP	INEEL RCM	Site Contractor Program
(e) For those activities that are required by §§835.102, 835.901(e), 835.1202(a), and 835.1202(b), the time interval to conduct these activities may be extended by a period not to exceed 30 days to accommodate scheduling needs.			
§835.4 Radiological units. Unless otherwise specified, the quantities used in the records required by this part shall be clearly indicated in special units of curie, rad, roentgen, or rem, including multiples and subdivisions of these units. The SI units, becquerel (Bq), gray (Gy), and sievert (Sv), are only provided parenthetically in this part for reference with scientific standards.	RPP III	These radiological units will be used in all Site Contractor documents.	These radiological units will be used in all Site Contractor documents.
Subpart B Management and Administrative Requirements			
§835.101 Radiation Protection Program			
(a) A DOE activity shall be conducted in compliance with a documented radiation protection program (RPP) as approved by the DOE.	RPP II		
(b) The DOE may direct or make modifications to a RPP.	RPP II		
(c) The content of each RPP shall be commensurate with the nature of the activities performed and shall include formal plans and measures for applying the as low as reasonably achievable (ALARA) process to occupational exposure.	RPP II & IV B	The requirements of this part are contained in the RCM Articles 138.1-.3, and RCM 312.1.	The current ALARA procedure meets these requirements.
(d) The RPP shall specify the existing and/or anticipated operational tasks that are intended to be within the scope of the RPP. Except as provided in §835.101(h), any task outside the scope of a RPP shall not be initiated until an update of the RPP is approved by DOE.	RPP II		
(e) The content of the RPP shall address, but shall not necessarily be limited to, each requirement in this part.	RPP V		

10 CFR 835	RPP	INEEL RCM	Site Contractor Program
(f) The RPP shall include plans, schedules, and other measures for achieving compliance with regulations of this part. Unless otherwise specified in this part, compliance with amendments to this part shall be achieved no later than 180 days following approval of the revised RPP by DOE. Compliance with the requirements of §835.402(d) for radiobioassay program accreditation shall be achieved no later than January 1, 2002. (g) An update of the RPP shall be submitted to DOE: (1) Whenever a change or an addition to the RPP is made; (2) Prior to the initiation of a task not within the scope of the RPP; or (3) Within 180 days of the effective date of any modifications to this part. (h) Changes, additions, or updates to the RPP may become effective without prior Department approval only if the changes do not decrease the effectiveness of the RPP and the RPP, as changed, continues to meet the requirements of this part. Proposed changes that decrease the effectiveness of the RPP shall not be implemented without submittal to and approval by the Department. (i) An initial RPP or an update shall be considered approved 180 days after its submission unless rejected by DOE at an earlier date.	RPP II		
§835.102 Internal Audits Internal audits of the radiation protection program, including examination of program content and implementation, shall be conducted through a process that ensures that all functional elements are reviewed no less frequently than every 36 months.	RPP IV A.4	The requirements of this part are contained in the RCM Article 134.1.	The current surveillance plan meets these requirements.

10 CFR 835	RPP	INEEL RCM	Site Contractor Program
§835.103 Education, Training and Skills Individuals responsible for developing and implementing measures necessary for ensuring compliance with the requirements of this part shall have the appropriate education, training, and skills to discharge these responsibilities.	RPP IV.A.1	The requirements of this part are contained in the RCM Article 654.	The current training plans, qualification standards, and a roles and responsibilities procedure meet these requirements.
§835.104 Written Procedures Written procedures shall be developed and implemented as necessary to ensure compliance with this part, commensurate with the radiological hazards created by the activity and consistent with the education, training, and skills of the individuals exposed to those hazards.	RPP IV.A.1	The requirements of this part are contained in the RCM Article 382.2.	The INEEL Site Contractor has and will continue to develop and implement written procedures as necessary to maintain compliance with this requirement.
Subpart C Standards for Internal and External Exposure			
§835.202 Occupational dose limits for general employees (a) Except for planned special exposures conducted consistent with §835.204 and emergency exposures authorized in accordance with §835.1302, the occupational dose received by general employees shall be controlled such that the following limits are not exceeded in a year: (1) A total effective dose equivalent of 5 rem (0.05 sievert); (2) The sum of the deep dose equivalent for external exposures and the committed dose equivalent to any organ or tissue other than the lens of the eye of 50 rem (0.5 sievert); (3) A lens of the eye dose equivalent of 15 rem (0.15 sievert); and (4) A shallow dose equivalent of 50 rem (0.5 sievert) to the skin or to any extremity.	RPP IV.C	The requirements of this part are contained in the RCM Article 213.	The current procedures meet these requirements.

10 CFR 835	RPP	INEEL RCM	Site Contractor Program
(b) All occupational doses received during the current year, except doses resulting from planned special exposures conducted in compliance with §835.204 and emergency exposures authorized in accordance with §835.1302, shall be included when demonstrating compliance with §§835.202(a) and 835.207. (c) Doses from background, therapeutic and diagnostic medical radiation, and participation as a subject in medical research programs shall not be included in dose records or in the assessment of compliance with the occupational dose limits.			
§835.203 Combining internal and external dose equivalents (a) The total effective dose equivalent during a year shall be determined by summing the effective dose equivalent from external exposures and the committed effective dose equivalent from intakes during the year. (b) Determinations of the effective dose equivalent shall be made using the weighting factor values provided in §835.2.	RPP IV.C	The requirements of this part are contained in the RCM Table 2-1, Footnote 1 and 5.	The site contractor dosimetry database combines the external and internal dose equivalents and applies the weighting factors from this part to determine compliance with annual dose limit requirements of RCM Table 2-1
§835.204 Planned special exposures (a) A planned special exposure may be authorized for a radiological worker to receive doses in addition to and accounted for separately from the doses received under the limits specified in §835.202(a), provided that each of the following conditions is satisfied:	RPP IV.D	The requirements of this part are contained in the RCM Article 213.2 and 722.13.	The current planned special exposure procedure meets these requirements.

