

DOE/NV/25946--144 REVISION 2

**NEVADA NATIONAL SECURITY SITE
RADIATION PROTECTION PROGRAM**

April 2013

**Prepared by:
Radiological Control Managers' Council
Nevada National Security Site**

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DOE/NV/25946--144 REVISION 2

**FOR THE USE OF NEVADA NATIONAL SECURITY SITE TENANT
ORGANIZATIONS AND THE U.S. DEPARTMENT OF ENERGY, NATIONAL
NUCLEAR SECURITY ADMINISTRATION NEVADA FIELD OFFICE**

**NEVADA NATIONAL SECURITY SITE
RADIATION PROTECTION PROGRAM**

April 2013

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NEVADA NATIONAL SECURITY SITE RADIATION PROTECTION PROGRAM

REVISION LOG

<u>Document Number</u>	<u>Document Title</u>	<u>Revision Number</u>	<u>Date</u>
N/A	Nevada Test Site Radiation Protection Program	0	12/12/1994
Training Required: N/A Brief Description of Revision: Initial Issue			

<u>Document Number</u>	<u>Document Title</u>	<u>Revision Number</u>	<u>Date</u>
N/A	Nevada Test Site Radiation Protection Program	1	5/25/1995
This document supersedes Nevada Test Site Radiation Protection Program, dated December 12, 1994. Brief Description of Revision: A complete revision to reflect the recent changes in mission and organizational structure at the Nevada Test Site (NTS) and Yucca Mountain Project (YMP).			

<u>Document Number</u>	<u>Document Title</u>	<u>Revision Number</u>	<u>Date</u>
DOE/NV/11432-203	Nevada Test Site Radiation Protection Program	3	12/12/1995
This document supersedes Nevada Test Site Radiation Protection Program, Revision 1, dated May 25, 1995. Brief Description of Revision: A complete revision to reflect the recent changes in compliance requirements with Title 10 Code of Federal Regulations (CFR) 835, "Occupational Radiation Protection," and U.S. Department of Energy Notice DOE N 441.1, "Radiological Protection for DOE Activities."			

<u>Document Number</u>	<u>Document Title</u>	<u>Revision Number</u>	<u>Date</u>
DOE/NV/11432-203	Nevada Test Site Radiation Protection Program	4	5/20/1999
This document supersedes DOE/NV/11432-203, Nevada Test Site Radiation Protection Program, Revision 3, dated December 12, 1995. Brief Description of Revision: A complete revision to reflect the recent changes in compliance requirements with 10 CFR 835.			

<u>Document Number</u>	<u>Document Title</u>	<u>Revision Number</u>	<u>Date</u>
DOE/NV/11432-203	Nevada Test Site Radiation Protection Program	4-A	11/10/1999
This document supersedes DOE/NV/11432-203, Nevada Test Site Radiation Protection Program, Revision 4, dated May 20, 1999. Brief Description of Revision: A complete revision to reflect the recent changes in compliance requirements with 10 CFR 835.			

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<u>Document Number</u>	<u>Document Title</u>	<u>Revision Number</u>	<u>Date</u>
DOE/NV/25946--144	Nevada Test Site Radiation Protection Program	0	08/09/2007
<p>This document supersedes DOE/NV/11432-203, Nevada Test Site Radiation Protection Program, Revision 4-A, dated November 10, 1999.</p> <p>Brief Description of Revision: A complete revision to reflect the recent changes in Tenant Organization contractors. Initial issue under National Security Technologies, LLC, contract.</p>			

<u>Document Number</u>	<u>Document Title</u>	<u>Revision Number</u>	<u>Date</u>
DOE/NV/25946--144	Nevada Test Site Radiation Protection Program	1	06/11/2008
<p>This document supersedes DOE/NV/25946--144, Nevada Test Site Radiation Protection Program, Revision 0, dated August 9, 2007.</p> <p>Brief Description of Revision: A complete revision to reflect the June 2007 updated 10 CFR 835 regulations and include an implementation plan and schedule.</p>			

<u>Document Number</u>	<u>Document Title</u>	<u>Revision Number</u>	<u>Date</u>
DOE/NV/25946--144	Nevada National Security Site Radiation Protection Program	2	April 2013
<p>This document supersedes DOE/NV/25946--144 Revision 1, Nevada Test Site Radiation Protection Program, dated June 11, 2008.</p> <p>Brief Description of Revision: Changed the site name from "Nevada Test Site" to "Nevada National Security Site" throughout the document. Added text to more clearly enumerate suggested RPP content as provided in U.S. Department of Energy (DOE) Guide DOE G 441.1-1C, "Radiation Protection Programs Guide for Use with Title 10, Code of Federal Regulations, Part 835, Occupational Radiation Protection." Updated references to other DOE documents within the RPP. Updated names and contract numbers for tenant organizations and to the Nevada Field Office. Minor revisions to tenant organization appendices and to Appendix H.</p>			

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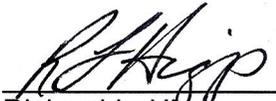
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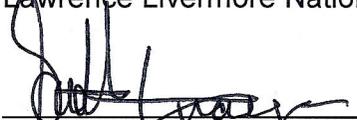
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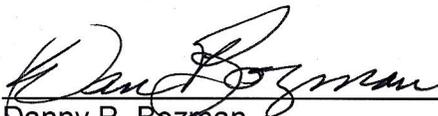
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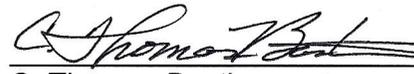
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ACRONYMS

ALARA	as low as reasonably achievable
AMAD.....	Activity Median Aerodynamic Diameter
CED.....	Committed Effective Dose
CFR.....	Code of Federal Regulations
DAC.....	Derived Air Concentration
DAF	Device Assembly Facility
DOE	U.S. Department of Energy
DOELAP.....	U.S. Department of Energy Laboratory Accreditation Program
DOT.....	U.S. Department of Transportation
DRI.....	Desert Research Institute
EH&S	Environmental, Health and Safety
ES&H	Environment, Safety, and Health
ESH&Q.....	Environment, Safety, Health, and Quality
GERT	General Employee Radiological Training
HASP	Health and Safety Plan
ICRP.....	International Commission on Radiological Protection
JASPER.....	Joint Actinide Shock Physics Experimental Research
JLON	Joint Laboratory Operations-Nevada
LANL	Los Alamos National Laboratory
LANL-New Mexico.....	LANL Home Laboratory in Los Alamos, NM
LLNL.....	Lawrence Livermore National Laboratory
LLNL-Livermore	LLNL Home Laboratory in Livermore, CA
M&O	Management and Operating
NAC.....	Nevada Administrative Code
NCERC	National Criticality Experimental Research Center
N-I	Navarro-Intera, LLC
NNSA	U.S. Department of Energy, National Nuclear Security Administration
NNSA/NFO.....	National Nuclear Security Administration Nevada Field Office
NNSS	Nevada National Security Site
NRC	U.S. Nuclear Regulatory Commission
NSTec	National Security Technologies, LLC

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NV EM	Nevada Environmental Management Program
PC	Protective Clothing
RCO	Radiological Control Organization
RCT	Radiological Control Technician
RCM	Radiological Control Manual
REOP	Real Estate/Operations Permit
RMA	Radioactive Material Area
RPP	Radiation Protection Program
RSC	Radiation Safety Committee
RSM	Radiation Safety Manual
RSO	Radiation Safety Officer
RSPC	Radiological Safety Prime Contractor
RW-I	Radiological Worker I
RW-II	Radiological Worker II
RWP	Radiological Work Permit
SI	Systems International
SNL	Sandia National Laboratories
SNL-NV	SNL-Nevada
SSE	Senior Site Executive
STC	Special Tritium Compounds
SWAC	Site-Wide ALARA Committee
TBD	Technical Basis Document
TED	Total Effective Dose
TO	Tenant Organization
UNR	University of Nevada, Reno
WBT	Web-Based Training
WSI-NV	WSI Nevada

UNITS OF MEASUREMENT

Bq.....	becquerel(s)
cm.....	centimeter(s)
cm ²	square centimeter(s)
ft.....	foot/feet
Gy.....	Gray
m.....	meter(s)
MeV.....	mega-electronvolts
μCi/ml.....	microcurie(s) per milliliter
μm.....	micrometer(s)
mrem.....	millirem
rad.....	radiation absorbed dose
rem.....	roentgen equivalent man
Sv.....	sievert
yr.....	year

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1.0 PURPOSE & SUMMARY

Title 10 Code of Federal Regulations (CFR) Part 835, "Occupational Radiation Protection," establishes radiation protection standards, limits, and program requirements for protecting individuals from ionizing radiation resulting from the conduct of U.S. Department of Energy (DOE) activities. 10 CFR 835.101(a) mandates that DOE activities be conducted in compliance with a documented Radiation Protection Program (RPP) as approved by DOE. This document promulgates the RPP for the Nevada National Security Site (NNSS), related (on-site or off-site) U.S. Department of Energy, National Nuclear Security Administration Nevada Field Office (NNSA/NFO) operations, and environmental restoration off-site projects.

This RPP section consists of general statements that are applicable to the NNSS as a whole. The RPP also includes a series of appendices which provide supporting detail for the associated NNSS Tennant Organizations (TOs). Appendix H, "Compliance Demonstration Table," contains a cross-walk for the implementation of 10 CFR 835 requirements.

This RPP does not contain any exemptions from the established 10 CFR 835 requirements. The RSPC and TOs are fully compliant with 10 CFR 835 and no additional funding is required in order to meet RPP commitments. No new programs or activities are needed to meet 10 CFR 835 requirements and there are no anticipated impacts to programs or activities that are not included in the RPP. There are no known constraints to implementing the RPP.

No guides or technical standards are adopted in this RPP as a means to meet the requirements of 10 CFR 835.

2.0 COMMITMENT

The TOs participating in this NNSS RPP commit to using the current version of the DOE/NV/25946--801, "Nevada National Security Site Radiological Control Manual," (NNSS RCM) as the primary means for ensuring a program of radiological excellence at NNSA/NFO facilities. Company policy statements, safety manuals, and procedures are tied to the NNSS RCM as a means to transfer directives to the working level. Only articles of the NNSS RCM specific to demonstrating compliance with 10 CFR 835 requirements are cited in Appendix H of this document. The NNSS RPP establishes the policy by which each participating TO shall ensure that radiation doses to occupational workers are maintained within acceptable limits and as far below these limits as is reasonably achievable. The issuance of this document demonstrates the commitment of the participating NNSS TOs to implement the requirements of this rule in the work place and in training programs, incorporating these requirements in appropriate documents and procedures. Each participating TO commits to also participate in internal audits of their RPP in accordance with Appendix 1B of the NNSS RCM.

3.0 SCOPE

This NNSS RPP promulgates the radiation protection standards, limits, and program requirements for occupational exposure to ionizing radiation resulting from NNSA/NFO activities at the NNSS and other operational areas as stated in 10 CFR 835.1(a). NNSA/NFO activities (including design, construction, operation, and decommissioning) within the scope of this RPP may result in occupational exposures to radiation or radioactive material. Therefore, a system of control is implemented through specific references to the site-specific NNSS RCM. This system of control is intended to ensure that the following criteria are met:

- (1) Occupational exposures are maintained as low as reasonably achievable (ALARA),
- (2) DOE's limiting values are not exceeded,
- (3) Employees are aware of and are prepared to cope with emergency conditions, and
- (4) Employees are not inadvertently exposed to radiation or radioactive material.

Operational tasks with radiological implications within the scope of this NNSS RPP are provided in the appendices of this document and are summarized below:

- Control of residual radioactive contamination including establishment and maintenance of radiologically controlled areas
- Radioactive waste storage, characterization, and disposal
- Environmental remediation operations that include decontamination and decommissioning activities, drilling and developing potentially contaminated wells, and sampling and characterizing radiologically contaminated media
- Dosimeter and instrument calibration
- Well logging
- Radiography
- Training exercises
- Experiments and tests
- Radioactive material receipt and handling
- Operation of radiation-generating devices and accelerators
- Maintenance of emergency response programs (e.g., Consequence Management Response Team/Federal Radiological Monitoring and Assessment Center, Aerial Measurements Services, Nuclear Emergency Support Team, Accident Response Group, and Radiological Assistance Program)
- Special activities supporting DOE worldwide

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Tasks outside the scope of this RPP include:

- Radon and radon daughters, unless site selection is made or materials are introduced that enhance the concentration of the precursors of radon
- Exclusions as identified in 10 CFR 835.1
 - Activities that are regulated through a license by the U.S. Nuclear Regulatory Commission (NRC) or a State under an Agreement with the NRC, including activities certified by the NRC under Section 1701 of the Atomic Energy Act (Public Law 585-79)
 - Activities conducted under the authority of the Deputy Administrator for Naval Reactors, as described in Public Law 98-525 and 106-65
 - Activities conducted under the Nuclear Explosive and Weapons Surety Program relating to the prevention of accidental or unauthorized nuclear detonations
 - DOE activities conducted outside the United States on territory under the jurisdiction of a foreign government to the extent governed by occupational radiation protection requirements agreed to between the United States and the cognizant government
 - Background radiation, radiation doses received as a patient for the purposes of medical diagnosis or therapy, or radiation doses received from voluntary participation as a subject in medical research programs
 - Radioactive material on or within material, equipment, and real property that is approved for release when the radiological conditions of the material, equipment, and real property have been documented to comply with the criteria for release set forth in a DOE pre-approved authorized limit or has been approved by the Chief Health, Safety and Security Officer or the responsible Cognizant Secretarial Officer in consultation with the Chief Health, Safety and Security Officer
 - Radioactive material transportation not performed by DOE or a DOE contractor.

However, occupational doses received as a result of excluded activities and radioactive material transportation, as listed in Paragraph (b) (with the exception of (b)(5) and (b)(6)) of 10 CFR 835.1, shall be considered when determining compliance with the occupational dose limits of 10 CFR 835.202 and 10 CFR 835.207, and with the limits for the embryo/fetus of 10 CFR 835.206.

Occupational doses resulting from authorized emergency exposures and planned special exposures shall not be considered when determining compliance with the dose limits of 10 CFR 835.202 and 10 CFR 835.207.

The requirements in subparts F and G of 10 CFR 835 do not apply to radioactive material transportation by DOE or a DOE contractor conducted under the continuous observation and control of an individual who is knowledgeable of and implements required exposure control measures, or in accordance with U.S. Department of Transportation regulations or DOE orders that govern such movements.

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Except as provided in 10 CFR 835.101(h), any task outside the scope of this RPP shall not be initiated until an amendment of this RPP is approved by NNSA/NFO.

If contracted organizations are used to provide radiological instrument calibration services that support the RPP, then those contracts should contain language that assures compliance with DOE requirements.

4.0 SITE DESCRIPTION

The NNSS is located in Nye County, Nevada and is approximately 65 miles northwest of Las Vegas. It is a remote facility that covers approximately 1,360 square miles of land. The dimensions of the NNSS vary from 28 to 35 miles in width (eastern to western border) and 40 to 55 miles in length (northern to southern border). The population density within Nye County, Nevada, is 1.4 persons per square mile.

The NNSS is surrounded to the west, north, and east by additional thousands of acres of land withdrawn from the public domain for use as a protected wildlife range and as a military gunnery range. These public exclusion areas comprise the Nevada Test and Training Range and the Tonopah Test Range. These two areas provide a buffer zone between the test areas and public lands administered by the U.S. Department of the Interior, Bureau of Land Management.

The combination of the Nevada Test and Training Range and the NNSS is one of the largest unpopulated land areas in the United States, comprising some 5,470 square miles. The open range surrounding the Nevada Test and Training Range is predominantly used for livestock grazing, mining, and recreation.

The NNSS has been the primary location for testing nuclear explosives in the continental United States since 1951. The topographical and geological characteristics of the NNSS afford some protection to the inhabitants of the surrounding areas from potential radiation exposure as a result of release of radioactivity or contamination from nuclear testing operations. Historically, testing programs at the NNSS have included atmospheric testing in the 1950s and early 1960s; underground testing in drilled, vertical holes and horizontal tunnels; earth-cratering experiments; and nuclear rocket engine testing. Current activities include operating low-level radioactive and mixed waste disposal facilities; assembly and execution of subcritical experiments; confined critical experiments; assembly/disassembly of special experiments; operation of pulsed x-ray machines and neutron generators; accelerator experiments; development, testing, and evaluation of radiation detectors; surface cleanup and site characterization of contaminated land areas; environmental activity by the University of Nevada system; and non-nuclear test operations such as controlled spills of hazardous materials at the Nonproliferation Test and Evaluation Complex.

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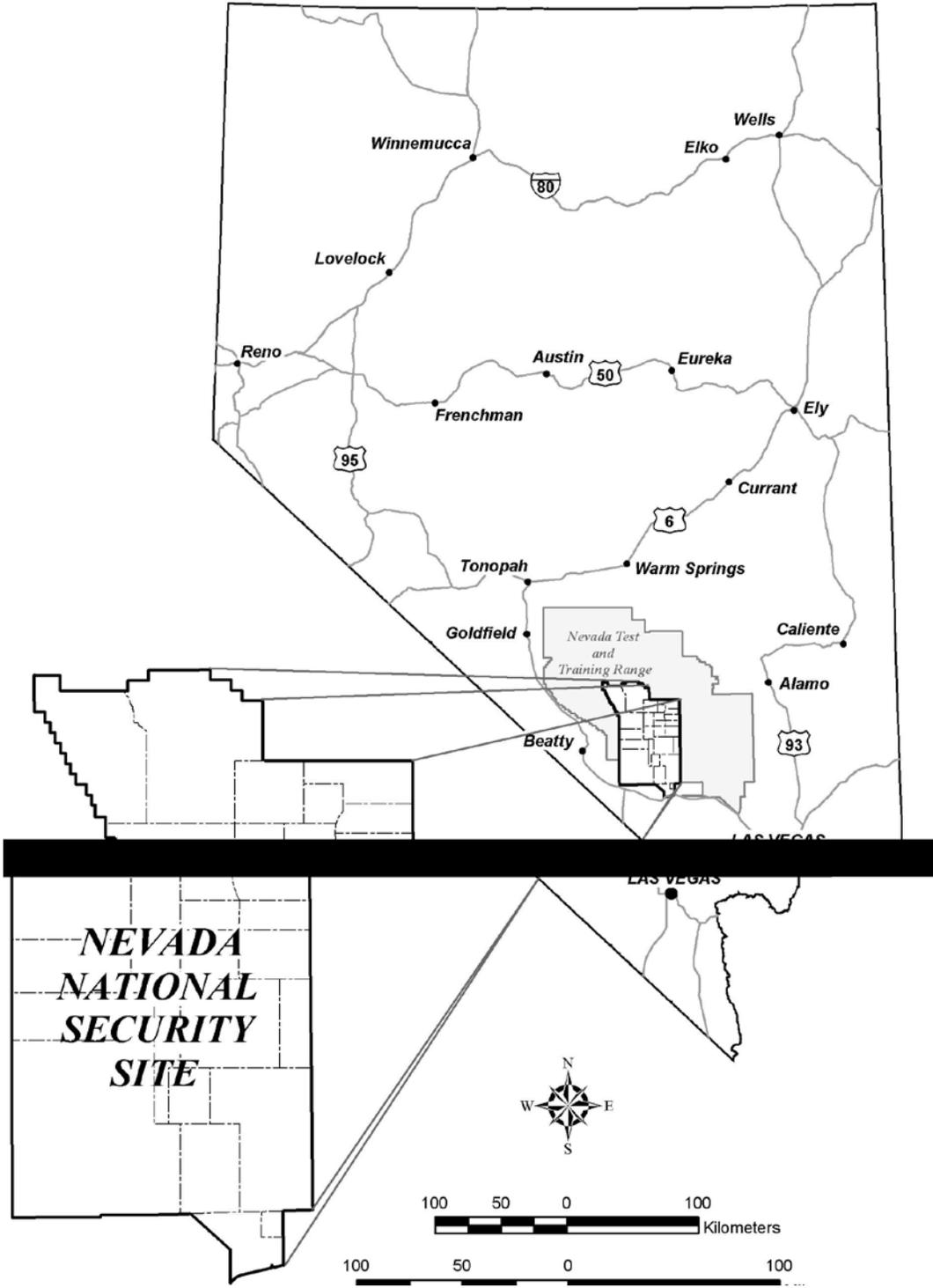


Figure 1. NNSS Location

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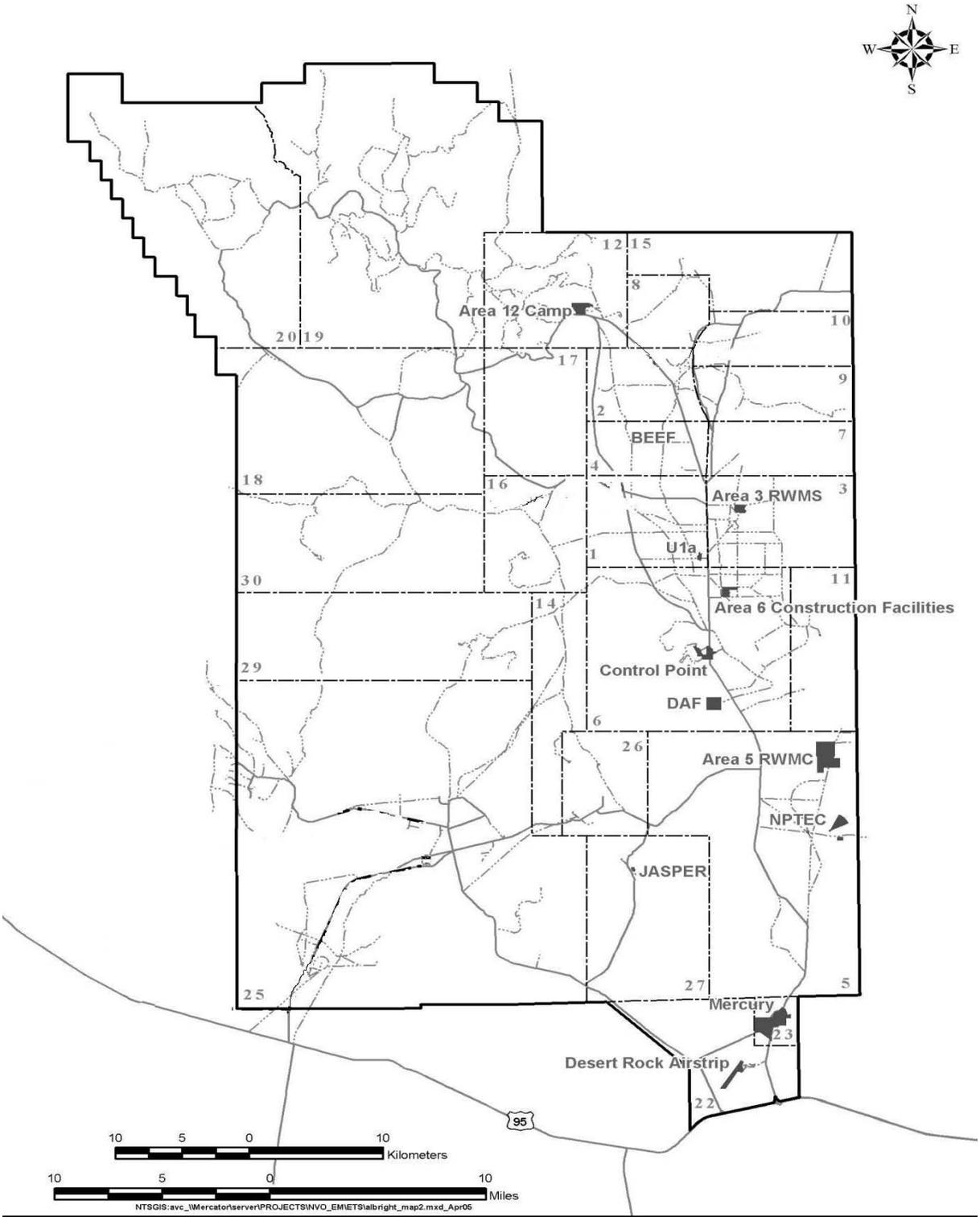


Figure 2. NNSA Area Designations and Principal Facilities

5.0 ORGANIZATIONAL RELATIONSHIPS

Activities at the NNSS are diverse. They involve the application of many different skills and occupational specialties widely dispersed over a large geographical area. Several different organizations frequently perform work either as a closely integrated team or concurrently at any one location. In order to ensure that procedures and policies are uniformly considered and applied by all of the program participants, one organization is assigned radiological safety coordination responsibility by NNSA/NFO.

NNSS radiological coordination responsibility for a facility, building, complex, or project is delegated to the TO by NNSA/NFO through NSO O 412.X1F, "Real Estate Operations Permit."

National Security Technologies, LLC (NSTec), is presently responsible to NNSA/NFO (through the Management and Operating [M&O] contract) for the coordination of the radiological safety of NNSS operations not specifically transferred to another organization. NSTec is currently serving as the Radiological Safety Prime Contractor (RSPC).

Each NNSS TO maintains a Radiological Control Organization (RCO). Each RCO is managed by a designated Radiological Control Manager under the authority of the TO's Senior Site Executive (SSE). Each SSE and Radiological Control Manager has radiological safety coordination responsibility as directed by NNSA/NFO for the scope of work under their control. The Radiological Control Managers meet at least quarterly at the Radiological Control Managers' Council to establish NNSS radiological control policy.

The following TOs are participating in this NNSS RPP:

- NSTec, the M&O contractor for the NNSS, performs radiological services to NNSS contractors and users and operates under Contract No. DE-AC52-06NA25946.
- Lawrence Livermore National Laboratory (LLNL), national laboratory and site user, operates under Contract No. DE-AC52-07NA27344.
- Los Alamos National Laboratory (LANL), national laboratory and site user, operates under Contract No. DE-AC52-06NA25396.
- Sandia National Laboratories (SNL), national laboratory and site user, is operated by Lockheed Martin under Contract No. DE-AC04-94AL85000.
- Navarro-Intera, LLC (N-I), the prime contractor for Environmental Support Services at the NNSS and other offsite locations for the Environmental Restoration Program, operates under Contract No. DE-AC52-09NA28091.
- Desert Research Institute (DRI), a nonprofit research campus of the Nevada System of Higher Education, operates under Contract No. DE-NA000939.
- WSI Nevada (WSI-NV), the prime security contractor, operates under Contract No. DE-NA0001435.

6.0 RESPONSIBILITIES

The NNSS RPP is organized into a format that provides information concerning the responsibilities and interrelationships among each of the participating TOs. Each TO participating in this RPP is responsible for complying with the requirements of 10 CFR 835 as described in the text of this RPP and their respective appendix that specifically addresses the program of that organization. Approval signatures from each participating organization's SSE for their respective appendix constitute concurrence and approval of this entire document.

The general rule of 10 CFR 835.3 states that 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. With respect to a particular DOE activity, contractor management shall be responsible for compliance with the requirements of this RPP. Where there is no contractor for a DOE activity, DOE shall ensure implementation of and compliance with the requirements of this part. However, nothing in this RPP shall be construed as limiting actions that may be necessary to protect health and safety.

7.0 ALARA PROGRAM

Elements of a successful ALARA program include management commitment, administrative control levels for control of radiation exposure to workers, ALARA goals/radiological performance goals, ALARA design review where applicable, ALARA job/experiment planning review, and records of these ALARA program elements. The concept of optimizing protection lends itself to a program with formal elements, plans, and measures that, when implemented, serves to reduce radiation exposures as far below regulatory dose limits as is reasonably achievable. The NNSS TOs are committed to conducting operations in a manner that protects the safety and health of their employees and the public, minimizes damage or loss to government- and company- owned property, and protects the environment. The TOs are further committed to ensuring that potential safety and health risks, such as exposure to ionizing radiation, are reduced to ALARA.

The NNSS Contractors' Site-Wide ALARA Committee provides oversight of ALARA activities at the NNSS. It is an independent, multi-organizational group that reviews performance and advises NNSS contractor organizations on improving progress towards minimizing radiation exposure and radiological releases.

8.0 RADIATION PROTECTION PROGRAM REVISION

An update to the RPP will be submitted to the DOE; whenever a change or an addition to the RPP is made, prior to the initiation of a task not within the scope of the RPP, or within 180 days of the effective date of any modifications to 10 CFR 835.

Since the important aspect of the NNSS RPP is to protect the safety and health of its workers and members of the public, proposed changes that decrease the effectiveness of the RPP shall not be implemented without submittal to and approval by NNSA/NFO.

Any changes to either the NNSS RPP text or the RSPC's Appendix A could affect the other individual appendices of this document. Consequently, any revisions of the NNSS RPP text or Appendix A require approval signatures of the SSEs from all participating TOs.

Changes to the remaining appendices need only be approved by that participating TO's SSE if the changes do not decrease the effectiveness of the RPP. All changes must be submitted to NNSA/NFO for review and may be modified or rejected by NNSA/NFO.

Revisions to the RPP shall be considered approved 180 days after its submission, unless rejected by the DOE at an earlier date.

9.0 APPENDICES

The following appendices describe each participating TO's RPP. The NNSS is implementing the requirements of 10 CFR 835 through specific related requirements in the current NNSS RCM, as outlined in Appendix H of this document.

<u>Appendix</u>	<u>Tenant Organization</u>
Appendix A	National Security Technologies, LLC
Appendix B	Lawrence Livermore National Laboratory
Appendix C	Los Alamos National Laboratory
Appendix D	Sandia National Laboratories
Appendix E	Navarro-Intera, LLC
Appendix F	Desert Research Institute
Appendix G	WSI Nevada
Appendix H	All TOs

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- Radiological Control Managers' Council, 2012. *Nevada National Security Site Radiological Control Manual*. DOE/NV/25946--801 Revision 2. Las Vegas, NV.
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- Nevada Administrative Code (NAC) 459, "Hazardous Materials," 2010.
- Nevada Field Office Order NSO O 412.X1F, "Real Estate Operations Permit," 2012.
- Nevada Field Office Order NSO O 421.X1D, "Nuclear Facility Safety Management," 2011.
- Public Law 585-79, Atomic Energy Act of 1946.
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**APPENDIX A
NATIONAL SECURITY TECHNOLOGIES, LLC**

1.0 PURPOSE

National Security Technologies, LLC (NSTec), provides this Radiation Protection Program (RPP) to comply with the requirement of Title 10 Code of Federal Regulations (CFR) Part 835.101, "Radiation Protection Programs," to conduct activities in compliance with a documented radiation protection program as approved by the U.S. Department of Energy (DOE).

2.0 SCOPE

The Nevada National Security Site (NNSS) RPP applies to radiological protection activities conducted by NSTec. NSTec is designated by the U.S. Department of Energy National Nuclear Security Administration Nevada Field Office (NNSA/NFO) as the NNSS Radiological Safety Prime Contractor (RSPC) as well as the Management and Operating (M&O) Contractor. As the site M&O Contractor, NSTec maintains the day-to-day NNSS operations by performing the following services and functions:

- Construction
- Conventional weapons testing
- Development and manufacture of portable radiation detector systems
- Development and research
- Development and operation of radiation-generating devices and accelerators
- Drilling research
- Emergency response training
- Emergency response assets planning, maintenance, and deployment
- Environmental remediation
- Environmental technologies studies
- Facility and site maintenance and operation
- Geophysical well logging
- Hazardous chemical spill testing
- Industrial radiography and materials testing
- Logistical support to user organizations
- Maintenance
- Mining research
- Nuclear material handling, packing, unpacking, measurement, storage, and transportation
- Radioactive and mixed waste storage, characterization, and disposal
- Seismic engineering research
- Staff and support emergency operations

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- Testing and evaluation of radiation detectors and radiation detection systems
- Training
- Transportation
- Transuranic waste examination, characterization, packaging, storage, and disposal

As the RSPC, NSTec provides the following radiological support services:

- Calibration and maintenance of radiological instrumentation
- Dosimetry
- In-vitro bioassay
- Maintenance of posted land areas (Demarcation Maintenance)
- Radioactive source and material accountability
- Radiological monitoring
- Radiological technical support
- Radiological work permit processes and operational job coverage

3.0 FACILITY DESCRIPTION

Radiological activities within the scope of 10 CFR 835 may be conducted in facilities and areas for which NSTec has been delegated safety coordination responsibility by NNSA/NFO and offsite operational areas as directed by NNSA/NFO.

NSTec provides maintenance and operations aspects of the facilities managed by NNSA/NFO. Some of these facilities are utilized by the national laboratories and other government entities to conduct experiments, exercises, training, and other related activities as authorized through Secondary Real Estate/Operations Permits (REOPs). Under this configuration, NSTec is delegated safety coordination responsibility for general facility activities and these responsibilities are delegated to the user conducting projects for those portions of the facility and time frames described in the Secondary REOPs.

NSTec performs radiological operations for NNSA/NFO in the following locations:

- Livermore Operations, Livermore, California
- Los Alamos Operations, Los Alamos, New Mexico
- North Las Vegas, Nevada
- NNSS, Mercury, Nevada including contiguous portions of the Nevada Test and Training Range, Tonopah Test Range, and Yucca Mountain
- Remote Sensing Laboratory-Andrews, Suitland, Maryland
- Remote Sensing Laboratory-Nellis, Las Vegas, Nevada
- Special Technologies Laboratory, Santa Barbara, California
- Other various locations

4.0 HAZARD IDENTIFICATION

NSTec, as the Prime M&O Contractor, performs, among other activities, construction; drilling; engineering; laboratory analyses; waste storage, characterization, and disposal; transportation; and mining activities. Industrial health and safety hazards are addressed when planning, preparing for, and performing these activities.

NSTec deals with low-specific activity radioactive materials that result in low exposures to alpha, beta, gamma, and neutron radiation. Lower activity radioactive sources, generally in the nanocurie-to-millicurie range, are used for instrument operability checks and calibrations, training, experiments, and tests. These sources result in little personnel radiation exposure.

The potential for higher levels of radiation exposure to personnel exists as a result of using quantities of fissile material that potentially constitute a critical mass, sealed radioactive sources in the millicurie-to-kilocurie range, radiation-generating devices, accelerators, disposal of high activity containers, and experimental equipment. Higher activity sources and radiation-generating devices, including accelerators, are used for industrial radiography, instrumentation calibration and testing, geophysical well logging, and materials and experimental testing.

Employee access to Radiation Areas and High Radiation Areas is governed by physical and/or strict administrative controls. Such measures include use of shielded containers and/or rooms with interlocks, alarms, and other devices to prevent exposure to high levels of radiation. Any source with detectable leakage of radioactive material will be controlled commensurate with the hazard.

Residual contamination to soils from historical testing on the NNSS as well as other activities within the scope result in a potential for internal uptake of radionuclides and personnel skin contamination.

Work in Contamination, High Contamination, and Airborne Radioactivity Areas is well planned with appropriate controls prescribed to protect personnel from the hazards present. Postings and barricades are used to warn personnel where these hazards exist.

5.0 ALARA COMMITMENT

NSTec's commitment of continuing improvement is essential to excellence in radiological control and maintaining radiation exposures as low as reasonably achievable (ALARA). Plans and measures for applying ALARA include the incorporation of ALARA processes in work planning, independent review of work plans and operations to ensure adequacy of ALARA provisions and performance, and development and tracking of company ALARA goals. NSTec maintains its own ALARA committee and is also a participating member of the NNSS Site-Wide ALARA Committee. By company procedure, NSTec assigns responsibilities and establishes methods for ensuring that radiation exposure is limited to the lowest level reasonably achievable. This procedure provides for the appointment of an ALARA Committee and

describes methods of monitoring, controlling, and documenting radiation exposure to employees and the general public. Radiation exposure of the work force and public is controlled such that radiation exposures are well below regulatory limits, and there is no planned radiation exposure without commensurate benefits. During routine operations, combinations of administrative control procedures, radiological work permits, design features, engineering controls, and training are used to keep exposure levels ALARA. Each NSTec employee involved in radiological work is expected to demonstrate responsibility and accountability through an informed, disciplined, and cautious attitude toward radiation. This results in excellent performance of the ALARA processes, as evidenced by a program in which radiation exposures are maintained well below regulatory limits, contamination is minimized, and radiological spills or uncontrolled releases are prevented.

6.0 EXCLUSIONS

NSTec activities and operations within the scope of the exclusions are listed in 10 CFR 835.1(b).

Additionally, radioactive materials transported to and from the NNSS in support of NSTec operations shall be packaged, surveyed, and shipped in accordance with the U.S. Department of Transportation (DOT) regulations. NSTec adheres to DOT requirements or the requirements of the NNSS Transportation Safety Document. NSTec will conduct monitoring in accordance with 10 CFR 835.405(b) upon initial receipt of radioactive material shipments from a common carrier at the NNSS; however, NSTec will not conduct additional monitoring when a radioactive material shipment occurs between facilities within the boundaries of the NNSS. For example, when a radioactive material shipment is received from a common carrier at the NSTec Warehouse, the Radiological Control Department is notified and a receipt survey is performed if required by 10 CFR 835.405. If that shipment is then transferred to another NNSS location, another receipt survey is not performed, unless some visible damage has occurred to the package in such transfer.

7.0 IMPLEMENTATION SCHEDULE AND PLAN

NSTec is in full compliance with the regulations of 10 CFR 835.

**APPENDIX B
LAWRENCE LIVERMORE NATIONAL LABORATORY**

1.0 SCOPE

The Nevada National Security Site (NNSS) Radiological Protection Program (RPP) applies to radiological protection activities conducted by Lawrence Livermore National Laboratory (LLNL) at the NNSS.

The LLNL activities within the scope of this NNSS RPP are:

- Nuclear material handling and measurement
- Assembly, disassembly, interim staging, retrofitting, or inspection of nuclear explosive devices, subcritical experiments, components, simulated components, or weapons
- Conducting gas gun-type experiments using radioactive material (e.g., plutonium and uranium)
- Operation of radiation-generating devices and sealed source radiography of nuclear explosive devices, subcritical experiments components, simulated components, or weapons
- Packaging and handling of radioactive material shipments
- Use of radioactive material or sealed radioactive sources associated with operational checks of portable radiological instrumentation, diagnostics, training, or laboratory/field experiments
- Screening analysis of operational radiological samples containing alpha, beta, and/or gamma-emitting nuclides, including tritium
- Sealed radioactive source and radioactive material handling and storage

Planned special exposures (Title 10 Code of Federal Regulations [CFR] Part 835.204) are beyond the scope of LLNL operations at the NNSS.