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(1) The planned special exposure is considered only in an exceptional situation when alternatives that might prevent a radiological worker from exceeding the limits in §835.202(a) are unavailable or impractical; (2) The contractor management (and employer, if the employer is not the contractor) specifically requests the planned special exposure, in writing; and (3) Joint written approval is received from the appropriate DOE Headquarters program office and the Secretarial Officer responsible for environment, safety and health matters. (b) Prior to requesting an individual to participate in an authorized planned special exposure, the individual's dose from all previous planned special exposures and all doses in excess of the occupational dose limits shall be determined. (c) An individual shall not receive a planned special exposure that, in addition to the doses determined in §835.204(b), would result in a dose exceeding the following: (1) In a year, the numerical values of the dose limits established at §835.202(a); and (2) Over the individual's lifetime, five times the numerical values of the dose limits established at §835.202(a). (d) Prior to a planned special exposure, written consent shall be obtained from each individual involved. Each such written consent shall include: (1) The purpose of the planned operations and procedures to be used;			

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(2) The estimated doses and associated potential risks and specific radiological conditions and other hazards which might be involved in performing the task; and (3) Instructions on the measures to be taken to keep the dose ALARA considering other risks that may be present. (e) Records of the conduct of a planned special exposure shall be maintained and a written report submitted within 30 days after the planned special exposure to the approving organizations identified in §835.204(a)(3). (f) The dose from planned special exposures is not to be considered in controlling future occupational dose of the individual under §835.202(a), but is to be included in records and reports required under this part.			
§835.205 Determination of compliance for non-uniform exposure of the skin (a) Non-uniform exposures of the skin from X-rays, beta radiation, and/or radioactive material on the skin are to be assessed as specified in this section. (b) For purposes of demonstrating compliance with §835.202(a)(4), assessments shall be conducted as follows: (1) Area of skin irradiated is 100 cm^2 or more. The non-uniform dose equivalent received during the year shall be averaged over the 100 cm^2 of the skin receiving the maximum dose, added to any uniform dose equivalent also received by the skin, and recorded as the shallow dose equivalent to any extremity or skin for the year.	RPP IV.D	The requirements of this part are contained in the RCM Appendix 2C.	The current procedure meets these requirements.

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(2) Area of skin irradiated is 10 cm^2 or more, but is less than 100 cm^2. The non-uniform dose equivalent (H) to the irradiated area received during the year shall be added to any uniform dose equivalent also received by the skin and recorded as the shallow dose equivalent to any extremity or skin for the year. H is the dose equivalent averaged over the 1 cm^2 of skin receiving the maximum absorbed dose, D, reduced by the fraction f, which is the irradiated area in cm^2 divided by 100 cm^2 (i.e., H = fD). In no case shall a value of f less than 0.1 be used. (3) Area of skin irradiated is less than 10 cm^2. The non-uniform dose equivalent shall be averaged over the 1 cm^2 of skin receiving the maximum dose. This dose equivalent shall: (i) Be recorded in the individual's occupational exposure history as a special entry; and (ii) Not be added to any other shallow dose equivalent to any extremity or skin recorded as the dose equivalent for the year.			
§835.206 Limits for the embryo/fetus (a) The dose equivalent limit for the embryo/fetus from the period of conception to birth, as a result of occupational exposure of a declared pregnant worker, is 0.5 rem (0.005 sievert). (b) Substantial variation above a uniform exposure rate that would satisfy the limits provided in §835.206(a) shall be avoided.	RPP IV.D	The requirements of this part are contained in the RCM Article 215.2(a). The requirements of this part are contained in the RCM Article 215.2(b).	The current procedure meets these requirements.

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(c) If the dose equivalent to the embryo/fetus is determined to have already exceeded 0.5 rem (0.005 sievert) by the time a worker declares her pregnancy, the declared pregnant worker shall not be assigned to tasks where additional occupational exposure is likely during the remaining gestation period.		The requirements of this part are contained in the RCM Article 215.3.	
§835.207 Occupational dose limits for minors The dose equivalent limits for minors occupationally exposed to radiation and/or radioactive materials at a DOE activity are 0.1 rem (0.001 sievert) total effective dose equivalent in a year and 10% of the occupational dose limits specified at §835.202(a)(3) and (a)(4).	RPP IV.D	The requirements of this part are contained in the RCM Table 2-1.	
§835.208 Limits for members of the public entering a controlled area The total effective dose equivalent limit for members of the public exposed to radiation and/or radioactive material during access to a controlled area is 0.1 rem (0.001 sievert) in a year.	RPP IV.D	The requirements of this part are contained in the RCM Article 214.	
§835.209 Concentrations of radioactive material in air (a) The derived air concentration (DAC) values given in appendices A and C of this part shall be used in the control of occupational exposures to airborne radioactive material. (b) The estimation of internal dose shall be based on bioassay data rather than air concentration values unless bioassay data are: (1) Unavailable; (2) Inadequate; or (3) Internal dose estimates based on air concentration values are demonstrated to be as or more accurate.	RPP IV. F	The requirements of this part are contained in the RCM Article 223.2. The requirements of this part are contained in the RCM Article 521.2(a)-(c).	The current air sampling/monitoring procedures meet these requirements. The current dosimetry procedures meet these requirements.

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Subpart E Monitoring of Individuals and Areas			
§835.401 General requirements (a) Monitoring of individuals and areas shall be performed to: (1) Demonstrate compliance with the regulations in this part; (2) Document radiological conditions; (3) Detect changes in radiological conditions; (4) Detect the gradual buildup of radioactive material; (5) Verify the effectiveness of engineered and process controls in containing radioactive material and reducing radiation exposure; (6) Identify and control potential sources of individual exposure to radiation and/or radioactive material.	RPP IV.F	The requirements of this part are contained in the RCM Article 551.1(a) – (e).	The current radiological survey procedure meets these requirements.
(b) Instruments and equipment used for monitoring shall be: (1) Periodically maintained and calibrated on an established frequency: (2) Appropriate for the typed(s), levels, and energies of the radiation(s) encountered; (3) Appropriate for existing environmental conditions; and (4) Routinely tested for operability.		The requirements of this part are contained in the RCM Article 551.2.	The current instrument calibration procedures meet these requirements.
§835.402 Individual monitoring (a) For the purpose of monitoring individual exposures to external radiation, personnel dosimeters shall be provided to and used by: (1) Radiological workers who, under typical conditions, are likely to receive one or more of the following: (i) An effective dose equivalent to the whole body of 0.1 rem (0.001 sievert) or more in a year;	RPP IV.D	The requirements of this part are contained in the RCM Article 511.1.	The current dosimetry procedures meet these requirements.

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(ii) A shallow dose equivalent to the skin or to any extremity of 5 rem (0.05 sievert) or more in a year; (iii) A lens of the eye dose equivalent of 1.5 rem (0.015 sievert) or more in a year; (2) Declared pregnant workers who are likely to receive from external sources a dose equivalent to the embryo/fetus in excess of 10 percent of the limit at §835.206(a); (3) Occupationally exposed minors likely to receive a dose in excess of 50 percent of the applicable limits at §835.207 in a year from external sources; (4) Members of the public entering a controlled area likely to receive a dose in excess of 50 percent of the limit at §835.208 in a year from external sources; and (5) Individuals entering a high or very high radiation area.			
(b) External dose monitoring programs implemented to demonstrate compliance with §835.402(a) shall be adequate to demonstrate compliance with the dose limits established in subpart C of this part and shall be: (1) Accredited, or excepted from accreditation, in accordance with the DOE Laboratory Accreditation Program for Personnel Dosimetry; or (2) Determined by the Secretarial Officer responsible for environment, safety and health matters to have performance substantially equivalent to that of programs accredited under the DOE Laboratory Accreditation Program for Personnel Dosimetry.	RPP IV.D	The requirements of this part are contained in the RCM Article 512.1.	The external dosimetry program is accredited by DOELAP and meets these requirements.

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(c) For the purpose of monitoring individual exposures to internal radiation, internal dosimetry programs (including routine bioassay programs) shall be conducted for: (1) Radiological workers who, under typical conditions, are likely to receive a committed effective dose equivalent of 0.1 rem (0.001 sievert) or more from all occupational radionuclide intakes in a year; (2) Declared pregnant workers likely to receive an intake or intakes resulting in a dose equivalent to the embryo/fetus in excess of 10 percent of the limit stated at §835.206(a); (3) Occupationally exposed minors who are likely to receive a dose in excess of 50 percent of the applicable limit stated at §835.207 from all radionuclide intakes in a year; or (4) Members of the public entering a controlled area likely to receive a dose in excess of 50 percent of the limit stated at §835.208 from all radionuclide intakes in a year.	RPP IV.E	The requirements of this part are contained in the RCM Article 521.1.	The current internal dosimetry procedure meets these requirements.
(d) Internal dose monitoring programs implemented to demonstrate compliance with §835.402(c) shall be adequate to demonstrate compliance with the dose limits established in subpart C of this part and shall be: (1) Accredited, or excepted from accreditation, in accordance with the DOE Laboratory Accreditation Program for Radiobioassay; or	RPP IV.E	The requirements of this part are contained in the RCM Article 522.1.	The current internal dosimetry program is accredited by DOELAP and meets these requirements.

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(2) Determined by the Secretarial Officer responsible for environment, safety and health matters to have performance substantially equivalent to that of programs accredited under the DOE Laboratory Accreditation Program for Radiobioassay.			
§835.403 Air monitoring (a) Monitoring of airborne radioactivity shall be performed: (1) Where an individual is likely to receive an exposure of 40 or more DAC-hours in a year; or (2) As necessary to characterize the airborne radioactivity hazard where respiratory protective devices for protection against airborne radionuclides have been prescribed.	RPP IV.F.2	The requirements of this part are contained in the RCM Article 555.2.	The current air monitoring procedures meet these requirements.
(b) Real-time air monitoring shall be performed as necessary to detect and provide warning of airborne radioactivity concentrations that warrant immediate action to terminate inhalation of airborne radioactive material.		The requirements of this part are contained in the RCM Article 555.3.	The current air monitoring procedures meet these requirements.
§835.405 Receipt of packages containing radioactive material (a) If packages containing quantities of radioactive material in excess of a Type A quantity (as defined at 10 CFR 71.4) are expected to be received from radioactive material transportation, arrangements shall be made to either: (1) Take possession of the package when the carrier offers it for delivery; or	RPP IV.G.7	The requirements of this part are contained in the RCM Article 423.	The current hazardous materials shipping and radiological survey procedures meet these requirements.

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(2) Receive notification as soon as practicable after arrival of the package at the carrier's terminal and to take possession of the package expeditiously after receiving such notification. (b) Upon receipt from radioactive material transportation, external surfaces of packages known to contain radioactive material shall be monitored if the package: (1) Is labeled with a Radioactive White I, Yellow II, or Yellow III label (as specified at 49 CFR 172.403 and 172.436-440); or (2) Has been transported as low specific activity material (as defined at 10 CFR 71.4) on an exclusive use vehicle (as defined at 10 CFR 71.4); or (3) Has evidence of degradation, such as packages that are crushed, wet, or damaged. (c) The monitoring required by paragraph (b) of this section shall include: (1) Measurements of removable contamination levels, unless the package contains only special form (as defined at 10 CFR 71.4) or gaseous radioactive material; and (2) Measurements of the radiation levels, unless the package contains less than a Type A quantity (as defined at 10 CFR 71.4) of radioactive material. (d) The monitoring required by paragraph (b) of this section shall be completed as soon as practicable following receipt of the package, but not later than 8 hours after the beginning of the working day following receipt of the package.			