As the Radiation Safety Prime Contractor (RSPC) for the NNSS, National Security Technologies (NSTec), is responsible for providing, in compliance with 10 CFR 835, core radiation protection services for the Tenant Organizations (TOs).

The 10 CFR 835 requirements that are implemented by the RSPC on behalf of the NNSS TOs are identified in the Appendix H, "Compliance Demonstration Table," and are outside the scope of LLNL work. The 10 CFR 835 requirements that are implemented by the LLNL Home Laboratory under the LLNL-Livermore RPP on behalf of LLNL are identified in the Appendix H and are outside the scope of LLNL work.

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The RSPC provides the following radiological support services to the NNSS TOs in compliance with 10 CFR 835 as described in Appendix H:

- Qualified radiological control technicians
- Radiological survey and swipe counting
- Personnel decontamination facilities
- Radiological control technician and site-monitoring services
- External and internal dosimetry
- Nuclear Accident Dosimetry
- Radiological instruments, maintenance, and calibration
- Radiological safety training
- Accountable sealed radioactive source control program

General employee and radiological worker training courses are given to LLNL employees by NSTec or LLNL. NSTec and LLNL have the responsibility for developing the courses in accordance with U.S. Department of Energy requirements. LLNL maintains the appropriate records in the NNSS database.

LLNL and Los Alamos National Laboratory (LANL) are integrated as Joint Laboratory Operations - Nevada (JLON). For the purpose of this RPP, LLNL and LANL are submitting separate columns in the RPP table to ensure that responsibilities of each are clearly described. The RPP for LLNL and LANL are similar except when the home laboratory's procedures or processes are needed to complete the requirements.

2.0 FACILITY DESCRIPTION

Radiological activities within the scope of 10 CFR 835 under this RPP may be conducted for facilities held under a Primary or Secondary Real Estate/Operations Permit (REOP) per the U.S. Department of Energy National Nuclear Security Administration Nevada Field Office Order NSO O 412.X1F, "Real Estate Operations Permit," as a component of safety coordination responsibility. As examples, LLNL performs work under a Primary and/or Secondary REOP at the following facilities:

- Area 6, Device Assembly Facility (DAF) is shared by LANL and LLNL. The following LLNL activities are conducted: Assembly, disassembly, retrofitting, and inspection of nuclear explosive devices or experiments; Training using radioactive sources and radioactive materials; Nuclear material measurements; Exposures of nuclear accident dosimeters and phantoms; Interim staging of weapons; and Industrial radiography. This includes screening operational radiological samples, operational radiological instrument checks, and radioactive source storage.
- Area 6, U1a Complex is an underground drift complex connected to the surface by approximately 1,000 foot shaft/man hoist access at U1a (main access) and U1g (emergency access). LLNL may use this facility to field subcritical experiments

using weapon's grade plutonium, associated diagnostics experiments, and radiation-generating devices to assess the performance of subcritical experiments.

- Area 4, Big Explosive Experimental Facility is the site of high-explosive experiments. LLNL has experiments that use radioactive materials at this facility.
- Area 23, Building 600 is used for office space, staging operations, processing radioactive water samples, screening operational radiological samples, operational radiological instrument checks, and radioactive source storage.
- Area 23, Building 703 is used for processing nuclear accident dosimeters and evaluating activated materials. Radioactive material and sealed radioactive sources are stored and used in this facility.
- Area 27, Able Compound contains the Joint Actinide Shock Physics Experimental Research (JASPER) buildings. LLNL conducts gas-gun type experiments conducted for JASPER that use radioactive materials. This includes screening operational radiological samples, operational radiological instrument checks, and radioactive source storage.
- Area 27, Baker Compound is a high explosive storage and staging facility. Radioactive materials are also stored and handled in this facility.

3.0 HAZARD IDENTIFICATION

A hazard analysis is performed prior to start-up of radiological work. The analysis identifies potential radiological hazards that may be encountered during LLNL activities. The results of the analysis and hazard controls are documented in JLON Activity Level Work Documents, which include procedures, Integration Work Sheets, and Radiological Work Permits.

Hazards from LLNL activities include use of radioactive materials and operations of radiation-generating devices. Sealed and unencapsulated sources of alpha, beta, gamma, and neutron radiation may be encountered. LLNL activities can result in creating Radioactive Material, Radiation, High Radiation, Very High Radiation, Contamination, High Contamination, Very High Contamination, and Airborne Radioactivity Areas. Potential personnel doses may result from extremity, whole body, or internal exposures.

4.0 ALARA COMMITMENT

The As Low As Reasonably Achievable (ALARA) policy results from the well-recognized practice in the scientific and radiation protection community of avoiding unnecessary exposure to ionizing radiation. The International Commission on Radiological Protection ICRP Publication 60, "1990 Recommendations of the International Commission on Radiological Protection," states that all exposure shall be kept ALARA, economic and social factors being taken into account. The concept of optimizing protection lends itself to a program description with formal elements, plans, and measures that, when implemented, serves to reduce radiation exposures as far below regulatory dose limits as is reasonably achievable. LLNL conducts research programs that involve radioactive materials and ionizing-radiation-generating devices. The policy

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is to conduct operations in such a way that radiation exposure to LLNL employees, employees of other organizations, and the public be kept ALARA. The details of the ALARA policy are outlined in LLNL Environment, Safety & Health Manual, Volume II, Document 20.1, "Occupational Radiation Protection."

Elements of a successful ALARA program include management commitment, ALARA training for employees/workers, administrative control levels for control of radiation exposure to workers, ALARA goals/radiological performance goals, ALARA design review where applicable, ALARA job/experiment planning review, and records of these ALARA program elements.

5.0 EXCLUSIONS

Generally, LLNL activities or operations within the scope of the exclusions listed in 10 CFR 835.1(b) are not included in this RPP. However, LLNL does conduct activities on the NNSC pursuant to 10 CFR 835.1(b)(3) which requires LLNL to use this exclusion:

- LLNL does conduct operations under the purview of the Nuclear Explosive and Weapons Surety Program at the DAF and U1a Complex, which requires the use of exclusion 10 CFR 835.1(b)(3). Requirements established in 10 CFR 835 which, if performed, would violate the requirements of the Nuclear Explosive and Weapons Surety Program shall not be implemented. For example, radiological portable monitoring instrumentation may not be brought into contact with an assembly during some stages of the operation. Alternatively, radioactive contamination surveys of items are conducted prior to starting assembly operations and swipe surveys are conducted periodically during the assembly.

6.0 IMPLEMENTATION PLAN

LLNL is in compliance with all applicable requirements of 10 CFR 835.

**APPENDIX C
LOS ALAMOS NATIONAL LABORATORY**

1.0 SCOPE

Radiological protection activities at the Nevada National Security Site (NNSS) are performed by Los Alamos National Laboratory (LANL) in accordance with Title 10 Code of Federal Regulations (CFR) Part 835, "Occupational Radiation Protection," as described in this Appendix and in the Appendix H, "Compliance Demonstration Table," for activities performed under a Joint Laboratory Operations - Nevada (JLON) Secondary Real Estate/Operations Permit (REOP).

The Lawrence Livermore National Laboratory (LLNL) and LANL radiation protection organizations are united under JLON. However, for the purpose of commitment to compliance with 10 CFR 835 through the NNSS Radiation Protection Program (RPP) and identification of applicable Home Laboratory programs, LLNL and LANL have developed separate columns in the Appendix H to ensure that the responsibilities of each are clearly described.

As the Radiation Safety Prime Contractor (RSPC) for the NNSS, National Security Technologies (NSTec), is responsible for providing, in compliance with 10 CFR 835, core radiation protection services for the Tenant Organizations (TOs).

The 10 CFR 835 requirements that are implemented by the RSPC on behalf of the NNSS TOs are identified in the Appendix H and are outside the scope of LANL work. The 10 CFR 835 requirements that are implemented by the LANL Home Laboratory under the LANL-New Mexico RPP on behalf of LANL are identified in the Appendix H and are outside the scope of LANL work at the NNSS.

The RSPC provides the following radiological support services to the NNSS TOs in compliance with 10 CFR 835 as described in Appendix H:

- Qualified radiological control technicians
- Radiological survey and swipe counting
- Personnel decontamination facilities
- Radiological control technician and site-monitoring services
- External and internal dosimetry
- Nuclear Accident Dosimetry
- Radiological instruments, maintenance, and calibration
- Radiological safety training
- Accountable sealed radioactive source control program

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The LANL activities within the scope of this NNSR RPP are:

- Nuclear material handling and measurement
- Assembly, disassembly, staging, insertion, and inspection of devices or experiments consisting of or containing depleted thorium, uranium, tritium, natural uranium, enriched uranium, special nuclear materials, and other transuranic nuclides
- Operation of radiation-generating devices and sealed source radiography of device or experiment components and completed assemblies
- Packing, unpacking, onsite transportation, and warehousing/handling of radioactive material shipments
- Instrument calibration and response studies with radioactive sources and radioactive materials
- Screening analysis of operational radiological samples containing alpha, beta, and/or gamma-emitting nuclides, including tritium
- Operation of radiation-generating devices for the purpose of diagnostic experimentation and radiography
- Radiation source handling and storage
- Post-experiment U1a drift complex and experiment area reentry operations

2.0 FACILITY DESCRIPTION

LANL is responsible for implementation of 10 CFR 835 requirements in accordance with this RPP for facilities held under a Secondary REOP per the U.S. Department of Energy National Nuclear Security Administration Nevada Field Office Order NSO O 412.X1F, "Real Estate Operations Permit," as a component of safety coordination responsibility. As examples, LANL performs work under a Secondary REOP at the following facilities:

- Area 6, Building CP-100 is the JLON warehousing facility. Radioactive material shipments are staged at this facility for shipment off-site or delivery to other facilities on the NNSR. CP-111 is an unoccupied storage bunker located within the CP-100 fenced compound.
- Area 6, Device Assembly Facility (DAF). National Criticality Experimental Research Center (NCERC) operations of Four Critical Assemblies, COMET, PLANET, FLAT-TOP, and GODIVA. NCERC includes the capability for handling, storage, and analysis of radioactive material. Assembly, disassembly, staging, and inspection of devices or experiments are also conducted in the DAF. Additional activities may include work in the Downdraft Table Building. Radiography is conducted with radiation-generating devices and/or sealed sources.

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- Area 6, U1a Complex is an underground drift complex connected to the surface by approximately 1,000 feet shaft/man hoist access at U1a, U1h, and U1g (emergency access only). The test bed for LANL experiments containing weapon's grade plutonium and other radioactive materials is located in the underground portion of the complex. Diagnostic experiments, including radiation-generating devices, are also fielded in the U1a Complex to assess the performance of the main experiment.
- Area 11, Los Alamos Technical Facility. Radioactive materials and sealed radiation sources are staged and used at this facility.

Additional areas and NNSS facilities may be identified for future LANL projects. However, the scope of activities at these areas and facilities would be as described above.

3.0 HAZARDS IDENTIFICATION

Nuclear material handling and measurement in the DAF may involve work in Radiation or High Radiation Areas, and potential work in Contamination or High Contamination Areas. The Radiation and High Radiation Areas may include both beta/gamma and neutron radiation fields.

Assembly, disassembly, staging, and inspection of devices or experiments containing special nuclear material, uranium, tritium, and/or other transuranic nuclides may involve work in Radiation or High Radiation Areas, and potential work in Contamination or High Contamination Areas.

Radiography involves the generation of a High or Very High Radiation Area in the case of both sealed sources and radiation-generating devices. Very High Radiation Areas are personnel exclusion areas and no personnel access is permitted.

Packing, unpacking, and warehousing/handling involves radioactive material shipments. Radioactive Material and Radiation Areas are posted as required.

Radiological screening analysis of operational samples involves work with radioactive materials and radioactive calibration sources in an area posted as a Radioactive Material Area.

Radiation-generating devices operated as diagnostic experiments produce Radiation, High Radiation, or Very High Radiation Areas attributable to neutron and/or photon fields. Very High Radiation Areas are personnel exclusion areas and personnel access is not permitted.

4.0 ALARA COMMITMENT

The As Low As Reasonably Achievable (ALARA) policy results from the practice in the scientific and radiation protection community of avoiding unnecessary exposure to ionizing radiation. Exposure shall be kept ALARA, economic and social factors being taken into account. The concept of optimizing protection lends itself to a description as

a program with formal elements, plans, and measures that, when implemented, serves to reduce radiation exposures as far below regulatory dose limits as is reasonably achievable. LANL conducts research programs that involve radioactive materials and ionizing-radiation-generating devices. The LANL policy is to review and plan activities to assure that operations are conducted in such a way that radiation exposure to LANL employees, employees of other organizations, and the public be kept ALARA.

5.0 EXCLUSIONS

Exclusion 835.1(b)(3); The requirements of 10 CFR 835 which, if performed, would violate Nuclear Explosive Safety Study requirements or DAF explosive safety procedures, shall not be implemented. For example, radiation monitoring instrumentation may not be brought in contact with, and must remain at least 1 foot away from, an assembly containing nuclear materials and explosives. Alternatively, radioactive contamination surveys of items are conducted prior to their introduction into the explosives assembly area and swipe surveys are conducted periodically during the assembly.

Exclusion 835.1(b)(5); Background radiation and radiation doses received as a patient for the purposes of medical diagnosis or therapy are excluded from consideration as occupational radiation exposure.

Exclusion 835.1(b)(7): Radioactive material transportation that is not performed by DOE or a DOE contractor.

6.0 IMPLEMENTATION SCHEDULE

LANL is in compliance with all applicable requirements of 10 CFR 835.

**APPENDIX D
SANDIA NATIONAL LABORATORIES**

1.0 SCOPE

Appendix D of the Nevada National Security Site (NNSS) Radiation Protection Program (RPP) applies to activities conducted by Sandia National Laboratories (SNL) at the NNSS. It includes the associated radiological protection activities conducted by SNL and the radiological control support provided through the NNSS Radiological Safety Prime Contractor (RSPC), which is currently National Security Technologies, LLC (NSTec).

The SNL-Nevada (NV) activities within the scope of this NNSS RPP are (1) receiving, storage, and inventory of special nuclear material and (2) work with and around radiation-generating devices.

SNL personnel provide oversight of the radiological protection program conducted in support of SNL-NV activities at the NNSS with responsibility to review survey and monitoring records to assure that the requirements of Title 10 Code of Federal Regulations (CFR) Part 835, "Occupational Radiation Protection," are being met in SNL's radiation control program. The RSPC provides trained radiological control technicians for all monitoring, surveying, and posting activities required by SNL-NV; provides radioactive source control, inventory, and leak testing services; provides radioanalytical laboratory capability for sample analysis; provides instrument calibration services for all stationary and permanent instrumentation used for SNL-NV support; provides U.S. Department of Energy Laboratory Accreditation Program (DOELAP)-accredited external dosimetry for SNL personnel; and performs internal dose assessments for SNL personnel whenever the bioassay sampling has been done at the NNSS. Since all radiological support functions are provided through the RSPC, SNL activities at the NNSS are conducted utilizing the standard operating procedures of the RSPC, supplemented by the corporate SNL Environment, Safety, and Health (ES&H) Manual (SNL, 1991) and job-specific standard operating procedures or radiation work permits. All records generated in the performance of these services are maintained and archived by the RSPC.

Since SNL personnel working at the NNSS are a mixture of personnel permanently assigned to the NNSS and personnel on temporary duty status from the Albuquerque or Livermore facilities, general employee and radiological worker training may be obtained at any of the three locations. Radiological worker training received at the NNSS is provided by NSTec training personnel; training received in Albuquerque or Livermore is supplemented by site-specific training provided by the SNL-NV ES&H staff, either by oral presentation or a pamphlet. Development of the course materials in accordance with U.S. Department of Energy (DOE) requirements is the responsibility of the organization providing the training. The SNL-NV ES&H staff are responsible for providing the appropriate information to the NSTec Training Department to update the NNSS database for SNL-NV personnel.

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The RSPC provides DOELAP-accredited external dosimetry services and DOELAP-accredited laboratory analyses of bioassay samples for internal dose assessment. SNL-NV ES&H personnel shall identify the SNL personnel who require these dosimetry services; NSTec Dosimetry shall retain and archive all records generated in performing these dose assessments. Any positive radiation doses received by SNL personnel at the NNSS shall be reported to the Sandia Dosimetry Records organization in Albuquerque for inclusion in the individual's occupational dose record. All reporting of dosimetry information to individuals shall remain a responsibility of the Sandia Dosimetry organization in Albuquerque.

2.0 FACILITY DESCRIPTION

Radiological activities within the scope of 10 CFR 835 may be conducted in, but are not limited to, the following facilities and areas for which SNL has been delegated safety coordination responsibility by the U.S. Department of Energy, National Nuclear Security Administration Nevada Field Office:

- Area 6, Building CP-1 houses the SNL-NV arming and firing personnel and provides space for equipment maintenance, a vault for storage of classified components, data acquisition and recording facilities, and general office space.
- Area 23, Building 600 provides office space for resident administrative, technical, and support staff for SNL-NV NNSS operations.

All radioactive material shipments received from offsite or sent offsite are received or shipped by the RSPC.

3.0 HAZARD IDENTIFICATION

SNL personnel are involved with radiation-generating devices while performing experiment and equipment setup and recovery activities. While participating in these operations, personnel are potentially exposed to x-ray, gamma, beta, alpha, or neutron radiation in High and Very High Radiation Areas. Employees are protected from these sources by strict administrative controls and by utilizing shielded installations with interlocks, alarms, and other devices to prevent exposure to high levels of radiation. Radioactive material shipments and work with and storage of radioactive and radioactively contaminated materials may involve work in a Contamination or Radiation Area with exposure to the hands and whole body. Radiation Area, Contamination Area, Airborne Radioactivity Area, and Radioactive Material Area postings are used as required. The potential exists for these activities to result in low-level contamination of personnel or facilities and internal and external radiation exposure. Personnel radiation exposure from these activities is anticipated to be well below the administrative control level.

4.0 ALARA COMMITMENT

SNL management at the NNSS is fully committed to reducing radiation exposures to SNL personnel and to the general public to the lowest practicable levels. The goal is to provide positive control of radioactive materials and radiation-generating devices so that radiation doses to occupational workers and the public are minimized and radioactive materials do not leave authorized work areas. The primary control of radiation exposures remains with the individual and with the individual's supervisor, and radiological safety training is the primary mechanism by which the concept of maintaining personnel radiation dose equivalents as low as reasonably achievable (ALARA) is passed on to the individual.

Since the potential for SNL personnel at the NNSS to be exposed to ionizing radiation is extremely low, SNL-NV ES&H personnel participate in the NNSS Contractors' Site-Wide ALARA Committee (SWAC) to effect their NNSS ALARA program. Any SNL activity that has the potential to exceed NNSS administrative limits shall be reviewed by the NNSS Contractors' SWAC before being instituted. Thus, the SNL ALARA program includes management commitment, ALARA training for employees/workers, administrative control levels, and job/experiment planning review. The minutes of the NNSS Contractors' SWAC meetings constitute the record of these ALARA program elements.

5.0 EXCLUSIONS

Radioactive materials transported to and from the NNSS in support of SNL operations shall be packaged and shipped in compliance with U.S. Department of Transportation (DOT) regulations. However, SNL retains the option of requesting a deviation or exemption from DOT regulations for onsite transfer of radioactive materials. This would include, but is not limited to, the lack of receipt surveys of a package at a final SNL/NNSS location. For example, when a radioactive material shipment is received from a common carrier at the SNL receiving area, NSTec's Radiological Control Department is notified and a receipt survey is performed. If that shipment is then transferred to another SNL location, another receipt survey is not accomplished unless visible damage has occurred to the package in such transfer. Conversely, because the potential for contamination is vanishingly small, and the hazard to the general population is negligible, some radioactive materials might be transferred onsite and will be packaged and shipped according to the RSPC on- and off-site transportation program for radioactive material. All onsite transfers of radioactive material by SNL are accomplished utilizing RSPC drivers trained according to the requirements of 49 CFR, "Transportation."

6.0 IMPLEMENTATION SCHEDULE

SNL is in compliance with applicable sections of 10 CFR 835.

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APPENDIX E
NAVARRO-INTERA, LLC

1.0 SCOPE & POLICY STATEMENTS

Title 10 Code of Federal Regulations (CFR) Part 835, "Occupational Radiation Protection," establishes radiation protection standards, limits, and program requirements to protect individuals from ionizing radiation that results from the conduct of U.S. Department of Energy (DOE) activities. Subsection 835.101(a) mandates that DOE activities be conducted in compliance with a documented Radiation Protection Program (RPP) as approved by DOE. This document promulgates the RPP for radiological activities conducted by Navarro-Intera, LLC (N-I) at the Nevada National Security Site (NNSS), related DOE sites, DOE National Nuclear Security Administration Nevada Field Office (NNSA/NFO) operations, and the DOE environmental management program.

The N-I RPP (contained within the larger NNSS RPP) is applicable to radiological activities conducted by N-I at the direction of the DOE Nevada Environmental Management Program (NV EM) at the NNSS, and other locations. N-I is committed to using integrated safety management as the best method of conducting business and supports implementation of DOE Policy DOE P 450.4A, "Integrated Safety Management Policy." Safety, health, and protection of workers and the environment take precedence over expediency.

It is an N-I policy to conduct radiological operations in a manner that ensures the health and safety of its employees, contractors, and the general public. In achieving this objective, N-I shall ensure that radiation exposures to its workers and the public and releases of radioactivity to the environment are maintained below regulatory limits and deliberate efforts are taken to further reduce exposures and releases as low as reasonably achievable (ALARA). N-I is fully committed to implementing a radiological control program of the highest quality, to consistently reflect this policy.

The N-I Radiological Control Organization (RCO) resides with the Environment, Safety, Health, & Quality (ESH&Q) group and is independent of the line organization. The ESH&Q Manager reports directly to the N-I Senior Site Executive.

N-I uses an NNSS-Common Radiological Control Manual (RCM) to guide the conduct of radiological activities and ensure compliance with requirements. The RCM has been endorsed by the N-I Senior Site Executive.

The N-I RCO maintains procedures which ensure that Radiological Control Technicians (RCTs) and their supervisors have the necessary knowledge, skills, and abilities to perform their function, and that RCT work receives the appropriate level of review.

The scope of NV EM activities encompasses all phases of investigation and remediation of inactive radioactive and/or hazardous waste disposal or release sites under NNSA/NFO management. Activities range from site discovery and initial assessment, to site characterization and analysis of remedial action, periodic site

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monitoring, and regulatory closure. N-I performs functions that include, but are not limited to, the following:

- Environmental management support
- Site assessments and characterizations
- Regulatory support
- Remedial actions
- Establishment and evaluation of corrective action levels for site remediation
- Data acquisition using existing and new technology
- Testing of newly developed technology for site characterization
- Testing new uses for existing technology
- Screening analysis of radiological samples for site characterization activities
- Operation of radiation detection instrumentation for site characterization activities
- Geophysical well logging, well development, well testing, and sampling
- Operation of radiation-generating devices
- Use and transportation of radioactive material and radioactive sources
- Drilling and environmental technologies studies
- Radioactive waste characterization, storage, and disposal
- Radiological monitoring and worker protection services
- Decontamination and decommissioning

The Radiological Safety Prime Contractor (RSPC) is the organization responsible to NNSA/NFO for the coordination of the radiological safety aspects of NNSS operations through a Management and Operating contract. The RSPC is responsible for providing radiological safety services to organizations operating at the NNSS. Requirements include, but are not limited to; 10 CFR 835.203, 205, 209, 702, and 801. Dosimetry services are also provided by the RSPC. Training in accordance with the requirements in 10 CFR 835.901 is provided by the RSPC and/or N-I. N-I utilizes trained and qualified RCTs and/or Health Physicists to implement radiological controls for work activities that are conducted in radiological areas.

When RSPC radiological control support is utilized, the RSPC provides RCTs, radiological instrumentation, and the supplies necessary to implement radiological controls. Additionally, the RSPC documents the radiological monitoring results. The RCT support between the RSPC and N-I is coordinated by the organization that is assigned radiological control responsibility for the work activity through the Real Estate/Operations Permit (REOP) holder.

For work conducted in radiological areas on and off the NNSS, not requiring RSPC personnel to work in radiological areas (e.g., N-I and N-I subcontractors), N-I utilizes the radiological monitoring services of N-I, the RSPC, or a qualified provider of radiological services, as necessary.

2.0 FACILITIES DESCRIPTION

N-I is responsible for implementation of 10 CFR 835 requirements in accordance with this RPP for facilities held by N-I under a Primary or Secondary REOP per NNSA/NFO Order NSO O 412.X1F, "Real Estate Operations Permit," including safety coordination responsibility. As examples, N-I performs work under a Primary REOP at the following facilities:

- Area 23, Building 310 is used for storing, performance testing, and utilization of portable and fixed laboratory radiological instrumentation. Swipes, air samples, and liquid samples are assayed in this facility. Sealed, non-accountable quantity radioactive check sources are utilized and stored in the facility. Small quantities of radioactive laboratory waste are present in closed containers. Small quantities of dry active waste and potentially contaminated equipment may be stored in a locked cargo container that is associated with this facility, and under N-I control.
- Area 6, Building 909 is used as a warehouse; primarily for the Underground Test Area project. In general, samples and radioactive materials are not stored or used at this facility, although liquid samples may be handled and packaged for shipping.

N-I may also hold REOPs for areas of soil contamination that are being investigated or remediated by N-I.

N-I also occupies a portion of North Las Vegas Facility, Building A-2 which is used to ship and receive materials and equipment needed to support N-I projects. Radioactive materials are generally not used, stored, or handled in this facility.

3.0 HAZARD IDENTIFICATION

A hazard analysis is performed as part of the routine work planning process for N-I activities, prior to start-up of radiological work. The analysis identifies potential hazards that may be encountered during site activities, and the results of the analysis are documented in site-specific health and safety plans that are used to develop appropriate protective measures.

Radionuclides of concern vary among work sites. Most of the environmental management sites on the NNSS and Tonopah Test Range are older than 20 years. Radionuclides that may be present include, but are not limited to: aged fission products (e.g., cesium-137 and strontium-90), uranium, plutonium, and tritium.

4.0 ALARA COMMITMENT

It is the policy of N-I and N-I subcontractors to conduct investigations and remedial actions in a manner that protects the health and safety of employees, visitors, and members of the public. N-I is committed to reduce safety or health risks associated with radioactive materials and ionizing radiation to levels that are ALARA. To accomplish this:

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- No activity or operation shall be conducted unless its performance will produce a net positive benefit.
- All radiation exposures shall be kept ALARA, considering economic and societal costs.
- No individual shall receive radiation doses in excess of federal or administrative limits.

N-I maintains its own ALARA Committee and is also a participating member of the NNSC Contractors' Site-Wide ALARA Committee. The N-I ALARA Program is implemented through company procedures that assign responsibilities and establish the methods for integrating ALARA principles into work activities.

5.0 EXEMPTIONS

No exemptions to 10 CFR 835 requirements have been requested or are being sought by N-I.

6.0 IMPLEMENTATION SCHEDULE & PLAN

N-I has fully implemented the requirements of 10 CFR 835, as described in Appendix H, "Compliance Demonstration Table," of this RPP. No change to life cycle costs are anticipated as a result of this revision. A schedule and prioritization of changes is not warranted. Milestones are not warranted. N-I utilizes an NNSC-Approved RCM to implement the requirements of 10 CFR 835, as described in Appendix H of this RPP. Many requirements of the RCM are further described in local implementing procedures and technical basis documents.

7.0 SUMMARY

Various work activities are performed by N-I at the direction of the NV EM for NNSA/NFO. In its conduct of work, N-I is committed to using integrated safety management as the best method of conducting business and conducting its radiological operations in a manner that ensures the health and safety of all its employees, subcontractors, the general public, and the environment. In achieving this objective, N-I ensures that radiation exposures to its workers and the public and releases of radioactivity to the environment are maintained below regulatory limits, and ensures that every effort is taken to reduce exposures and releases to levels that are ALARA.

N-I complies with the requirements of 10 CFR 835. A detailed cross-walk of the N-I commitment to implementing the requirements of 10 CFR 835 is provided in Appendix H of this document.

**APPENDIX F
DESERT RESEARCH INSTITUTE**

1.0 SCOPE

This Appendix pertains to activities conducted by the Desert Research Institute (DRI), a nonprofit research campus of the Nevada System of Higher Education, and its subcontractors at the Nevada National Security Site (NNSS), at inactive Offsite Testing Areas, and at other locations on behalf of the U.S. Department of Energy (DOE) National Nuclear Security Administration (NNSA) Nevada Field Office (NNSA/NFO); and for the Yucca Mountain Office of Repository Development; and for activities at the inactive Nevada Offsite Test Areas for DOE Office of Legacy Management. The radiological activities conducted by DRI personnel supporting NNSA and non-NNSA projects at its facilities located in Las Vegas and Reno are not within the scope of this appendix, but are covered under the regulations stated in the Radioactive Material License issued to the University of Nevada, Reno (UNR) by the state of Nevada Radiation Control Program, Bureau of Health Care Quality and Compliance, Nevada Department of Health and Human Services. In addition, DRI's use of radioactive materials or radioactive sealed sources on DOE sites similarly falls under the provision of the UNR's radioactive material license and their radiation safety program.

The DRI Environmental, Health and Safety (EH&S) Office and the Office of the Executive Vice President for Research are responsible for the assurance that DRI employees are provided radiological safety training applicable to their job duties and that they participate in the radiological safety program, as required, under the rules and provisions stated in the Nevada National Security Site Radiological Control Manual (NNSS RCM), and/or as required under the conditions stated in Radioactive Material License number 16-13-0003-07 issued to UNR.

The definitions used in the NNSS Radiation Protection Program (RPP) as defined in Title 10 Code of Federal Regulations (CFR) Part 835, "Occupational Radiation Protection," Paragraph 2, "Definitions," and in the NNSS RCM are acceptable to DRI.

2.0 FACILITY DESCRIPTION

DRI works closely with the NNSA, other federal agencies, contractors, and National Weapons Laboratories on issues related to past and present testing at the NNSS and other former testing locations, at Yucca Mountain, and at other locations on behalf of DOE. In addition, DRI conducts activities on the NNSS on behalf of other agencies (e.g., National Science Foundation). Currently, DRI conducts a number of investigative programs compatible with its expertise, and within these programs, there are a number of activities applicable to the scope of this RPP. These programs include:

- Hydrologic Resource Management Program
- Environmental Restoration Project
- Waste Management Program

- Cultural Resources and Historical Preservation
- Containment Evaluation Program
- Test Control Panel and Test Readiness
- Nonproliferation and Emergency Management
- Inactive Offsite Test Areas
- Yucca Mountain
- Community Environmental Monitoring Program and other environmental monitoring off the NNSS
- Technology and Energy Development and Testing
- DOE Office of Science and National Science Foundation Research

3.0 HAZARD IDENTIFICATION

On behalf of NNSA, DRI conducts a variety of investigative studies in security and radiological controlled areas at the NNSS and the Offsites. Many of the areas where DRI conducts field studies including activities (e.g., collecting of water, soil, air particulates, and cultural and historic materials) are areas that potentially have been contaminated with radioactive materials released from prior nuclear testing. Therefore, a potential occupational safety and health risk due to direct or indirect exposure to ionizing radiation exists.

DRI's RPP objectives are to establish and maintain a radiation protection program consistent with the scope of its activities at the NNSS and to ensure that any radiological exposure is as low as reasonably achievable (ALARA). We are committed to conducting our operations in a manner that not only protects the safety and health of our employees, but also minimizes damage or loss to government- and company-owned property, and protects the environment and the public. Our ALARA objectives are met by:

- Working under site-specific health and safety plans (HASPs) that address radiological exposure (as well as other health and safety hazard) controls developed by the lead contractor for a project, or to write our own site-specific HASP when DRI is the lead organization on a project.
- Preparing this RPP and accepting relevant sections of the NNSS RCM, which provide measures to assess and report exposures, provide training requirements, and provide record-keeping requirements. The NNSS RCM also provides DRI employees the assurance that every attempt has been made to define the appropriate approach to avoid a radiation exposure as well as to define the regulatory limitations and requirements to perform their work safely.
- Adopting the radiation safety policies and procedures outlined in UNR's Radiation Safety Manual.

Unless specifically addressed in subsequent sections, many of the radiological protective services required by 10 CFR 835 are provided by the Radiological Safety Prime Contractor (RSPC). It is the responsibility of the DRI EH&S Director/Radiological Control Manager to ensure that DRI employees comply with the conditions established by the RSPC for these services.

4.0 ALARA COMMITMENT

It is DRI's policy to conduct all operations and research in a manner protective of the health and safety of employees, visitors, and members of the public, as well as of property and the environment. As part of that policy, DRI follows sound radiological safety practices to ensure that potential safety and health risks associated with exposure to ionizing radiation are reduced to ALARA.

Elements of DRI's ALARA efforts include:

- The requirement for DRI employees to receive radiation safety training and education commensurate to the work conducted.
- The preparation of written procedures and protocols.
- The review of radiation safety protocols involving the NNSC Contractors' Site Wide ALARA Committee (SWAC), the Radiological Control Managers' Council, and/or the UNR Radiation Safety Committee (RSC), as appropriate.
- The maintenance of radiation safety records.

In planning an operation involving the use of radioactive material, the use of radioactive sealed sources, or activities involving the disturbance of radiological contaminated lands and waters, the following ALARA principles are to be addressed:

- Eliminating, to the extent possible, the necessity of an exposure to radioactive material by the substitution of other technologies or materials
- Use of suitable containment, ventilation, and processing
- Eliminating or reducing the time spent in the vicinity of a radiation source
- Performing work activities in such a manner that the source potential of the radiation field is at maximal distance
- Use of shielding between the worker and the radiation source

DRI is also represented at the NNSC Contractors' SWAC, the Radiological Control Managers' Council, and the UNR RSC meetings.

5.0 EXCLUSIONS

DRI's activities involving radioactive materials outside of NNSA/NFO projects and DRI's use of radioactive materials including sealed sources on NNSA/NFO projects fall under UNR's radioactive materials license number 16-13-0003-07 issued by the State of Nevada, and are therefore excluded (§835.1(b) (1)).

On occasion, DRI may conduct radioactive material transportation operations on the NNSS which requires the use of exclusion 10 CFR 835.1(b)(4). For offsite shipments (leaving the NNSS) and for on-site transportation (within the boundaries of the NNSS), DRI will adhere to U.S. Department of Transportation requirements. Shipping papers for either scenario are prepared for DRI personnel by the UNR Radiation Safety Office.

6.0 SUMMARY

DRI is in compliance with applicable sections of 10 CFR 835 and the UNR Radioactive Materials License.

**APPENDIX G
WSI NEVADA**

1.0 SCOPE

WSI Nevada (WSI-NV) is a subsidiary of the G4S Government Solutions, a worldwide security and investigation corporation. WSI-NV provides security services to the U.S. Department of Energy (DOE) at the Nevada National Security Site (NNSS) and DOE-affiliated operations within Las Vegas, Nevada. WSI-NV provides security support operations through a variety of interagency agreements relative to underground tests, emergencies, and other related functional operations.

It is the policy of WSI-NV, its subcontractors, and vendors to conduct its radiological operations in a manner that ensures the health and safety of all its employees, contractors, and the general public. In achieving this objective, WSI-NV shall ensure that radiation exposures to its workers and the public and releases of radioactivity to the environment are maintained below regulatory limits and deliberate efforts are taken to further reduce exposures and releases as low as reasonably achievable (ALARA). WSI-NV is fully committed to implementing a radiological control program of the highest quality that consistently reflects this policy. Additionally, WSI-NV is committed to using integrated safety management as the best method of conducting business and supports implementation of the DOE Policy DOE P 450.4A, "Integrated Safety Management Policy."

WSI-NV has approved the DOE/NV/25946--801 Revision 2, "Nevada National Security Site Radiological Control Manual," (NNSS RCM), and has implemented the articles that are applicable to WSI-NV operations. When WSI-NV performs work for other contractors, WSI-NV abides by the safety and radiological requirements established and implemented by the other contractor.

2.0 ACTIVITIES

WSI-NV conducts the following activities that are not delineated in the NNSS RCM.

- Radiological Emergencies
Description: When employed, WSI-NV will provide onsite security support for the Nuclear Emergency Support Team, Accident Response Group, and Federal Radiological Monitoring and Assessment Center.

- Access Control, Device Assembly Facility (DAF)
Description: WSI-NV employees will operate the x-ray system as part of the access control plans for the DAF. The x-ray source is permanently mounted inside of a lead-lined cabinet, eliminating the potential for exposure except for when an access panel or door is opened.

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- Portal Monitor Testing, DAF
Description: WSI-NV Protective Force (Radiological Worker I or Radiological Worker II trained) are required to test special nuclear material detectors in the course of their normal duties using sealed radioactive sources.
- DAF Explosive Detectors
Description: The Technical and Information Services Division, Electronic Systems Technicians (Radiological Worker I trained) are required to perform operational checks, preventive and corrective maintenance, periodic modifications, and system upgrades of the explosives detectors. Work will be performed in a Radioactive Material Area, if required.

3.0 ALARA COMMITMENT

WSI-NV is fully committed to keeping radiation exposures to WSI-NV personnel ALARA. It is the policy of WSI-NV that employees practice ALARA principles in the conduct of day-to-day operations and adhere to the provisions of Title 10 Code of Federal Regulations (CFR) Part 835, "Occupational Radiation Protection," as defined by Appendix H, "Compliance Demonstration Table," of this Radiation Protection Program. Radiological safety training is the primary mechanism by which the concept of maintaining personnel radiation dose equivalents ALARA is passed on to the individual. WSI-NV Environment, Safety & Health (ES&H) personnel monitor measurements of occupational radiation dose to verify and document that doses are being maintained ALARA.

The WSI-NV ALARA Program is implemented through company procedure and Memorandums of Understanding. This procedure assigns responsibilities and establishes the methods for integrating ALARA principles into work activities. The WSI-NV ES&H personnel review all plans for operations that may require WSI-NV personnel to be exposed to ionizing radiation.