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Subpart F Entry Control Program			
§835.501 Radiological Areas (a) Personnel entry control shall be maintained for each radiological area. (b) The degree of control shall be commensurate with existing and potential radiological hazards within the area. (c) One or more of the following methods shall be used to ensure control: (1) Signs and barricades; (2) Control devices on entrances; (3) Conspicuous visual and/or audible alarms; (4) Locked entrance ways; or (5) Administrative controls. (d) Written authorizations shall be required to control entry into and perform work within radiological areas. These authorizations shall specify radiation protection measures commensurate with the existing and potential hazards. (e) No control(s) shall be installed at any radiological area exit that would prevent rapid evacuation of personnel under emergency conditions.	RPP IV.G.2	The requirements of this part are contained in the RCM Articles 331, 332, 333, 334, and 335. The requirements of this part are contained in the RCM Article 321.1 and 322.1, .4, and .8. The requirements of this part are contained in the RCM Article 231.10.	The current posting procedure and a radiation work permit procedure meet these requirements.
§835.502 High and Very High Radiation Areas (a) The following measures shall be implemented for each entry into a high radiation area: (1) The area shall be monitored as necessary during access to determine the exposure rates to which the individuals are exposed; and	RPP IV.G.2, & G.3	The requirements of this part are contained in the RCM Article 334.3 and .4.	The current access controls for high and very high radiation areas procedure meets these requirements.

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(2) Each individual shall be monitored by a supplemental dosimetry device or other means capable of providing an immediate estimate of the individual's integrated deep dose equivalent during the entry.			
(b) Physical controls. One or more of the following controls shall be used for each entrance or access point to a high radiation area where radiation levels exist such that an individual could exceed a deep dose equivalent to the whole body of 1 rem (0.01 sievert) in any one hour at 30 centimeters from the source or from any surface that the radiation penetrates:		The requirements of this part are contained in the RCM Article 334.2.	
(1) A control device that prevents entry to the area when high radiation levels exist or, upon entry causes the radiation level to be reduced below the level defining a high radiation area;		The requirements of this part are contained in the RCM App 3B.1(a).	
(2) A device that functions automatically to prevent use or operation of the radiation source or field while individuals are in the area;		The requirements of this part are contained in the RCM App 3B.1(b).	
(3) A control device that energizes a conspicuous visible or audible alarm signal so that the individual entering the high radiation area and the supervisor of the activity are made aware of the entry;		The requirements of this part are contained in the RCM App 3B.1(c).	
(4) Entryways that are locked. During periods when access to the area is required, positive control over each entry is maintained;		The requirements of this part are contained in the RCM App 3B.1(d).	
(5) Continuous direct or electronic surveillance that is capable of preventing unauthorized entry;		The requirements of this part are contained in the RCM App 3B.1(e).	

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(6) A control device that will automatically generate audible and visual alarm signals to alert personnel in the area before use or operation of the radiation source and in sufficient time to permit evacuation of the area or activation of a secondary control device that will prevent use or operation of the source.		The requirements of this part are contained in the RCM App 3B.1(f).	
(c) Very high radiation areas. In addition to the above requirements, additional measures shall be implemented to ensure individuals are not able to gain unauthorized or inadvertent access to very high radiation areas.		The requirements of this part are contained in the RCM App 3B.2.	
(d) No control(s) shall be established in a high or very high radiation area that would prevent rapid evacuation of personnel.		The requirement of this part is contained in the RCM Appendix 3B.3.	
Subpart G Posting and Labeling			
§835.601 General Requirements	RPP IV.G.4		The current posting and labeling procedure meets these requirements.
(a) Except as otherwise provided in this subpart, postings and labels required by this subpart shall include the standard radiation-warning trefoil in black or magenta imposed upon a yellow background.		The requirements of this part are contained in the RCM Article 231.2 and 412.	
(b) Signs required by this subpart shall be clearly and conspicuously posted and may include radiological protection instructions.		The requirements of this part are contained in the RCM Article 231.3.	
(c) The posting and labeling requirements in this subpart may be modified to reflect the special considerations of DOE activities conducted at private residences or businesses. Such modifications shall provide the same level of protection to individuals as the existing provisions in this subpart.		The requirements of this part are contained in the RCM Article 231.2(a).	

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§835.602 Controlled Areas (a) Each access point to a controlled area (as defined in §835.2) shall be posted whenever radiological areas or radioactive material areas exist in the area. Individuals who enter only controlled areas without entering radiological areas or radioactive material areas are not expected to receive a total effective dose equivalent of more than 0.1 rem (0.001 sievert) in a year. (b) Signs used for this purpose may be selected by the contractor to avoid conflict with local security requirements.	RPP IV.G.4	The requirements of this part are contained in the RCM Article 232.	The current program meets these requirements.
§835.603 Radiological Areas and Radioactive Material Areas Each access point to radiological areas and radioactive material areas (as defined at §835.2) shall be posted with conspicuous signs bearing the wording provided in this section. (a) Radiation Area. The words "Caution, Radiation Area" shall be posted at each radiation area. (b) High Radiation Area. The words "Caution, High Radiation Area" or "Danger, High Radiation Area" shall be posted at each high radiation area. (c) Very High Radiation Area. The words "Grave Danger, Very High Radiation Area" shall be posted at each very high radiation area. (d) Airborne Radioactivity Area. The words "Caution, Airborne Radioactivity Area" or "Danger, Airborne Radioactivity Area" shall be posted at each airborne radioactivity area. (e) Contamination Area. The words "Caution, Contamination Area" shall be posted at each contamination area.	RPP IV G.2 & G.4	The requirements of this part are contained in the RCM Articles 231.3 and 232.1. The requirements of this part are contained in the RCM Table 2-3. The requirements of this part are contained in the RCM Table 2-4.	The current posting procedure meets these requirements.