The potential for exposure of WSI-NV personnel to ionizing radiation is extremely low. WSI-NV ES&H personnel participate in the NNSS Contractors' Site-Wide ALARA Committee (SWAC) to affect their NNSS ALARA Program. Any WSI-NV activity that has the potential to exceed NNSS administrative limits shall be reviewed by the SWAC before being instituted. The minutes of these meetings constitute the record of the WSI-NV ALARA Program elements.

4.0 SUMMARY

WSI-NV complies with the requirements of 10 CFR 835. The summary of WSI-NV's commitment to implementing the requirements of 10 CFR 835 is provided in Appendix H of this document, with reference to the NNSS RCM. When WSI-NV performs work for other contractors, WSI-NV abides by the safety and radiological requirements established and implemented by the other contractor.

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**APPENDIX H
COMPLIANCE DEMONSTRATION TABLE**

Title 10 Code of Federal Regulations (CFR) Part 835, "Occupational Radiation Protection" Requirement	NATIONAL SECURITY TECHNOLOGIES Appendix A	LAWRENCE LIVERMORE NATIONAL LABORATORY Appendix B	LOS ALAMOS NATIONAL LABORATORY Appendix C	SANDIA NATIONAL LABORATORIES Appendix D	NAVARRO-INTERA Appendix E	DESERT RESEARCH INSTITUTE Appendix F	WSI NEVADA Appendix G
	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference

<p>A-General Provisions</p> <p>835.1 Scope.</p> <p>835.1(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.</p>	<p>NNSS RPP Narrative Sections 1.0 Purpose & Summary, 2.0 Commitment, and 3.0 Scope</p>	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2
<p>835.1(b) Exclusion. Except as provided in paragraph (c) of this section, the requirements in this part do not apply to:</p> <p>(1) Activities that are regulated through a license by the Nuclear Regulatory Commission or a State under an Agreement with the Nuclear Regulatory Commission, including activities certified by the Nuclear Regulatory Commission under section 1701 of the Atomic Energy Act;</p> <p>(2) Activities conducted under the authority of the Deputy Administrator for Naval Reactors, as described in Pub. L. 98-525 and 106-65;</p> <p>(3) Activities conducted under the Nuclear Explosive and Weapons Surety Program relating to the prevention of accidental or unauthorized nuclear detonations;</p>	<p>NNSS RPP Narrative Section 3.0 Scope and Appendix A, Section 6.0 Exclusions</p>	Same as Column 2 and LLNL Appendix B, Section 5.0 Exclusions	Same as Column 2 and LANL Appendix C, Section 5.0 Exclusions	Same as Column 2 and SNL Appendix D, Sections 1.0 Scope and 5.0 Exclusions	The excluded activities are not within the scope of N-I work.	Same as Column 2 and DRI Appendix F, Section 5.0 Exclusions	Same as Column 2

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**APPENDIX H
COMPLIANCE DEMONSTRATION TABLE**

Title 10 Code of Federal Regulations (CFR) Part 835, "Occupational Radiation Protection" Requirement	NATIONAL SECURITY TECHNOLOGIES Appendix A	LAWRENCE LIVERMORE NATIONAL LABORATORY Appendix B	LOS ALAMOS NATIONAL LABORATORY Appendix C	SANDIA NATIONAL LABORATORIES Appendix D	NAVARRO-INTERA Appendix E	DESERT RESEARCH INSTITUTE Appendix F	WSI NEVADA Appendix G
	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
<p>(4) DOE activities conducted outside the United States on territory under the jurisdiction of a foreign government to the extent governed by occupational radiation protection requirements agreed to between the United States and the cognizant government.</p> <p>(5) Background radiation, radiation doses received as a patient for the purposes of medical diagnosis or therapy, or radiation doses received from voluntary participation as a subject in medical research programs; or</p> <p>(6) Radioactive material on or within material, equipment, and real property which is approved for release when the radiological conditions of the material, equipment, and real property have been documented to comply with the criteria for release set forth in a DOE authorized limit which has been approved by a Secretarial Officer in consultation with the Chief Health, Safety and Security Officer.</p> <p>(7) Radioactive material transportation not performed by DOE or a DOE contractor.</p>							
835.1(c) Occupational doses received as a result of excluded activities and radioactive material transportation, listed in paragraphs (b)(1) through (b)(4)	NNSS RPP Narrative Section 3.0 Scope	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2. Emergency exposures and planned special exposures are not	Same as Column 2	Same as Column 2

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**APPENDIX H
COMPLIANCE DEMONSTRATION TABLE**

Title 10 Code of Federal Regulations (CFR) Part 835, "Occupational Radiation Protection" Requirement	NATIONAL SECURITY TECHNOLOGIES Appendix A	LAWRENCE LIVERMORE NATIONAL LABORATORY Appendix B	LOS ALAMOS NATIONAL LABORATORY Appendix C	SANDIA NATIONAL LABORATORIES Appendix D	NAVARRO-INTERA Appendix E	DESERT RESEARCH INSTITUTE Appendix F	WSI NEVADA Appendix G
	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
and b(7) of this section, shall be included to the extent practicable when determining compliance with the occupational dose limits at §§ 835.202 and 835.207, and with the limits for the embryo/fetus at § 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.					within the scope of N-I work.		
835.1(d) The requirements in subparts F and G of this part do not apply to radioactive material transportation by DOE or a DOE contractor conducted: (1) Under the continuous observation and control of an individual who is knowledgeable of and implements required exposure control measures, or (2) In accordance with Department of Transportation regulations or DOE orders that govern such movements.	NNSS RPP Narrative Section 3.0 Scope	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2
835.2 Definitions.	NNSS RCM, Glossary	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2
835.3 General rule. 835.3(a) No person or DOE personnel shall take or cause to be taken any action inconsistent with the requirements of: (1) This part; or	NNSS RPP Narrative Section 6.0 Responsibilities.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2

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**APPENDIX H
COMPLIANCE DEMONSTRATION TABLE**

Title 10 Code of Federal Regulations (CFR) Part 835, "Occupational Radiation Protection" Requirement	NATIONAL SECURITY TECHNOLOGIES Appendix A	LAWRENCE LIVERMORE NATIONAL LABORATORY Appendix B	LOS ALAMOS NATIONAL LABORATORY Appendix C	SANDIA NATIONAL LABORATORIES Appendix D	NAVARRO-INTERA Appendix E	DESERT RESEARCH INSTITUTE Appendix F	WSI NEVADA Appendix G
	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
(2) Any program, plan, schedule, or other process established by this part.							
835.3(b) With respect to a particular DOE activity, contractor management shall be responsible for compliance with the requirements of this part.	NNSS RPP Narrative Section 6.0 Responsibilities	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2
835.3(c) Where there is no contractor for a DOE activity, DOE shall ensure implementation of and compliance with the requirements of this part	NNSS RPP Narrative Section 6.0 Responsibilities	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2
835.3(d) Nothing in this part shall be construed as limiting actions that may be necessary to protect health and safety.	NNSS RPP Narrative Section 6.0 Responsibilities	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2
835.3(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.	<p>NNSS RCM 134.02. The TO RadCon Manager may extend the time interval by a period not to exceed 30 days.</p> <p>NNSS RCM 613.3. b. The 24-month period may be extended by the TO RadCon Manager, not to exceed 30 days, to meet scheduling needs.</p> <p>NNSS RCM 431.3 The requirements for inventory and</p>	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2

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**APPENDIX H
COMPLIANCE DEMONSTRATION TABLE**

Title 10 Code of Federal Regulations (CFR) Part 835, "Occupational Radiation Protection" Requirement	NATIONAL SECURITY TECHNOLOGIES Appendix A Implementation Reference	LAWRENCE LIVERMORE NATIONAL LABORATORY Appendix B Implementation Reference	LOS ALAMOS NATIONAL LABORATORY Appendix C Implementation Reference	SANDIA NATIONAL LABORATORIES Appendix D Implementation Reference	NAVARRO-INTERA Appendix E Implementation Reference	DESERT RESEARCH INSTITUTE Appendix F Implementation Reference	WSI NEVADA Appendix G Implementation Reference
	leak testing of accountable sealed sources are: f. The TO RadCon Manager may extend the time interval in Article 431.3a and 3b by a period not to exceed 30 days.						
<p>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, or other conventional units, such as, dpm, dpm/100 cm² or mass units. The SI units, Becquerel (Bq), gray (Gy), and sievert (Sv), may be provided parenthetically for reference with scientific standards.</p>	<p>NSS RCM 713.3 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, or other conventional units, such as, dpm, dpm/100 cm² or mass units. The Systems international (SI) units, becquerel (Bq), gray (Gy), and sievert (Sv), may only be provided parenthetically for reference with scientific standards, except when required by regulations (e.g., 49 CFR).</p>	Same as Column 2	Same as Column 2	Radiological control records for SNL activities at NNSS are prepared and maintained by the RSPC.	Same as Column 2	Not a DRI activity. Records containing radiological units are generated for DRI by the RSPC (or the University of Nevada, Reno [UNR] Radiation Safety Office [RSO] for excluded activities).	Not a WSI-NV activity. Radiological control records for WSI-NV are prepared and maintained by the RSPC or TO that has radiological control responsibilities for an activity. Records containing radiological units under the RPP are generated by the RSPC.

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COMPLIANCE DEMONSTRATION TABLE**

Title 10 Code of Federal Regulations (CFR) Part 835, "Occupational Radiation Protection" Requirement	NATIONAL SECURITY TECHNOLOGIES Appendix A	LAWRENCE LIVERMORE NATIONAL LABORATORY Appendix B	LOS ALAMOS NATIONAL LABORATORY Appendix C	SANDIA NATIONAL LABORATORIES Appendix D	NAVARRO-INTERA Appendix E	DESERT RESEARCH INSTITUTE Appendix F	WSI NEVADA Appendix G
	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
<p>Subpart B - Management and Administrative Requirements</p> <p>835.101 Radiation protection programs.</p> <p>101(a) A DOE activity shall be conducted in compliance with a documented radiation protection program (RPP) as approved by the DOE.</p>	<p>NNSS RCM 112.1.02. Any DOE activity as defined in 10 CFR 835 shall be planned and conducted in compliance with a documented RPP as approved by NNSA.</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>
<p>101(b) The DOE may direct or make modifications to a RPP.</p>	<p>NNSS RCM 157.5. The NNSA/NSO may direct modifications to an RPP.</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>
<p>101(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.</p>	<p>NNSS RCM 157.2. The content of each RPP shall:</p> <p>d. Be commensurate with the nature of the activities performed and shall include formal plans and measures for applying the ALARA process to occupational exposure.</p> <p>NNSS RPP Narrative Section 7.0 ALARA Program</p>	<p>Same as Column 2 and LLNL Appendix B, Section 4.0 ALARA Commitment</p>	<p>Same as Column 2 and LANL Appendix C, Section 4.0 ALARA Commitment</p>	<p>Same as Column 2 and SNL Appendix D, Section 4.0 ALARA Commitment</p>	<p>Same as Column 2 and N-I Appendix E, Sections 1.0 Scope & Policy Statements and 4.0 ALARA Commitment</p>	<p>Same as Column 2 and DRI Appendix F, Sections 3.0 Hazard Identification and 4.0 ALARA Commitment</p>	<p>Same as Column 2 and WSI-NV Appendix G, Sections 1.0 Scope and 3.0 ALARA Commitment</p>
<p>101(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</p>	<p>NNSS RCM 157.2. The content of each RPP shall:</p> <p>c. Specify the</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2 and See SNL Appendix D, Section 1.0 Scope</p>	<p>Same as Column 2 and N-I Appendix E, Section 1.0 Scope & Policy Statements</p>	<p>Same as Column 2 and See DRI Appendix F, Section 1.0 Scope</p>	<p>Same as Column 2 and See WSI-NV Appendix G, Sections 1.0 Scope and 2.0 Activities</p>

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<p>§ 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.</p>	<p>existing and/or anticipated operational tasks that are intended to be within the scope of the RPP.</p> <p>NNSS RCM 157.3. An update of the RPP shall be submitted to NNSA/NSO:</p> <p>b. Before the initiation of a task not within the scope of the RPP. Except as provided in Article 157.3.a.(1), any task outside the scope of an RPP shall not be initiated until an update of the RPP is approved by NNSA/NSO.</p>						
<p>101(e) The content of the RPP shall address, but shall not necessarily be limited to, each requirement in this part.</p>	<p>NNSS RCM 157.2. The content of each RPP shall:</p> <p>a. Address, but shall not necessarily be limited to, each requirement in 10 CFR 835.</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>
<p>101(f) The RPP shall include plans, schedules, and other measures for achieving compliance with regulations of this part. Unless otherwise</p>	<p>NNSS RCM 157.2. The content of each RPP shall:</p> <p>b. Include plans,</p>	<p>Same as Column 2 and LLNL Appendix B, Section 6.0 Implementation Plan</p>	<p>Same as Column 2 and LANL Appendix C, Section 6.0 Implementation Schedule</p>	<p>Same as Column 2 and SNL Appendix D, Section 6.0 Implementation Schedule</p>	<p>Same as Column 2 and N-I Appendix E, Section 6.0 Implementation Schedule & Plan</p>	<p>Same as Column 2 and DRI Appendix F, Section 6.0 Summary</p>	<p>Same as Column 2 and WSI Appendix G, Section 4.0 Summary</p>

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	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
specified in this part, compliance with the amendments to this part, published on June 8, 2007 shall be achieved no later than July 9, 2010.	schedules, and other measures for achieving compliance with the regulations within 10 CFR 835. NNSR RPP Appendix A, Section 7.0 Implementation Schedule and Plan						
101(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.	NNSR RCM 157.3. An update of the RPP shall be submitted to NNSA/NSO: a. Whenever a change or addition to the RPP is made. b. Before the initiation of a task not within the scope of the RPP. c. Within 180 days of the effective date of any modification to 10 CFR 835.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2
101(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	NNSR RCM 157.3 An update of the RPP shall be submitted to NNSA/NSO: a. Whenever a change or addition to the RPP is made.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2

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	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
not be implemented without submittal to and approval by the Department.	(1) Changes, additions, or updates to the RPP may become effective without prior approval of NNSA/NSO, as appropriate, only if the changes do not decrease the effectiveness of the RPP and the RPP, as changed, continues to meet the requirements of 10 CFR 835. (2) Proposed changes that decrease the effectiveness of the RPP shall not be implemented without submittal to and subsequent approval by NNSA/NSO.						
101(i) An initial RPP or an update shall be considered approved 180 days after its submission unless rejected by DOE at an earlier date.	NNSC RCM 157.4. An initial RPP or an update shall be considered approved 180 days after its submission unless rejected by NNSA/NSO at an earlier date.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2
835.102 Internal audits. Internal audits of the radiation	NNSC RCM 134.01. Internal audits of the radiological control	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2

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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.	program shall be conducted such that over a 36-month period, all functional elements of 10 CFR 835 are assessed for program performance, applicability, content, and implementation.						
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.	NNSS RCM 142.3. Individuals responsible for developing and implementing measures necessary for ensuring compliance with the requirements of 10 CFR 835 shall have the appropriate education, training, and skills to discharge these responsibilities.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2
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.	NNSS RCM 113.3. Written procedures shall be developed and implemented as necessary to ensure compliance with 10 CFR 835.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2

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Subpart C - Standards for Internal and External Exposure 835.201 [Reserved]							
835.202 Occupational Dose Limits for General Employees. 202(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 of 5 rems (0.05 Sv); (2) The sum of the equivalent dose to the whole body for external exposures and the committed equivalent dose to any organ or tissue other than the skin or the lens of the eye of 50 rems (0.5 Sv); (3) An equivalent dose-to the lens of the eye of 15 rems (0.15 Sv); and (4) The sum of the equivalent dose to the skin or to any extremity for external exposures and the committed equivalent dose to the skin or to any extremity of 50 rems (0.5 Sv).	NNSS RCM 213.1 Except for emergency exposures authorized according to 10 CFR 835.1302, the occupational dose received by general employees shall be controlled such that the following limits are not exceeded in a year: (a) A TED of 5 rem (0.05 Sv) (b) The sum of the equivalent dose to the whole body for external exposures and the committed equivalent dose to any organ or tissue other than the skin or the lens of the eye of 50 rem (0.5 Sv) (c) An equivalent dose to the lens of the eye of 15 rem (0.15 Sv) (d) The sum of the equivalent dose to the skin or to any extremity for external	Same as Column 2	DRI has adopted the UNR Radiation Safety Manual (RSM). Reference UNR RSM Policy III: Occupational Dose Limits and Contamination Standards.	Same as Column 2			

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	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
	exposures and the committed equivalent dose to the skin or to any extremity of 50 rem (0.5 Sv). NNSC RCM 213.3. Planned special exposures are beyond the scope of operations conducted by NNSA/NSO.						
202(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.	NNSC RCM 213.1.03 and .04. The TED during a year shall be determined by summing the effective dose from external exposures and the committed effective dose (CED) from intakes during the year and shall be used when demonstrating compliance with Table 2-1 dose limits. All occupational doses received during the current year except emergency exposures authorized according to 10 CFR 835.1302 shall be included.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2. N-I utilizes the dosimetry services provided by the RSPC, including record retention and reporting.	Written dose assessments for DRI personnel are determined by the RSPC.	By written agreement, dose assessments are determined by the RSPC for WSI-NV.

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	NNSC RCM 213.3. Planned special exposures are beyond the scope of operations conducted by NNSA/NSO.						
202(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.	NNSC RCM Table 2-1 Notes: 3. 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.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2. N-I utilizes the dosimetry services provided by the RSPC, including record retention and reporting.	Same as Column 2 Regarding dually badged employees, UNR subtracts background via subtraction of dose recorded on a control badge.	Same as Column 2
835.203 Combining internal and external equivalent doses. 203(a) The total effective dose during a year shall be determined by summing the effective dose from external exposures and the committed effective dose from intakes during the year.	NNSC RCM 213.1.03. The TED during a year shall be determined by summing the effective dose from external exposures and the committed effective dose (CED) from intakes during the year and shall be used when demonstrating compliance with Table 2-1 dose limits.	Dosimetry services are provided to LLNL by the RSPC per NNSC RCM 141.3.e.	Dosimetry services are provided to LANL by the RSPC per NNSC RCM 141.3.e.	Same as Column 2	Same as Column 2. NNSC RCM 141.3. The RSPC shall provide the following: e. External and internal dosimetry services N-I utilizes the dosimetry services provided by the RSPC, including record retention and reporting.	Not applicable to DRI. Dosimetry services, including the calculation of TED, are provided to DRI by the RSPC per NNSC RCM 141.3.e.	By written agreement, dosimetry services are provided to WSI-NV by the RSPC per NNSC RCM 141.3.e.