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(f) High Contamination Area. The words "Caution, High Contamination Area" or "Danger, High Contamination Area" shall be posted at each high contamination area.			
(g) Radioactive Material Area. The words "Caution, Radioactive Material(s)" shall be posted at each radioactive material area.		The requirements of this part are contained in the RCM Article 236.1.	
§835.604 Exceptions to Posting Requirements	RPP IV.G.4		The current posting procedure meets these requirements.
(a) Areas may be excepted from the posting requirements of §835.603 for periods of less than 8 continuous hours when placed under continuous observation and control of an individual knowledgeable of, and empowered to implement, required access and exposure control measures.		The requirements of this part are contained in the RCM Articles 231.13(a) and 236.3(e).	
(b) Areas may be excepted from the radioactive material area posting requirements of §835.603(g) when: (1) Posted in accordance with §835.603(a) through (f); or (2) Each item or container of radioactive material is labeled in accordance with this subpart such that individuals entering the area are made aware of the hazard; or (3) The radioactive material of concern consists solely of structures or installed components, which have been activated (i.e., such as by being exposed to neutron radiation or particles produced in an accelerator).		The requirements of this part are contained in the RCM Article 236.3(a)–(c).	
(c) Areas containing only packages received from radioactive material transportation labeled and in non-degraded condition need not be posted in accordance with §835.603 until the packages are monitored in accordance with §835.405.		The requirements of this part are contained in the RCM Article 236.3(d).	

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§835.605 Labeling Items and Containers Except as provided at §835.606, each item or container of radioactive material shall bear a durable, clearly visible label bearing the standard radiation warning trefoil and the words "Caution, Radioactive Material" or "Danger, Radioactive Material." The label shall also provide sufficient information to permit individuals handling, using, or working in the vicinity of the items or containers, to take precautions to avoid or control exposures.	RPP IV.G.4	The requirements of this part are contained in the RCM Article 412.3 and .4.	The current posting procedure meets these requirements.
§835.606 Exceptions to labeling Requirements (a) Items and containers may be excepted from the radioactive material labeling requirements of §835.605 when: (1) Used, handled, or stored in areas posted and controlled in accordance with this subpart and sufficient information is provided to permit individuals to take precautions to avoid or control exposures; or (2) The quantity of radioactive material is less than one tenth of the values specified in appendix E of this part; or (3) Packaged, labeled, and marked in accordance with the regulations of the Department of Transportation or DOE Orders governing radioactive material transportation; or (4) Inaccessible, or accessible only to individuals authorized to handle or use them, or to work in the vicinity; or (5) Installed in manufacturing, process, or other equipment, such as reactor components, piping, and tanks; or	RPP IV.G.4	The requirements of this part are contained in the RCM Table 4-2.	The current posting, radioactive material area/storage area, and source accountability/control procedures meet these requirements.

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(6) The radioactive material consists solely of nuclear weapons or their components. (b) Radioactive material labels applied to sealed radioactive sources may be excepted from the color specifications of §835.601(a).			
Subpart H Records			
§835.701 General Provisions (a) Records shall be maintained to document compliance with this part and with radiation protection programs required by §835.101. (b) Unless otherwise specified in this subpart, records shall be retained until final disposition is authorized by DOE.	RPP IV.I & J	The requirements of this part are contained in the RCM Article 712.1. The requirements of this part are contained in the RCM Article 771.	The current record management program meets these requirements.
§835.702 Individual Monitoring Records (a) Records shall be maintained to document doses received by all individuals for whom monitoring was required pursuant to §835.402 and to document doses received during planned special exposures, unplanned doses exceeding the monitoring thresholds of §835.402, and authorized emergency exposures. (b) The results of individual external and internal dose monitoring that is performed, but not required by §835.402, shall be recorded. Recording of the non-uniform shallow dose equivalent to the skin is not required if the dose is less than 2 percent of the limit specified for the skin at §835.202(a)(4). (c) The records required by this section shall: (1) Be sufficient to evaluate compliance with subpart C of this part;	RPP IV.I & J	The requirements of this part are contained in the INEEL RCM Article 722.1 and .13. The requirements of this part are contained in the INEEL RCM Article 722.4, .5, and .14. The requirements of this part are contained in the INEEL RCM Article 722.1(b).	The current external dosimetry procedure meets these requirements.

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(2) Be sufficient to provide dose information necessary to complete reports required by subpart I of this part; (3) Include the following quantities for external dose received during the year: (i) The effective dose equivalent from external sources of radiation (deep dose equivalent may be used as effective dose equivalent for external exposure); (ii) The lens of the eye dose equivalent; (iii) The shallow dose equivalent to the skin; and (iv) The shallow dose equivalent to the extremities.			
(4) Include the following information for internal dose resulting from intakes received during the year: (i) Committed effective dose equivalent; (ii) Committed dose equivalent to any organ or tissue of concern; and (iii) Identity of radionuclides.		The requirements of this part are contained in the RCM Article 722.5.	
(5) Include the following quantities for the summation of the external and internal dose: (i) Total effective dose equivalent in a year; (ii) For any organ or tissue assigned an internal dose during the year, the sum of the deep dose equivalent from external exposures and the committed dose equivalent to that organ or tissue; and (iii) Cumulative total effective dose equivalent.		The requirements of this part are contained in the RCM Article 722.6, .7, and .9.	

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(6) Include the dose equivalent to the embryo/fetus of a declared pregnant worker.		The requirements of this part are contained in the RCM Article 722.8.	
(d) Documentation of all occupational doses received during the current year, except for doses resulting from planned special exposures conducted in compliance with §835.204 and emergency exposures authorized in accordance with §835.1302(d), shall be obtained to demonstrate compliance with §835.202(a). If complete records documenting previous occupational dose during the year cannot be obtained, a written estimate signed by the individual may be accepted to demonstrate compliance.		The requirements of this part are contained in the RCM Article 721.1.	
(e) For radiological workers whose occupational dose is monitored in accordance with §835.402, reasonable efforts shall be made to obtain complete records of prior years occupational internal and external doses.		The requirements of this part are contained in the RCM Articles 721.1 and 722.10.	
(f) The records specified in this section that are identified with a specific individual shall be readily available to that individual.		The requirements of this part are contained in the RCM Article 781.1.	
(g) Data necessary for future verification or reassessment of the recorded doses shall be recorded.		The requirements of this part are contained in the RCM Article 722.3.	
(h) All records required by this section shall be transferred to the DOE upon cessation of activities at the site that could cause exposure to individuals.		The requirements of this part are contained in the RCM Article 774.1.	
§835.703 Other Monitoring Records The following information shall be documented and maintained:	RPP IV.I		The current record management system meets these requirements.
(a) Results of monitoring for radiation and radioactive material as required by subparts E and L of this part, except for monitoring required by §835.1102(d);		The requirements of this part are contained in the INEEL RCM Article 751.2(a).	

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(b) Results of monitoring used to determine individual occupational dose from external and internal sources;		The requirements of this part are contained in the RCM Article 751.2(b).	
(c) Results of monitoring for the release and control of material and equipment as required by §835.1101; and		The requirements of this part are contained in the RCM Article 751.2(c).	
(d) Results of maintenance and calibration performed on instruments and equipment as required by §835.401(b).		The requirements of this part are contained in the RCM Article 761.1 and .4.	
§835.704 Administrative Records	RPP IV.I & K		
(a) Training records shall be maintained, as necessary, to demonstrate compliance with §835.901.		The requirements of this part are contained in the RCM Article 725.3.	The current training program and procedures meet these requirements.
(b) Actions taken to maintain occupational exposures as low as reasonably achievable, including the actions required for this purpose by §835.101, as well as facility design and control actions required by §§835.1001, 835.1002 and 835.1003, shall be documented.		The requirements of this part are contained in the RCM Article 742.	The current ALARA procedure meets these requirements.
(c) Records shall be maintained to document the results of internal audits and other reviews of program content and implementation.		The requirements of this part are contained in the RCM Article 743.	The current surveillance plan meets these requirements.
(d) Written declarations of pregnancy, including the estimated date of conception, and revocations of declarations of pregnancy shall be maintained.		The requirements of this part are contained in the RCM Article 723.3.	The current radiation protection for embryo/fetus procedure meets these requirements.
(e) Changes in equipment, techniques, and procedures used for monitoring shall be documented.		The requirements of this part are contained in the RCM Article 751.2(f).	
(f) Records shall be maintained as necessary to demonstrate compliance with the requirements of §§835.1201 and 835.1202 for sealed radioactive source control, inventory, and source leak tests.		The requirements of this part are contained in the RCM Article 751.2(d).	The current radioactive source accountability procedure meets these requirements.

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Subpart I Reports to Individuals			
§835.801 Reports to Individuals	RPP IV.J		
(a) Radiation exposure data for individuals monitored in accordance with §835.402 shall be reported as specified in this section. The information shall include the data required under §835.702(c). Each notification and report shall be in writing and include: the DOE site or facility name, the name of the individual, and the individual's social security number, employee number, or other unique identification number.		The requirements of this part are contained in the RCM Article 781.3.	
(b) Upon the request from an individual terminating employment, records of exposure shall be provided to that individual as soon as the data are available, but not later than 90 days after termination. A written estimate of the radiation dose received by that employee based on available information shall be provided at the time of termination, if requested.		The requirements of this part are contained in the RCM Article 781.2.	
(c) Each DOE- or DOE-contractor-operated site or facility shall, on an annual basis, provide a radiation dose report to each individual monitored during the year at that site or facility in accordance with §835.402.		The requirements of this part are contained in the RCM Article 781.1.	
(d) Detailed information concerning any individual's exposure shall be made available to the individual upon request of that individual, consistent with the provisions of the Privacy Act (5 U.S.C. 552a).		The requirements of this part are contained in the RCM Article 781.1.	

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(e) When a DOE contractor is required to report to the Department, pursuant to Departmental requirements for occurrence reporting and processing, any exposure of an individual to radiation and/or radioactive material, or planned special exposure in accordance with §835.204(e), the contractor shall also provide that individual with a report on his or her exposure data included therein. Such report shall be transmitted at a time not later than the transmittal to the Department.		The requirements of this part are contained in the RCM Article 781.4.	
Subpart J Radiation Safety Training			
§835.901 Radiation Safety Training	RPP IV.K		
(a) Each individual shall complete radiation safety training on the topics established at §835.901(c) commensurate with the hazards in the area and the required controls: (1) Before being permitted unescorted access to controlled areas; and (2) Before receiving occupational dose during access to controlled areas at a DOE site or facility.		The requirements of this part are contained in the RCM Article 611, 612 and 613.2.	The current Radiological Control training program PDD meets these requirements.
(b) Each individual shall demonstrate knowledge of the radiation safety training topics established at §835.901(c), commensurate with the hazards in the area and required controls, by successful completion of an examination and performance demonstrations: (1) Before being permitted unescorted access to radiological areas; and (2) Before performing unescorted assignments as a radiological worker.			
(c) Radiation safety training shall include the owing topics, to the extent appropriate to each individual's prior training, work assignments, and degree of exposure to potential radiological hazards:		The requirements of this part are contained in the RCM Article 613.1(a)–(f).	