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203(b) Determinations of the effective dose shall be made using the radiation and tissue weighting factor values provided in § 835.2.	NNSS RCM 213.5.02. Determinations of the effective dose shall be made using the radiation and tissue weighting factors provided in 10 CFR 835.2, "Definitions," under Radiation Weighting Factors.	Dosimetry services are provided to LLNL by the RSPC per NNSS RCM 141.3.e.	Dosimetry services are provided to LANL by the RSPC per NNSS RCM 141.3.e.	Same as Column 2	Same as Column 2. N-I utilizes the dosimetry services provided by the RSPC, including record retention and reporting.	Dosimetry services are provided to DRI by the RSPC per NNSS RCM 141.3.e.	By written agreement, dosimetry services are provided to WSI-NV by the RSPC per NNSS RCM 141.3.e.
<p>835.204 Planned Special Exposures.</p> <p>204(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:</p> <p>(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;</p> <p>(2) The contractor management (and employer, if the employer is not the contractor) specifically requests the planned special exposure, in writing; and</p> <p>(3) Joint written approval is received from the appropriate DOE Headquarters program</p>	NNSS RCM 213.3. Planned special exposures are beyond the scope of operations conducted by NNNSA/NSO.	Planned special exposures are beyond the scope of operations conducted by LLNL at the NNSS. LLNL will not conduct a planned special exposure at the NNSS.	This is outside the scope of the LANL Radiological Control Program. Planned special exposures are beyond the scope of operations conducted by LANL at the NNSS. LANL will not conduct a planned special exposure at the NNSS.	Same as Column 2	Same as Column 2	The contents of this section are not applicable to DRI as there are no circumstances for planned special exposures to employees	The contents of this section are not applicable to WSI-NV as there are no circumstances for planned special exposures to employees.

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	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
office and the Secretarial Officer responsible for environment, safety and health matters.							
204(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.	NNSS RCM 213.3. Planned special exposures are beyond the scope of operations conducted by NNSA/NSO.	Planned special exposures are beyond the scope of operations conducted by LLNL at the NNSS. LLNL will not conduct a planned special exposure at the NNSS.	This is outside the scope of the LANL Radiological Control Program. Planned special exposures are beyond the scope of operations conducted by LANL at the NNSS. LANL will not conduct a planned special exposure at the NNSS.	Same as Column 2	Same as Column 2	The contents of this section are not applicable to DRI as there are no circumstances for planned special exposures to employees.	The contents of this section are not applicable to WSI-NV as there are no circumstances for planned special exposures to employees.
204(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).	NNSS RCM 213.3. Planned special exposures are beyond the scope of operations conducted by NNSA/NSO.	Planned special exposures are beyond the scope of operations conducted by LLNL at the NNSS. LLNL will not conduct a planned special exposure at the NNSS.	This is outside the scope of the LANL Radiological Control Program. Planned special exposures are beyond the scope of operations conducted by LANL at the NNSS. LANL will not conduct a planned special exposure at the NNSS.	Same as Column 2	Same as Column 2	The contents of this section are not applicable to DRI as there are no circumstances for planned special exposures to employees.	The contents of this section are not applicable to WSI-NV as there are no circumstances for planned special exposures to employees.
204(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;	NNSS RCM 213.3. Planned special exposures are beyond the scope of operations conducted by NNSA/NSO.	Planned special exposures are beyond the scope of operations conducted by LLNL at the NNSS. LLNL will not conduct a planned special	This is outside the scope of the LANL Radiological Control Program. Planned special exposures are beyond the scope of operations conducted by LANL	Same as Column 2	Same as Column 2	The contents of this section are not applicable to DRI as there are no circumstances for planned special exposures to employees.	The contents of this section are not applicable to WSI-NV as there are no circumstances for planned special exposures to employees.

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	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
(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.		exposure at the NNSS.	at the NNSS. LANL will not conduct a planned special exposure at the NNSS.				
204(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).	NNSS RCM 213.3. Planned special exposures are beyond the scope of operations conducted by NNSA/NSO.	Planned special exposures are beyond the scope of operations conducted by LLNL at the NNSS. LLNL will not conduct a planned special exposure at the NNSS.	This is outside the scope of the LANL Radiological Control Program. Planned special exposures are beyond the scope of operations conducted by LANL at the NNSS. LANL will not conduct a planned special exposure at the NNSS.	Same as Column 2	Same as Column 2	The contents of this section are not applicable to DRI as there are no circumstances for planned special exposures to employees.	The contents of this section are not applicable to WSI-NV as there are no circumstances for planned special exposures to employees.
204(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.	NNSS RCM 213.3. Planned special exposures are beyond the scope of operations conducted by NNSA/NSO.	Planned special exposures are beyond the scope of operations conducted by LLNL at the NNSS. LLNL will not conduct a planned special exposure at the NNSS.	This is outside the scope of the LANL Radiological Control Program. Planned special exposures are beyond the scope of operations conducted by LANL at the NNSS. LANL will not conduct a planned special exposure at the NNSS.	Same as Column 2	Same as Column 2	The contents of this section are not applicable to DRI as there are no circumstances for planned special exposures to employees.	The contents of this section are not applicable to WSI-NV as there are no circumstances for planned special exposures to employees.

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	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
<p>835.205 Determination of compliance for non-uniform exposure of the skin.</p> <p>205(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.</p>	<p>NNSS RCM Appendix 2C, Non-Uniform Exposure Of The Skin.</p> <p>Non-uniform exposures of the skin from X rays, beta radiation, and radioactive materials on the skin shall be assessed and recorded as specified in the following table. (Table 2C-1).</p>	<p>Dosimetry services are provided to LLNL by the RSPC.</p>	<p>Dosimetry services are provided to LANL by the RSPC.</p>	<p>Same as Column 2</p>	<p>Same as Column 2. N-I utilizes the dosimetry services provided by the RSPC, including record retention and reporting.</p>	<p>Dosimetry services are provided to DRI by the RSPC.</p>	<p>By written agreement, dosimetry services are provided to WSI-NV by the RSPC.</p>
<p>205(b) For purposes of demonstrating compliance with § 835.202(a)(4), assessments shall be conducted as follows:</p> <p>(1) Area of skin irradiated is 100 cm² or more. The non-uniform equivalent dose received during the year shall be averaged over the 100 cm² of the skin receiving the maximum dose, added to any uniform equivalent dose also received by the skin, and recorded as the equivalent dose to any extremity or skin for the year.</p> <p>(2) Area of skin irradiated is 10 cm² or more, but is less than 100 cm². The non-uniform equivalent dose (H) to the irradiated area received during the year shall be added to any uniform equivalent dose also received by the skin</p>	<p>NNSS RCM Appendix 2C, Table 2C-1.</p>	<p>Dosimetry services are provided to LLNL by the RSPC.</p>	<p>Dosimetry services are provided to LANL by the RSPC.</p>	<p>Same as Column 2</p>	<p>Same as Column 2. NNSS RCM 141.3. The RSPC shall provide the following: e. External and internal dosimetry services N-I utilizes the dosimetry services provided by the RSPC, including record retention and reporting.</p>	<p>Dosimetry services are provided to DRI by the RSPC.</p>	<p>By written agreement, dosimetry services are provided to WSI-NV by the RSPC.</p>

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	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
<p>and recorded as the equivalent dose to any extremity or skin for the year. H is the equivalent dose averaged over the 1 cm² of skin receiving the maximum absorbed dose, D, reduced by the fraction f, which is the irradiated area in cm² divided by 100 cm² (i.e., H=fD). In no case shall a value of f less than 0.1 be used.</p> <p>(3) Area of skin irradiated is less than 10 cm². The non-uniform equivalent dose shall be averaged over the 1 cm² of skin receiving the maximum dose. This equivalent dose shall:</p> <p>(i) Be recorded in the individual's occupational exposure history as a special entry; and</p> <p>(ii) Not be added to any other equivalent dose to any extremity or skin-for the year.</p>							
<p>835.206 Limits for the embryo/fetus.</p> <p>206(a) The equivalent dose 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 Sv).</p>	<p>NNSS RCM 215.1 For a declared pregnant worker who chooses to continue working as a radiological worker:</p> <p>a. The equivalent dose limit for the embryo/fetus from conception to birth (entire gestation period) is 500 mrem.</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>As part of our ALARA commitment, DRI has adopted the policies and procedures outlined in the UNR RSM. Reference UNR RSM Policy III.</p> <p>The allowed occupational dose to the declared pregnant worker/fetus may not exceed 0.5 rem/ yr (Nevada Administrative Code</p>	<p>Same as Column 2</p>

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COMPLIANCE DEMONSTRATION TABLE**

Title 10 Code of Federal Regulations (CFR) Part 835, "Occupational Radiation Protection" Requirement	NATIONAL SECURITY TECHNOLOGIES Appendix A	LAWRENCE LIVERMORE NATIONAL LABORATORY Appendix B	LOS ALAMOS NATIONAL LABORATORY Appendix C	SANDIA NATIONAL LABORATORIES Appendix D	NAVARRO-INTERA Appendix E	DESERT RESEARCH INSTITUTE Appendix F	WSI NEVADA Appendix G
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						NAC 459.333, "Dose Equivalents To Embryos").	
206(b) Substantial variation above a uniform exposure rate that would satisfy the limits provided in § 835.206(a) shall be avoided.	NNSS RCM 215.1 For a declared pregnant worker who chooses to continue working as a radiological worker: b. Measures shall be taken to avoid substantial variation above the uniform exposure rate necessary to meet the 500 mrem limit for the gestation period.	Same as Column 2	As part of our ALARA commitment, DRI has adopted the policies and procedures outlined in the UNR RSM. Reference UNR RSM Policy III. UNR has set the administrative limit to the fetus as 50 mrem/yr (10% of the regulatory limit).	Same as Column 2			
206(c) If the equivalent dose to the embryo/fetus is determined to have already exceeded 0.5 rem (0.005 Sv) 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.	NNSS RCM 215.2. If the equivalent dose to the embryo/fetus is determined to have already exceeded 500 mrem when a worker notifies her employer of her pregnancy, the worker shall not be assigned to tasks where additional occupational radiation exposure is likely during the remainder of the gestation period.	Same as Column 2	As part of our ALARA commitment, DRI has adopted the policies and procedures outlined in the UNR RSM. Reference UNR RSM Policy III. Dose to the fetus may not exceed 0.5 rem and dose to a pregnant worker shall not exceed 0.01 rem/month or 0.1 rem/yr. Reassignment will take place if these limits are likely to be exceeded during the	Same as Column 2			

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						remainder of the gestation period.	
<p>835.207 Occupational Dose Limits for Minors.</p> <p>The dose limits for minors occupationally exposed to radiation and/or radioactive materials at a DOE activity are 0.1 rem (0.001 Sv) total effective dose in a year and 10 percent of the occupational dose limits specified at § 835.202(a)(3) and (a)(4).</p>	<p>NNSS RCM Table 2-1, Item 6.</p>	<p>Same as Column 2</p>	<p>As part of our ALARA commitment, DRI has adopted the policies and procedures outlined in the UNR RSM. Reference UNR RSM Policy III. Exposures to minors shall not exceed 0.01 rem/month or 0.1 rem/yr.</p>	<p>Not applicable to WSI-NV. WSI-NV does not employ minors.</p>			
<p>835.208 Limits for Members of the Public Entering A Controlled Area.</p> <p>The total effective dose 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 Sv) in a year.</p>	<p>NNSS RCM 214. The TED limits 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.</p>	<p>Same as Column 2</p>	<p>As part of our ALARA commitment, DRI has adopted the policies and procedures outlined in the UNR RSM. Reference UNR RSM Policy III. Exposures to the public shall not exceed 0.1 rem (0.001 Sv)/yr.</p>	<p>WSI-NV complies with the site-wide guidance for public access to controlled areas, as defined by the RSPC.</p>			
<p>835.209 Concentrations of Radioactive Material in Air.</p> <p>209(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.</p>	<p>NNSS RCM 235.3. DAC values for use with Table 2-4 as found in 10 CFR 835 shall be used in the control of occupational exposure to airborne radioactive material.</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>				

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<p>209(b) The estimation of internal dose shall be based on bioassay data rather than air concentration values unless bioassay data are:</p> <p>(1) unavailable;</p> <p>(2) inadequate; or</p> <p>(3) internal dose estimates based on air concentration values are demonstrated to be as or more accurate.</p>	<p>NNSS RCM 521.2. The determination of internal dose shall be based on bioassay data rather than air concentration values unless bioassay data are:</p> <p>a. Unavailable. or</p> <p>b. Inadequate. or</p> <p>c. Internal dose estimates based on representative air concentration values are demonstrated to be as or more accurate.</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2. NNSS RCM 141.3. The RSPC shall provide the following:</p> <p>e. External and internal dosimetry services</p> <p>N-I utilizes the dosimetry services provided by the RSPC, including record retention and reporting.</p>	<p>Not applicable to DRI. Dosimetry services are provided to DRI by the RSPC.</p>	<p>Not applicable to WSI-NV. By written agreement, the RSPC provides dosimetry services to WSI-NV.</p>
<p>Subpart D - [Reserved]</p>							
<p>Subpart E-Monitoring of Individuals and Areas.</p> <p>835.401 General Requirements.</p> <p>401(a) Monitoring of individuals and areas shall be performed to:</p> <p>(1) Demonstrate compliance with the regulations in this part;</p> <p>(2) Document radiological conditions;</p> <p>(3) Detect changes in radiological conditions;</p> <p>(4) Detect the gradual buildup of radioactive material;</p> <p>(5) Verify the effectiveness of</p>	<p>NNSS RCM 551.1. Monitoring of individuals and areas shall be performed to:</p> <p>a. Demonstrate compliance with the regulations in 10 CFR 835, Subpart E, "Monitoring of Individuals and Areas."</p> <p>b. Document radiological conditions.</p>	<p>The NNSS RSPC provides trained and qualified Radiological Control Technicians (RCTs) to perform and document radiological surveys per NNSS RSPC procedures compliant with 10 CFR 835.</p> <p>LLNL determines radiological survey parameters.</p>	<p>The NNSS RSPC provides trained and qualified Radiological Control Technicians (RCTs) to perform and document radiological surveys per NNSS RSPC procedures compliant with 10 CFR 835.</p> <p>LANL determines radiological survey parameters.</p>	<p>Workplace monitoring for Sandia activities provided by RSPC.</p>	<p>Same as Column 2</p>	<p>Not a DRI activity. These activities are performed by the RSPC. Where DRI has the lead responsibility for engineering and process controls, DRI will access data generated by the RSPC to determine their effectiveness. Where DRI is the lead agency on a project, DRI will access data generated by the</p>	<p>WSI-NV does not have any Radiological Areas that require monitoring. By written agreement, the RSPC provides monitoring of individuals and resulting records, surveys, and workplace monitoring.</p>

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<p>engineered and administrative controls in containing radioactive material and reducing radiation exposure; and</p> <p>(6) Identify and control potential sources of individual exposure to radiation and/or radioactive material.</p>	<p>c. Detect changes in radiological conditions.</p> <p>d. Detect the gradual buildup of radioactive material.</p> <p>e. Verify the effectiveness of engineered and administrative controls in containing radioactive material and reducing radiation exposures.</p> <p>f. Identify and control potential sources of individual exposure to radiation and/or radioactive material.</p> <p>NSS RCM 551.6 Surveys shall be performed before, during, and at the completion of work that has the potential for causing changes in radiation exposure/dose rates or contamination levels.</p> <p>NSS RCM 551.7 Survey frequencies should be established based on potential</p>					<p>RSPC to determine potential sources of exposure and will implement appropriate control measures.</p>	

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	radiological conditions, probability of change in conditions, and area occupancy factors. NNSC RCM 711.01. Radiological control records shall be maintained as necessary to document compliance with the requirements of 10 CFR 835.						
<p>401(b) Instruments and equipment used for monitoring shall be:</p> <p>(1) Periodically maintained and calibrated on an established frequency;</p> <p>(2) Appropriate for the type(s), levels, and energies of the radiation(s) encountered;</p> <p>(3) Appropriate for existing environmental conditions; and (4) Routinely tested for operability.</p>	<p>NNSC RCM 551.2 Instruments and equipment used for monitoring shall be:</p> <p>a. Periodically maintained and calibrated on an established frequency.</p> <p>b. Appropriate for the type(s), levels, and energies of radiation(s) encountered.</p> <p>c. Appropriate for existing environmental conditions.</p> <p>d. Routinely tested for operability.</p>	<p>This service is provided to LLNL by the NNSC RSPC in compliance with 10 CFR 835.</p> <p>NNSC RCM 551.2.b-d. Instruments and equipment used for monitoring shall be:</p> <p>b. Appropriate for the type(s), levels, and energies of radiation(s) encountered.</p> <p>c. Appropriate for existing environmental conditions.</p> <p>d. Routinely tested for operability.</p>	<p>The calibration and maintenance of instruments and equipment are outside the scope of the LANL Radiological Control Program. These services are provided to LANL by the NNSC RSPC in compliance with 10 CFR 835.</p> <p>Selection of instruments and equipment appropriate for the types, levels, and energies of the radiation(s) encountered, selection of instruments</p>	<p>Instruments for workplace monitoring in Sandia operations provided by RSPC.</p> <p>Responsibilities of RSPC with Sandia oversight.</p> <p>Responsibility of RSPC to determine environmental constraints of instruments being used.</p> <p>Instruments provided by RSPC and used exclusively by RSPC personnel.</p>	<p>Same as Column 2</p>	<p>Not a DRI activity. Instruments and equipment used for monitoring are provided by the RSPC and used exclusively by RSPC personnel. Therefore, it is their responsibility to determine environmental constraints of instruments being used.</p>	<p>By written agreement, the RSPC provides instruments and equipment used for monitoring. It is the responsibility of the RSPC to maintain and calibrate instruments and equipment used for monitoring, to ensure the instruments and equipment used for monitoring are appropriate for the type(s), level(s), and energies of the radiation(s) encountered, to ensure the instruments and</p>

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	<p>NNSS RCM 562.1.01. Radiological instruments shall be used only to measure the radiation for which their calibrations are valid.</p> <p>NNSS RCM 562.4. The effects of environmental conditions on an instrument, including interfering radiation, shall be known before use.</p> <p>NNSS RCM 551.4.01. Instruments used to perform radiation surveys shall be readily available and performance checked daily or before operation.</p>		<p>appropriate to environmental conditions, and routine testing for operability are LANL responsibilities.</p> <p>NNSS RCM 551.2. Instruments and equipment used for monitoring shall be:</p> <p>b. Appropriate for the type(s), levels, and energies of radiation(s) encountered.</p>				<p>equipment used for monitoring are appropriate for existing environmental conditions, and to ensure the instruments and equipment used for monitoring are routinely tested for operability.</p>
<p>835.402 Individual Monitoring.</p> <p>402(a) For the purpose of monitoring individual exposures to external radiation, personnel dosimeters shall be provided to and used by:</p> <p>(1) Radiological workers who, under typical conditions, are likely to receive one or more of the following:</p>	<p>NNSS RCM 511.1 Individual dosimetry shall be required for the following:</p> <p>a. Radiological workers who under typical conditions are likely to receive from external sources an effective dose of 100 mrem or more in a year,</p>	<p>Same as Column 2 and LLNL will have the responsibility to determine which LLNL and LLNL-Livermore personnel need Dosimetry.</p>	<p>Same as Column 2</p>	<p>Same as Column 2 and SNL-NV will have the responsibility to determine which Sandia personnel need dosimetry. Dosimeters are provided and processed by RSPC.</p>	<p>Same as Column 2</p>	<p>Same as Column 2 and Cross reference NNSS RCM 511.1.d. and Table 6-1, Item 8.</p> <p>Dosimetry will be required should DRI employees enter a High Radiation Areas. Entry into Very High Radiation Areas will not be</p>	<p>NNSS RCM 511.1.a. b. d. Individual dosimetry shall be required for the following:</p> <p>a. Radiological workers who under typical conditions are likely to receive from external sources an effective dose of 100 mrem or more in a</p>