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(1) Risks of exposure to radiation and radioactive materials, including prenatal radiation exposure; (2) Basic radiological fundamentals and radiation protection concepts; (3) Physical design features, administrative controls, limits, policies, procedures, alarms, and other measures implemented at the facility to manage doses and maintain doses ALARA, including both routine and emergency actions; (4) Individual rights and responsibilities as related to implementation of the facility radiation protection program; (5) Individual responsibilities for implementing ALARA measures required by §835.101; and (6) Individual exposure reports that may be requested in accordance with §835.801.			
(d) When an escort is used in lieu of training in accordance with paragraph (a) or (b) of this section, the escort shall: (1) Have completed radiation safety training, examinations, and performance demonstrations required for entry to the area and performance of the work; and (2) Ensure that all escorted individuals comply with the documented radiation protection program.		The requirements of this part are contained in the RCM Article 631.7.	
(e) Radiation safety training shall be provided to individuals when there is a significant change to radiation protection policies and procedures that may affect the individual and at intervals not to exceed 24 months. Such training provided for individuals subject to the requirements of §835.901(b)(1) and (b)(2) shall include successful completion of an examination.		The requirements of this part are contained in the RCM Article 613.2 and .4.	

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Subpart K Design and Control			
§835.1001 Design and Control	RPP II, IV.B.4 & F.2 & G		The current ALARA procedure meets these requirements.
(a) Measures shall be taken to maintain radiation exposure in controlled areas ALARA through physical design features and administrative control. The primary methods used shall be physical design features (e.g., confinement, ventilation, remote handling, and shielding). Administrative controls shall be employed only as supplemental methods to control radiation exposure.		The requirements of this part are contained in the RCM Article 311.2 and .3.	
(b) For specific activities where use of physical design features is demonstrated to be impractical, administrative controls shall be used to maintain radiation exposures ALARA.		The requirements of this part are contained in the RCM Article 311.3 and 382.1.	
§835.1002 Facility Design and Modifications	RPP II, IV. B.4 & F.2 & G		The current ALARA procedure meets these requirements.
During the design of new facilities or modification of existing facilities, the following objectives shall be adopted:			
(a) Optimization methods shall be used to assure that occupational exposure is maintained ALARA in developing and justifying facility design and physical controls.		The requirements of this part are contained in the RCM Article 381.4.	
(b) The design objective for controlling personnel exposure from external sources of radiation in areas of continuous occupational occupancy (2000 hours per year) shall be to maintain exposure levels below an average of 0.5 mrem (5 microsieverts) per hour and as far below this average as is reasonably achievable. The design objectives for exposure rates for potential exposure to a radiological worker where occupancy differs from the above shall be ALARA and shall not exceed 20 percent of the applicable standards in §835.202.		The requirements of this part are contained in the RCM Article 381.1.	

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(c) Regarding the control of airborne radioactive material, the design objective shall be, under normal conditions, to avoid releases to the workplace atmosphere and in any situation, to control the inhalation of such material by workers to levels that are ALARA; confinement and ventilation shall normally be used.		The requirements of this part are contained in the RCM Article 381.2.	
(d) The design or modification of a facility and the selection of materials shall include features that facilitate operations, maintenance, decontamination, and decommissioning.		The requirements of this part are contained in the RCM Article 381.3.	
§835.1003 Workplace Controls During routine operations, the combination of physical design features and administrative controls shall provide that:	RPP IV.B & G		The current ALARA procedure meets these requirements.
(a) The anticipated occupational dose to general employees shall not exceed the limits established at §835.202; and		The requirements of this part are contained in the RCM Article 382.4.	
(b) The ALARA process is utilized for personnel exposures to ionizing radiation.		The requirements of this part are contained in the RCM Article 421.7(c).	
Subpart L Radioactive Contamination Control			
§835.1101 Control of Material and Equipment	RPP IV.F & G.5		The current surveys of material for unrestricted release and control of movement of contaminated material procedure meets these requirements.
(a) Except as provided in paragraphs (b) and (c) of this section, material and equipment in contamination areas, high contamination areas, and airborne radioactivity areas shall not be released to a controlled area if: (1) Removable surface contamination levels on accessible surfaces exceed the removable surface contamination values specified in appendix D of this part; or		The requirements of this part are contained in the RCM Article 421.1–.4.	

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(2) Prior use suggests that the removable surface contamination levels on inaccessible surfaces are likely to exceed the removable surface contamination values specified in appendix D of this part.			
(b) Material and equipment exceeding the removable surface contamination values specified in appendix D of this part may be conditionally released for movement on-site from one radiological area for immediate placement in another radiological area only if appropriate monitoring is performed and appropriate controls for the movement are established and exercised.		The requirements of this part are contained in the RCM Article 421.6.	
(c) Material and equipment with fixed contamination levels that exceed the total surface contamination values specified in appendix D of this part may be released for use in controlled areas outside of radiological areas only under the following conditions: (1) Removable surface contamination levels are below the removable surface contamination values specified in appendix D of this part; and (2) The material or equipment is routinely monitored and clearly marked or labeled to alert personnel of the contaminated status.		The requirements of this part are contained in the RCM Article 421.5.	
§835.1102 Control of Areas (a) Appropriate controls shall be maintained and verified which prevent the inadvertent transfer of removable contamination to locations outside of radiological areas under normal operating conditions.	RPP IV.F.3	The requirements of this part are contained in the RCM Article 337.	The current radiological surveys, PPE, and posting procedures meet these requirements.