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<p>(i) An effective dose of 0.1 rem (0.001 Sv) or more in a year;</p> <p>(ii) An equivalent dose to the skin or to any extremity of 5 rems (0.05 Sv) or more in a year;</p> <p>(iii) An equivalent dose to the lens of the eye of 1.5 rems (0.015 Sv) or more in a year;</p> <p>(2) Declared pregnant workers who are likely to receive from external sources an equivalent dose to the embryo/fetus in excess of 10 percent of the applicable limit at § 835.206(a).</p> <p>(3) Occupationally exposed minors likely to receive a dose in excess of 50 percent of the applicable limits in § 835.207 in a year from external sources;</p> <p>(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</p> <p>(5) Individuals entering a high or very high radiation area.</p>	<p>an equivalent dose to the skin or to any extremity of 5 rem or more in a year, or an equivalent dose to the lens of the eye of 1.5 rem or more in a year or greater than 10 percent of the corresponding limits specified in Table 2-1</p> <p>b. Declared pregnant workers who are expected to receive from external sources an equivalent dose of 50 mrem or more to the embryo/fetus during the gestation period</p> <p>c. Occupationally exposed minors and members of the public likely to receive an effective dose of 50 mrem or more in a year</p> <p>d. Individuals entering a High Radiation Area NNSS RCM Table 6-1 Item 8. Entry into Very High Radiation Areas Not Permitted.</p>					permitted.	<p>year, an equivalent dose to the skin or to any extremity of 5 rem or more in a year, or an equivalent dose to the lens of the eye of 1.5 rem or more in a year or greater than 10 percent of the corresponding limits specified in Table 2-1</p> <p>b. Declared pregnant workers who are expected to receive from external sources an equivalent dose of 50 mrem or more to the embryo/fetus during the gestation period</p> <p>d. Individuals entering a High Radiation Area</p> <p>10 CFR 835.402 (a) (3) and (4) are not applicable to WSI-NV. WSI-NV does not employ minors and does not have radiological control responsibilities for members of the public entering a controlled area.</p> <p>WSI-NV is</p>

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							responsible for determining which WSI-NV personnel need dosimetry.
<p>402(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:</p> <p>(1) Accredited, or excepted from accreditation, in accordance with the DOE Laboratory Accreditation Program for Personnel Dosimetry; or</p> <p>(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.</p>	<p>NNSS RCM 512.1. The RSPC shall maintain an external monitoring program that is adequate to demonstrate compliance with Subpart C of 10 CFR 835 that is accredited in accordance with DOELAP.</p>	<p>This service is provided to LLNL at the NNSS by the RSPC. LLNL will verify that the RSPC standards in this requirement by insuring their programs are accredited by the DOELAP for personnel dosimetry.</p>	<p>This is outside the scope of the LANL Radiological Control Program.</p> <p>This service is provided to LANL at the NNSS by the NNSS RSPC in compliance with 10 CFR 835.</p>	<p>SNL utilizes the dosimetry services provided by the RSPC which is DOELAP accredited. SNL-NV is responsible for assuring that the proper dosimetry is used by personnel engaged in SNL activities at NNSS.</p>	<p>N-I utilizes the dosimetry services provided by the RSPC, including record retention and reporting.</p>	<p>Not applicable to DRI. Dosimetry services, including external dose monitoring are provided to DRI by RSPC.</p>	<p>By written agreement, dosimetry services are provided to WSI-NV by the RSPC. WSI-NV will verify that the RSPC maintains DOELAP accreditation.</p>
<p>402(c) For the purpose of monitoring individual exposures to internal radiation, internal dosimetry programs (including routine bioassay programs) shall be conducted for:</p> <p>(1) Radiological workers who, under typical conditions, are likely to receive a committed effective dose of 0.1 rem (0.001 Sv) or more from all occupational radionuclide intakes in a year;</p>	<p>NNSS RCM 521.1. The following individuals shall participate in an internal dosimetry program:</p> <p>a. Radiological Workers entering radiological areas who under typical conditions are likely to receive intakes resulting in a CED of</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Internal exposure monitoring services are provided by RSPC at the request of DRI.</p> <p>NNSS RCM 214 The TED limit for members of the public exposed to radiation and/or radioactive material during access to a</p>	<p>NNSS RCM 521.1. The following individuals shall participate in an internal dosimetry program:</p> <p>a. Radiological Workers entering radiological areas who under typical conditions are likely to receive intakes resulting in a CED</p>

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<p>(2) Declared pregnant workers likely to receive an intake or intakes resulting in an equivalent dose to the embryo/fetus in excess of 10 percent of the limit stated at § 835.206(a);</p> <p>(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</p> <p>(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.</p>	<p>100 mrem or more in a year.</p> <p>b. Declared pregnant workers likely to receive intakes resulting in an equivalent dose to the embryo/fetus of 50 mrem or more during the gestation period.</p> <p>c. Occupationally exposed minors and members of the public likely to receive intakes resulting in a CED of 50 mrem or more in a year.</p>					<p>Controlled Area is 0.1 rem (0.001 sievert) in a year.</p>	<p>of 100 mrem or more in a year.</p> <p>b. Declared pregnant workers likely to receive intakes resulting in an equivalent dose to the embryo/fetus of 50 mrem or more during the gestation period.</p> <p>10 CFR 835.402(c) (3) and (4) are not applicable to WSI-NV. WSI-NV does not employ minors or control members of the public entering a controlled area.</p>
<p>402(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:</p> <p>(1) Accredited, or excepted from accreditation, in accordance with the DOE Laboratory Accreditation Program for Radiobioassay; or</p> <p>(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.</p>	<p>NNSS RCM 522.1. 10 CFR 835 requires accreditation of the internal radiobioassay monitoring program by DOELAP. The RSPC radiobioassay program shall be DOELAP accredited.</p>	<p>This service is provided to LLNL at the NNSS by the RSPC or LLNL-Livermore or LANL-New Mexico. LLNL will verify that the RSPC meets the standards in this requirement by participating in the 36 month internal audit program.</p>	<p>This service is provided to LANL at the NNSS by the RSPC or LANL-New Mexico. LANL will verify that the RSPC meets the standards in this requirement by participating in the 36 month internal audit program.</p>	<p>SNL-NV has the responsibility to determine which SNL personnel should participate in an internal dosimetry program.</p>	<p>N-I utilizes the dosimetry services provided by the RSPC, including record retention and reporting.</p>	<p>Not applicable to DRI. This service is provided by the RSPC and it is their responsibility to be DOELAP accredited.</p>	<p>By written agreement, dosimetry services are provided by the RSPC. It is the responsibility of the RSPC to have the program accredited by DOELAP. WSI-NV will verify that the RSPC maintains DOELAP accreditation.</p>

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<p>835.403 Air Monitoring.</p> <p>403(a) Monitoring of airborne radioactivity shall be performed:</p> <p>(1) Where an individual is likely to receive an exposure of 40 or more DAC-hours in a year; or</p> <p>(2) As necessary to characterize the airborne radioactivity hazard where respiratory protective devices for protection against airborne radionuclides have been prescribed.</p>	<p>NNSS RCM 555.1. Monitoring of airborne radioactivity shall be performed:</p> <p>a. Where an individual is likely to receive an exposure of 40 or more DAC-hours in a year.</p> <p>b. As necessary to characterize the airborne radioactivity hazard where respiratory protective devices for protection against airborne radionuclides have been prescribed.</p>	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not applicable to DRI. This service is provided by the RSPC.	By written agreement, the RSPC performs air monitoring.
<p>403(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.</p>	<p>NNSS RCM 555.2. 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.</p>	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not applicable to DRI. This service is provided by the RSPC.	By written agreement, the RSPC performs air monitoring.
<p>835.404 [Reserved]</p>							
<p>835.405 Receipt of Packages Containing Radioactive Material.</p>	<p>NNSS RCM 423.4.a. When packages containing</p>	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not applicable to DRI. All radioactive material used by	Receipt of packages containing radioactive material

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<p>405(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:</p> <p>(1) Take possession of the package when the carrier offers it for delivery; or</p> <p>(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.</p>	<p>quantities of radioactive material in excess of Type A quantity (as defined in 10 CFR 71.4) are expected to be received from radioactive material transportation, arrangements shall be made to either:</p> <p>(1) Take possession of the package when the carrier offers it for delivery; or</p> <p>(2) Receive notification as soon as practical after arrival of the package at the carrier's terminal and take possession of the package expeditiously after receiving such notification.</p>					<p>DRI employees need to be approved by the UNR Radiation Safety Committee (RSC) as required by the UNR Radioactive Material License number 16-13-0003-07. DRI will follow UNR RSM Procedure III "Radiation Source Control," for any radioactive material in excess of Type A quantities.</p>	<p>is outside the scope of WSI-NV activities.</p>
<p>405(b) Upon receipt from radioactive material transportation, external surfaces of packages known to contain radioactive material shall be monitored if the package:</p> <p>(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</p>	<p>NNSS RCM 423.4.b. Upon receipt from radioactive material transportation, external surfaces of the packages known to contain radioactive material shall be monitored if the package:</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Not applicable to DRI. Under the UNR Radioactive Material License number 16-13-0003-07, DRI must follow the UNR radioactive material receipt procedure as outlined in UNR RSM Procedure III.</p>	<p>By written agreement, the RSPC performs this service.</p>

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<p>(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</p> <p>(3) Has evidence of degradation, such as packages that are crushed, wet, or damaged.</p>	<p>(1) Is labeled with a Radioactive White I, Yellow II, or Yellow III label (as specified in 49 CFR 172.403 and 172.436-440), or</p> <p>(2) Has been transported as low-specific-activity material (as defined in 10 CFR 71.4) on an exclusive use vehicle (as defined in 10 CFR 71.4), or</p> <p>(3) Has evidence of degradation, such as packages that are crushed, wet, or damaged.</p>						
<p>405(c) The monitoring required by paragraph (b) of this section shall include:</p> <p>(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</p> <p>(2) Measurements of the radiation levels, if the package contains a Type B quantity (as defined at 10 CFR 71.4) of radioactive material.</p>	<p>NNSS RCM 423.4.c. The monitoring required by Article 423.4b shall include:</p> <p>(1) Measurements of removable contamination levels, unless the package contains only special form, (as defined in 10 CFR 71.4) or gaseous radioactive material, and</p> <p>(2) Measurements of the radiation levels, unless the package contains less than a Type A</p>	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not applicable to DRI. Under the UNR Radioactive Material License number 16-13-0003-07, DRI must follow the UNR radioactive material receipt procedure as outlined in UNR RSM Procedure III.	By written agreement, the RSPC provides monitoring.

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	quantity (as defined at 10 CFR 71.4) of radioactive material.						
405(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.	NNSS RCM 423.4.d. The monitoring required by Article 423.4.b shall be completed as soon as practical following receipt of the package, but not later than 8 hours after the beginning of the working day following receipt of the package.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not applicable to DRI. Under the UNR Radioactive Material License number 16-13-0003-07, DRI must follow the UNR radioactive material receipt procedure as outlined in UNR RSM Procedure III.	By written agreement, the RSPC provides monitoring.
405(e) Monitoring pursuant to § 835.405(b) is not required for packages transported on a DOE site which have remained under the continuous observation and control of a DOE employee or DOE contractor employee who is knowledgeable of and implements required exposure control measures.	NNSS RCM 423.4.e. The Monitoring required by Article 423.4.b is not required for packages transported on site that have remained under the continuous observation and control of a DOE employee or DOE contractor employee who is knowledgeable of and implements required exposure control measures.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2
Subpart F-Entry Control Program	NNSS RCM 334.7.01. Written authorizations shall	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	NNSS RCM 322.2. Radiological Work Permits (RWP) or	WSI-NV does not have radiological control

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<p>835.501 Radiological Areas.</p> <p>501(a) Personnel entry control shall be maintained for each radiological area.</p>	<p>be required to control entry into and permit work to be performed within radiological areas.</p>					<p>alternative, formal mechanism as described in Article 322.8 shall be used to control the following activities:</p> <ul style="list-style-type: none"> a. Entering Radiation Areas. b. Entering Contamination Areas. c. Handling materials with removable contamination that exceed the values of Table 2-2. DRI does not have any radiological areas, but will comply with the requirements established by the RSPC or the RWP as applicable. 	<p>responsibilities for any radiological area. The RSPC or TO who has radiological control responsibilities for the radiological area is responsible for ensuring that the requirements of this section are met. WSI-NV personnel will comply with all requirements established by the RSPC or TO.</p>
<p>501(b) The degree of control shall be commensurate with existing and potential radiological hazards within the area.</p>	<p>NSS RCM 322.7. The degree of personnel entry control for radiological areas shall be commensurate with existing and potential radiological hazards within the area.</p> <p>NSS RCM 334.7 02 and 335.5.02.</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>DRI does not have any radiological areas, but will comply with the requirements established by the RSPC or the RWP as applicable.</p>	<p>WSI-NV does not have radiological control responsibilities for any radiological area. The RSPC or TO who has radiological control responsibilities for the radiological area is responsible for ensuring that the requirements of this section are met.</p>

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	These authorizations shall specify radiation protection measures commensurate with the existing and potential hazards.						WSI-NV personnel will comply with all requirements established by the RSPC or TO.
<p>501(c) One or more of the following methods shall be used to ensure control:</p> <ul style="list-style-type: none"> (1) Signs and barricades; (2) Control devices on entrances; (3) Conspicuous visual and/or audible alarms; (4) Locked entrance ways; or (5) Administrative controls. 	<p>NSS RCM 231.1. Radiological postings shall be used to alert personnel to the presences of radiation and radioactive materials and to aid them in minimizing exposures and preventing the spread of contamination.</p> <p>NSS RCM 231.7 Rope, tape, chain, and similar barriers used to designate the boundaries of posted areas should be yellow or yellow and magenta in color. Existing barb wire, chain link, yellow rope, or snow fencing is acceptable at NNSA/NSO facilities. These barriers shall be setup such that they</p>	Same as Column 2	DRI does not have any radiological areas, but will comply with the requirements established by the RSPC or the RWP as applicable when working in areas which require these controls.	WSI-NV does not have radiological control responsibilities for any radiological area. The RSPC or TO who has radiological control responsibilities for the radiological area is responsible for ensuring that the requirements of this section are met. WSI-NV personnel will comply with all requirements established by the RSPC or TO.			

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	<p>do not impede the intended use of emergency exits or evacuation routes.</p> <p>NNSS RCM 231.8. Posting of doors or access gates should be such that the postings remain visible when the doors and gates are open or closed.</p> <p>NNSS RCM 334.2. Physical controls to prevent inadvertent or unauthorized access to High and Very High Radiation Areas shall be maintained according to Appendix 3A.</p> <p>NNSS RCM 322.1. RWPs or an alternative, formal mechanism as described in Article 322.9 shall be used to control the following activities:</p> <ul style="list-style-type: none"> a. Entering Radiation Areas and High Radiation Areas b. Entering Contamination 						
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	Areas, High Contamination Areas, and Airborne Radioactivity Areas. c. Handling materials with removable contamination that exceed the values of Table 2-2 d. Work that involves digging in URMAs						
501(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.	NNSS RCM 382.3. Written authorizations, including specific radiation protection measures, shall be required to control entry into and work within radiological areas. [see 835.501(d)]. These authorizations may include RWPs, technical work documents, administrative procedures, and other administrative controls.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	DRI does not have any radiological areas, but will comply with the requirements established by the cognizant TO.	WSI-NV does not have radiological control responsibilities for any radiological area. The RSPC or TO who has radiological control responsibilities for the radiological area is responsible for ensuring that the requirements of this section are met. WSI-NV personnel will comply with all requirements established by the RSPC or TO.
501(e) No control(s) shall be installed at any radiological area exit that would prevent rapid evacuation of personnel under emergency conditions.	NNSS RCM Appendix 3A.3. Physical access controls over High and Very High Radiation Areas shall be established	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not a DRI activity. This service is provided to DRI by the RSPC.	WSI-NV does not have radiological control responsibilities for any radiological area. The RSPC or TO who has

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	<p>in such a way that they do not prevent a person from leaving the area [see 835.502(d)].</p> <p>NSS RCM 231.7.03. These barriers shall be set up such that they do not impede the intended use of emergency exits or evacuation routes.</p>						<p>radiological control responsibilities for the radiological area is responsible for ensuring that the requirements of this section are met. WSI-NV personnel will comply with all requirements established by the RSPC or TO.</p>
<p>835.502 High and Very High Radiation Areas.</p> <p>502(a) The following measures shall be implemented for each entry into a high radiation area;</p> <p>(1) The area shall be monitored as necessary during access to determine the exposure rates to which the individuals are exposed; and</p> <p>(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 equivalent dose to the whole body during the entry.</p>	<p>NSS RCM 334.3 The minimum requirements for entry into High Radiation Areas shall include the following:</p> <p>c. Primary and supplemental dosimeters or other means to immediately estimate whole body dose.</p> <p>e. Area monitoring, as necessary, during access to determine the exposure rates to which the individuals are exposed.</p> <p>NSS RCM 513.1.01. Pocket or electronic</p>	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	<p>DRI does not typically conduct work in areas of high radiation. Should entry be required, monitoring and dosimetry service would be provided to DRI by the RSPC and we would follow all compliance measures established by the cognizant TO.</p>	<p>The content of this section does not apply to WSI-NV, as WSI-NV personnel are not permitted to enter high or very high radiation areas. If access were required, WSI-NV would comply with the measures established by the cognizant TO.</p>

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	dosimeters shall be issued to personnel before entry into a High Radiation Area (see Article 334 for entry requirements).						
<p>502(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 an equivalent dose to the whole body of 1 rem (0.01 Sv) in any one hour at 30 centimeters from the source or from any surface that the radiation penetrates:</p> <p>(1) A control device that prevents entry to the area when high radiation levels exist or that, upon entry, causes the radiation level to be reduced below the level that defines a high radiation area;</p> <p>(2) A device that functions automatically to prevent use or operation of the radiation source or field while individuals are in the area;</p> <p>(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;</p> <p>(4) Entryways that are locked. During periods when access to</p>	<p>NNSS RCM Appendix 3A 1. One or more of the following features should be used for each entrance or access point to a High Radiation Area and shall be used for each entrance or access point to a High Radiation Area where radiation levels exist such that a person could exceed a whole body dose of 1 rem in any one hour [see 835.502(b)]:</p> <p>a. 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 that level defining a High Radiation Area.</p> <p>b. A device that functions automatically to prevent the use or</p>	Same as Column 2	DRI does not typically conduct work in areas of high radiation. Should entry be required, DRI will follow all compliance measures established by the cognizant TO.	The content of this section does not apply to WSI-NV, as WSI-NV personnel are not permitted to enter high or very high radiation areas. If access were required, WSI-NV would comply with the measures established by the cognizant TO.			