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(b) Any area in which contamination levels exceed the values specified in appendix D of this part shall be controlled in a manner commensurate with the physical and chemical characteristics of the contaminant, the radionuclides present, and the fixed and removable surface contamination levels.		The requirements of this part are contained in the RCM Article 222.1.	
(c) Areas accessible to individuals where the measured total surface contamination levels exceed, but the removable surface contamination levels are less than, corresponding surface contamination values specified in appendix D of this part, shall be controlled as follows when located outside of radiological areas: (1) The area shall be routinely monitored to ensure the removable surface contamination level remains below the removable surface contamination values specified in appendix D of this part; and (2) The area shall be conspicuously marked to warn individuals of the contaminated status.		The requirements of this part are contained in the RCM Article 224.1 and .2.	
(d) Individuals exiting contamination, high contamination, or airborne radioactivity areas shall be monitored, as appropriate, for the presence of surface contamination.		The requirements of this part are contained in the RCM Article 335.3, 338.1 and 347.5.	
(e) Protective clothing shall be required for entry to areas in which removable contamination exists at levels exceeding the removable surface contamination values specified in appendix D of this part.		The requirements of this part are contained in the RCM Article 325.1 and 335.1 and .2.	
Subpart M Sealed Radioactive Source Control			
§835.1201 Sealed Radioactive Source Control	RPP IV.G.6	The requirements of this part are contained in the RCM Article 431.8.	The current radiological source control procedure meets these requirements.

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Sealed radioactive sources shall be used, handled, and stored in a manner commensurate with the hazards associated with operations involving the sources.			
§835.1202 Accountable Sealed Radioactive Sources (a) Each accountable sealed radioactive source shall be inventoried at intervals not to exceed six months. This inventory shall: (1) Establish the physical location of each accountable sealed radioactive source; (2) Verify the presence and adequacy of associated postings and labels; and (3) Establish the adequacy of storage locations, containers, and devices. (b) Except for sealed radioactive sources consisting solely of gaseous radioactive material or tritium, each accountable sealed radioactive source shall be subject to a source leak test upon receipt, when damage is suspected, and at intervals not to exceed six months. Source leak tests shall be capable of detecting radioactive material leakage equal to or exceeding 0.005 microcurie. (c) Notwithstanding the requirements of paragraph (b) of this section, an accountable sealed radioactive source is not subject to periodic source leak testing if that source has been removed from service. Such sources shall be stored in a controlled location, subject to periodic inventory as required by paragraph (a) of this section, and subject to source leak testing prior to being returned to service.	RPP IV.G.6	The requirements of this part are contained in the RCM Article 431.3(a)–(c). The requirements of this part are contained in the RCM Article 431.4. The requirements of this part are contained in the RCM Article 431.5.	The current radiological source control procedure meets these requirements.

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(d) Notwithstanding the requirements of paragraphs (a) and (b) of this section, an accountable sealed radioactive source is not subject to periodic inventory and source leak testing if that source is located in an area that is unsafe for human entry or otherwise inaccessible.		The requirements of this part are contained in the RCM Article 431.6.	
(e) An accountable sealed radioactive source found to be leaking radioactive material shall be controlled in a manner that minimizes the spread of radioactive contamination.		The requirements of this part are contained in the RCM Article 431.7.	
Subpart N Emergency Exposure Situations			
§835.1301 General Provisions (a) A general employee whose occupational dose has exceeded the numerical value of any of the limits specified in §835.202 as a result of an authorized emergency exposure may be permitted to return to work in radiological areas during the current year providing that all of the following conditions are met: (1) Approval is first obtained from the contractor management and the Head of the responsible DOE field organization; (2) The individual receives counseling from radiological protection and medical personnel regarding the consequences of receiving additional occupational exposure during the year; and (3) The affected employee agrees to return to radiological work. (b) All doses exceeding the limits specified in §835.202 shall be recorded in the affected individual's occupational dose record.	RPP IV.H	The requirements of this part are contained in the RCM Article 213.2.	

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(c) When the conditions under which a dose was received in excess of the limits specified in §835.202, except those doses received in accordance with §835.204, have been eliminated, operating management shall notify the Head of the responsible DOE field organization. (d) Operations after a dose was received in excess of the limits specified in §835.202, except those received in accordance with §835.204 may be resumed only with the approval of DOE.			
§835.1302 Emergency Exposure Situations (a) The risk of injury to those individuals involved in rescue and recovery operations shall be minimized. (b) Operating management shall weigh actual and potential risks against the benefits to be gained. (c) No individual shall be required to perform rescue action that might involve substantial personal risk. (d) Each individual authorized to perform emergency actions likely to result in occupational doses exceeding the values of the limits provided at §835.202(a) shall be trained in accordance with §835.901(b) and briefed beforehand on the known or anticipated hazards to which the individual will be subjected.	RPP IV.H	The requirements of this part are contained in the RCM Article 213.2. The requirements of this part are contained in the RCM Article 656.2.	The current Emergency Management Program procedures are controlling in any such emergency.
§835.1304 Nuclear Accident Dosimetry	RPP IV.H		The current TLD and fixed NAD procedures meet these requirements.

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(a) Installations possessing sufficient quantities of fissile material to potentially constitute a critical mass, such that the excessive exposure of individuals to radiation from a nuclear accident is possible, shall provide nuclear accident dosimetry for those individuals.		The requirements of this part are contained in the RCM Article 515.1.	
(b) Nuclear accident dosimetry shall include the following: (1) A method to conduct initial screening of individuals involved in a nuclear accident to determine whether significant exposures to radiation occurred; (2) Methods and equipment for analysis of biological materials; (3) A system of fixed nuclear accident dosimeter units; and (4) Personal nuclear accident dosimeters.		The requirements of this part are contained in the RCM Article 515.2(a)-(d).	
Appendix A to Part 835 Derived Air Concentrations (DAC) For Controlling Radiation Exposure To Workers At Doe Facilities		The requirements of this part are contained in the RCM App 2A.	
Appendix C to Part 835 Derived Air Concentration (DAC) For Workers From External Exposure During Immersion In A Contaminated Atmospheric Cloud		The requirements of this part are contained in the RCM Article 223.2.	
Appendix D to Part 835 Surface Contamination Values		The requirements of this part are contained in the RCM Table 2-2.	
Appendix E to Part 835 Values For Establishing Sealed Radioactive Source Accountability And Radioactive Material Posting And Labeling Requirements		The requirements of this part are contained in the RCM App 4A.	