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<p>the area is required, positive control over each entry is maintained;</p> <p>(5) Continuous direct or electronic surveillance that is capable of preventing unauthorized entry;</p> <p>(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.</p>	<p>operation of the radiation source or field while personnel are in the area.</p> <p>c. A control device that energizes a conspicuous visible or audible alarm signal so that the person entering the High Radiation Area and the supervisor of the activity are made aware of the entry.</p> <p>d. Entryways that are locked, except during periods when access to the area is required, with positive control over each entry.</p> <p>e. Continuous direct or electronic surveillance that is capable of preventing unauthorized entry.</p> <p>f. A control device that automatically generates 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</p>						
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	the area or activation of a secondary control device that will prevent the use or operation of the source.						
502(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.	<p>NSS RCM Appendix 3A. 2. In addition to the above requirements, additional measures shall be implemented to ensure personnel are not able to gain access to Very High Radiation Areas [see 835.502(c)].</p> <p>NSS RCM 334.4. 01. Workers shall be prevented from entry to Very High Radiation Areas.</p>	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not applicable. DRI employees do not enter Very High Radiation Areas.	The content of this section does not apply to WSI-NV, as WSI-NV personnel are not permitted to enter Very High Radiation Areas. If access were required, WSI-NV would comply with the measures established by the cognizant TO.
502(d) No control(s) shall be established in a high or very high radiation area that would prevent rapid evacuation of personnel.	<p>NSS RCM Appendix 3A.3. Physical access controls over High and Very High Radiation Areas shall be established in such a way that they do not prevent a person from leaving the area [see 835.502(d)].</p>	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not applicable to DRI. DRI does not conduct work in High or Very High Radiation areas.	The content of this section does not apply to WSI-NV, as WSI-NV personnel are not permitted to enter High or Very High Radiation Areas. If access were required, WSI-NV would comply with the measures established by the cognizant TO.

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	NNSS RCM 231.7.03. These barriers shall be set up such that they do not impede the intended use of emergency exits or evacuation routes.						
<p>Subpart G-Posting and Labeling</p> <p>835.601 General Requirements.</p> <p>601(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.</p>	<p>NNSS RCM 231.2.02 and .03. Signs shall contain the standard radiation symbol ("trefoil") colored magenta or black on a yellow background. Lettering shall be either magenta or black.</p> <p>NNSS RCM 412.3.01 and .02. Labels shall have a yellow background with a magenta or black standard radiation symbol. Lettering shall be magenta or black.</p>	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not applicable to DRI. The RSPC provides the appropriate signage and labels.	Posting and labeling are beyond the scope of WSI-NV radiological control responsibilities. The RSPC provides appropriate signs and labels.
601(b) Signs required by this subpart shall be clearly and conspicuously posted and may include radiological protection instructions.	NNSS RCM 231.3.01. Signs shall be conspicuously posted, clearly worded, and may include radiological control instructions, where appropriate.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	This service is provided to DRI by the RSPC.	Posting and labeling are beyond the scope of WSI-NV radiological control responsibilities. The RSPC provides appropriate signs and labels.

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	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
601(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.	NNSS RCM 231.10. The posting and labeling requirements in this manual 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 manual.	Operations conducted by LLNL at the NNSS do not include activities at private residences or businesses.	This is outside the scope of the LANL Radiological Control Program. Operations conducted by LANL at the NNSS do not include activities at private residences or businesses.	SNL-NV is not involved in any remediation activities at private residences nor are there SNL facilities, operations or processes at private residences or businesses.	Same as Column 2	Not applicable to DRI as operations conducted by DRI at the NNSS do not include activities at private residences or businesses.	Posting and labeling are beyond the scope of WSI-NV radiological control responsibilities. The RSPC provides appropriate signs and labels.
<p>835.602 Controlled Areas.</p> <p>602(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 of more than 0.1 rem (0.001 Sv) in a year.</p>	NNSS RCM 232.1. Each access point to a Controlled Area shall be posted. When any other radiological warning signs are present, the Controlled Area sign is not required. Individuals who enter only the Controlled Area without entering radiological areas or RMAs are not likely to receive a TED of more than 0.1 rem (0.001 sievert) in a year.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not a DRI activity. Posting of access points to a controlled area is a service provided to DRI by the RSPC. If access is required DRI will comply with controls established by the cognizant TO.	Posting of controlled areas is beyond the scope of WSI-NV radiological control responsibilities. The RSPC or TO who has radiological control responsibilities for the controlled area is responsible for ensuring that the requirements of this section are met. If access is required, WSI-NV personnel will comply with all controls established by the RSPC or TO.

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602(b) Signs used for this purpose may be selected by the contractor to avoid conflict with local security requirements.	NNSS RCM 232.2. As a minimum the Controlled Area posting shall contain the following wording: "CONTROLLED AREA. THIS AREA IS CONTROLLED FOR THE PURPOSE OF LIMITING ACCESS TO RADIATION OR RADIOACTIVITY. GENERAL EMPLOYEE RADIOLOGICAL TRAINING (GERT) IS REQUIRED FOR ACCESS."	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not a DRI activity. Required signage is provided to DRI by the RSPC.	By written agreement, the RSPC provides this service.
835.603 Radiological Areas and Radioactive Material Areas. Each access point to radiological areas and radioactive material areas (as defined in § 835.2) shall be posted with conspicuous signs bearing the wording provided in this section.	NNSS RCM 231.2. 01. Each access point to a radiological area shall be posted according to Tables 2-3 and 2-4. NNSS RCM 236.1. 01. Accessible areas where items or containers of radioactive material in quantities exceeding the values provided in Appendix E of 10 CFR 835 are used, handled, or stored	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not applicable. DRI does not have radiological areas, but will comply with any requirements established by the postings provided by the RSPC or cognizant TO.	Not a WSI-NV activity. WSI-NV does not control radiological areas but will comply with the requirements established by the RSPC.

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COMPLIANCE DEMONSTRATION TABLE**

Title 10 Code of Federal Regulations (CFR) Part 835, "Occupational Radiation Protection" Requirement	NATIONAL SECURITY TECHNOLOGIES Appendix A	LAWRENCE LIVERMORE NATIONAL LABORATORY Appendix B	LOS ALAMOS NATIONAL LABORATORY Appendix C	SANDIA NATIONAL LABORATORIES Appendix D	NAVARRO-INTERA Appendix E	DESERT RESEARCH INSTITUTE Appendix F	WSI NEVADA Appendix G
	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
	shall be posted "CAUTION, RADIOACTIVE MATERIAL."						
603(a) Radiation Area. The words "Caution, Radiation Area" shall be posted at each radiation area.	NNSC RCM Table 2-3, Item 1. Radiation Area, >0.005 rem in one hour at 30 cm, "CAUTION, RADIATION AREA."	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not applicable. DRI does not have radiological areas, but will comply with any requirements established by the postings provided by the RSPC or cognizant TO.	Not a WSI-NV activity. WSI-NV does not control radiological areas.
603(b) High Radiation Area. The words "Caution, High Radiation Area" or "Danger, High Radiation Area" shall be posted at each high radiation area.	NNSC RCM Table 2-3, Item 2. High Radiation Area, >0.1 rem in one hour at 30 cm, "CAUTION, HIGH RADIATION AREA" or "DANGER, HIGH RADIATION AREA."	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not applicable. DRI does not have radiological areas, but will comply with any requirements established by the postings provided by the RSPC or cognizant TO.	Not a WSI-NV activity. WSI-NV does not control radiological areas.
603(c) Very High Radiation Area. The words "Grave Danger, Very High Radiation Area" shall be posted at each very high radiation area.	NNSC RCM Table 2-3, Item 3. Very High Radiation Area, >500 rad in one hour at 1 meter. "GRAVE DANGER, VERY HIGH RADIATION AREA."	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not a DRI activity, DRI does not have radiological areas and does not conduct work in very high radiation areas.	Not a WSI-NV activity. WSI-NV does not control radiological areas.
603(d) Airborne Radioactivity Area. The words "Caution, Airborne Radioactivity Area" or "Danger, Airborne Radioactivity Area" shall be posted at each airborne radioactivity area.	NNSC RCM Table 2-4, Item 3. Airborne Radioactivity. Concentrations ($\mu\text{Ci/ml}$) > any DAC value or potential for intakes exceeding	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not a DRI activity, DRI does not have radiological areas and does not conduct work in airborne	Not a WSI-NV activity. WSI-NV does not control radiological areas.

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	12 DAC hours/week without respiratory protection. "CAUTION, AIRBORNE RADIOACTIVITY AREA" or "DANGER, AIRBORNE RADIOACTIVITY AREA."					radioactivity areas.	
603(e) Contamination Area. The words "Caution, Contamination Area" shall be posted at each contamination area.	NNSS RCM Table 2-4, Item 1. Contamination. Removable contamination levels >1 time but ≤100 times Table 2-2 values, "CAUTION, CONTAMINATION AREA."	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not a DRI activity. This service is provided to DRI by the RSPC on the NNSS and as requested at offsite locations.	Not a WSI-NV activity. WSI-NV does not control radiological areas.
603(f) High Contamination Area. The words "Caution, High Contamination Area" or "Danger, High Contamination Area" shall be posted at each high contamination area.	NNSS RCM Table 2-4, Item 2. High Contamination. Removable contamination levels >100 times Table 2-2 values. "CAUTION, HIGH CONTAMINATION AREA" or "DANGER, HIGH CONTAMINATION AREA."	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not a DRI activity. This service is provided to DRI by the RSPC on the NNSS and as requested at offsite locations.	Not a WSI-NV activity. WSI-NV does not control radiological areas.
603(g) Radioactive Material Area. The words "Caution, Radioactive Material(s)" shall be posted at	NNSS RCM 236.1.01. Accessible areas where items	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	UNR RSM Policy IV, "Handling Policies," Section F.1,	Not a WSI-NV activity. WSI-NV does not control

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	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
each radioactive material area.	or containers of radioactive material in quantities exceeding the values provided in Appendix E of 10 CFR 835 are used, handled, or stored shall be posted "CAUTION, RADIOACTIVE MATERIAL."					"Posting of Radiation Areas," (speaks to RMAs). Required signage for materials obtained under the UNR Radioactive Material License number 16-13-0003-07 is provided to DRI by the UNR RSO.	radioactive material areas.
<p>835.604 Exceptions to Posting Requirements.</p> <p>604(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.</p>	<p>NNSS RCM 231.11. Exceptions to posting requirements:</p> <p>a. Areas may be excepted from the posting requirements of 10 CFR 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.</p>	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not a WSI-NV activity. WSI-NV does not control radiological areas but will comply with the requirements established by the RSPC.
604(b) Areas may be excepted from the radioactive material area posting requirements of § 835.603 (g) when:	NNSS RCM 231.11. Exceptions to posting requirements:	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not a WSI-NV activity. WSI-NV does not control radioactive material

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	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
<p>(1) Posted in accordance with § 835.603 (a) through (f); or</p> <p>(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</p> <p>(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).</p>	<p>b. Areas may be excepted from the Radioactive Material Area (RMA) posting requirements of 10 CFR 835.603(g) when:</p> <p>(1) Posted according to 10 CFR 835.603(a) through (f); or</p> <p>(2) Each item or container of radioactive material is labeled according to 10 CFR 835.605 such that individuals entering the area are made aware of the hazard; or</p> <p>(3) The radioactive material of concern consists solely of structures or installed components that have been activated (i.e., such as being exposed to neutron radiation or particles produced in an accelerator).</p>						areas.
604(c) Areas containing only packages received from radioactive material transportation labeled and in non-degraded condition need not be posted in accordance with	<p>NNSS RCM 231.11. Exceptions to posting requirements:</p> <p>c. Areas containing only packages received from</p>	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not a WSI-NV activity. WSI-NV does not control radiological areas.

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	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
§ 835.603 until the packages are monitored in accordance with § 835.405.	radioactive material transportation labeled and in non-degraded condition need not be posted according to 10 CFR 835.603 until the packages are monitored according to 10 CFR 835.405.						
<p>835.605 Labeling Items and Containers.</p> <p>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.</p>	<p>NNSS RCM 412.1. Except as provided in Article 412.2, 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.</p>	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	<p>Not applicable to WSI-NV. The RSPC or TO who has radiological control responsibility for an item or container of radiological material is responsible for ensuring that the requirements of this section are met. WSI-NV personnel will comply with all requirements established.</p>

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	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
<p>835.606 Exceptions to Labeling Requirements.</p> <p>606(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</p> <p>(2) The quantity of radioactive material is less than one tenth of the values specified in appendix E of this part and less than 0.1 Ci; or</p> <p>(3) Packaged, labeled, and marked in accordance with the regulations of the Department of Transportation or DOE Orders governing radioactive material transportation; or</p> <p>(4) Inaccessible, or accessible only to individuals authorized to handle or use them, or to work in the vicinity; or</p> <p>(5) Installed in manufacturing, process, or other equipment, such as reactor components, piping, and tanks; or</p> <p>(6) The radioactive material consists solely of nuclear weapons or their components.</p>	<p>NNSS RCM 411.2.01. Except for accountable sealed radioactive sources, according to Appendix E of 10 CFR 835, radioactive material located within Controlled Areas, RMAs, or radiological areas do not require specific labeling or packaging if sufficient information is provided to allow individuals to take appropriate protective actions.</p> <p>NNSS RCM 412.2. The following materials are not subject to labeling requirements:</p> <p>b. Items packaged, labeled, and marked according to the regulations of the U.S. Department of Transportation (DOT) or DOE orders governing radioactive material transportation</p> <p>d. The quantity of radioactive material is less than one</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Not applicable to WSI-NV. The RSPC or TO who has radiological control responsibility for an item or container of radiological material is responsible for ensuring that the requirements of this section are met. WSI-NV personnel will comply with all requirements established.</p>

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	<p>tenth of the values specified in Appendix E of 10 CFR 835 and less than 0.1 Ci</p> <p>e. Inaccessible or accessible only to individuals authorized to handle or use them or to work in the vicinity of the material</p> <p>f. Installed in manufacturing, processing, or other equipment, such as reactor components, piping, and tanks</p> <p>g. The radioactive material consists solely of nuclear weapons or their components</p>						
606(b) Radioactive material labels applied to sealed radioactive sources may be excepted from the color specifications of § 835.601(a).	NNSC RCM 412.3.03. Radioactive material labels applied to sealed radioactive sources may be excepted from the color specifications.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not applicable to WSI-NV. WSI-NV is not a sealed radioactive source custodian.
<p>Subpart H-Records</p> <p>835.701 General Provisions.</p> <p>701(a) Records shall be maintained to document compliance with this part and with</p>	NNSC RCM 711.01. Radiological control records shall be maintained as necessary to document	Same as Column 2	Same as Column 2	All records pertaining to SNL activities at NNSC are maintained and archived by the RSPC.	Same as Column 2. Records generated by the RSPC for dosimetry services provided to N-I are maintained by the	Radiological records for DRI generated by the RSPC are maintained by the RSPC. Any copies of radiological	Records generated by WSI-NV will be maintained by WSI-NV. By written agreement, records generated by the

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radiation protection programs required by § 835.101.	compliance with the requirements of 10 CFR 835. NNSC RCM 712.1.01. A radiological records management program shall be established by each NNSA/NSO TO.				RSPC.	records received by DRI from the RSPC are kept on file in the DRI EH&S Office for a minimum of 3 years, after which medical and exposure records are sent for long-term storage to Business Center North Risk Management per Nevada Systems of Higher Education policy.	RSPC will be maintained by the RSPC.
701(b) Unless otherwise specified in this subpart, records shall be retained until final disposition is authorized by DOE.	NNSC RCM 711.04. Unless otherwise specified in this section, records shall be retained until final disposition is authorized by NNSA/NSO.	Same as Column 2	Same as Column 2	All records pertaining to SNL activities at NNSC are maintained and archived by the RSPC.	Same as Column 2. Records generated by the RSPC for dosimetry services provided to N-I are maintained by the RSPC.	Radiological records generated by the RSPC for DRI are maintained and archived by the RSPC.	By written agreement, records generated by the RSPC will be maintained by the RSPC.
835.702 Individual Monitoring Records. 702(a) Except as authorized by § 835.702(b), records shall be maintained to document doses received by all individuals for whom monitoring was conducted and to document doses received during planned special exposures, unplanned doses exceeding the monitoring thresholds of § 835.402, and authorized emergency exposures.	NNSC RCM 722.1.01. Records of doses received by all individuals for whom individual monitoring was performed shall be recorded in the individual's occupational dose record and shall be maintained by the RPSC.	By written agreement the LLNL-Livermore Radiation Protection Functional Area Personnel Dosimetry Team records and maintains LLNL employee occupational dose provided by the NNSC RSPC.	This is outside the scope of the LANL Radiological Control Program. The LANL-New Mexico RP-2 Radiation Information Management Team records and maintains LANL employee occupational dose provided by the NNSC RSPC.	Same as Column 2 and Primary dose records for SNL personnel at NNSC are maintained and archived by RSPC. Doses received are reported by RSPC to SNL-Albuquerque Dosimetry Records Organization.	Same as Column 2. Records generated by the RSPC for dosimetry services provided to N-I are maintained by the RSPC.	Same as Column 2 and NNSC RCM 141.3. The RSPC shall provide the following: e. External and internal dosimetry services Dosimetry records generated by RSPC are maintained by the RPSC.	By written agreement, the RSPC provides dosimetry services to WSI-NV. Records generated by the RSPC will be maintained by the RSPC.

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<p>702(b) Recording of the non-uniform equivalent dose 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). Recording of internal dose (committed effective dose or committed equivalent dose) is not required for any monitoring result estimated to correspond to an individual receiving less than 0.01 rem (0.1 mSv) committed effective dose. The bioassay or air monitoring result used to make the estimate shall be maintained in accordance with § 835.703(b) and the unrecorded internal dose estimated for any individual in a year shall not exceed the applicable monitoring threshold at § 835.402(c).</p>	<p>NNSS RCM 722.1.01. Records of doses received by all individuals for whom individual monitoring was performed shall be recorded in the individual's occupational dose record and shall be maintained by the RPSC.</p> <p>NNSS RCM 722.12. Recording of the non-uniform equivalent dose to the skin is not required if the dose is less than 2 percent of the limit specified for the skin in Table 2-1.</p> <p>NNSS RCM 722.13. Recording of internal dose (CED or committed equivalent dose) is not required for any monitoring result estimated to correspond to an individual receiving less than 0.01 rem CED. The bioassay or air monitoring result used to make the estimate shall</p>	<p>By written agreement the LLNL-Livermore Radiation Protection Functional Area Personnel Dosimetry Team records and maintains LLNL employee occupational dose provided by the NNSS RSPC.</p>	<p>This is outside the scope of the LANL Radiological Control Program. The LANL-New Mexico RP-2 Radiation Information Management Team records and maintains LANL employee occupational dose provided by the NNSS RSPC.</p>	<p>Primary dose records for SNL personnel at NNSS maintained and archived by RSPC. Doses received reported by RSPC to SNL-Albuquerque Dosimetry Records Organization.</p>	<p>Records generated by the RSPC for dosimetry services provided to N-I are maintained by the RSPC.</p>	<p>NNSS RCM 141.3. The RSPC shall provide the following: e. External and internal dosimetry services</p> <p>Dosimetry records generated by RSPC are maintained by the RPSC.</p>	<p>By written agreement, the RSPC provides dosimetry services to WSI-NV and maintains individual monitoring records.</p>

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	be maintained in accordance with § 835.703(b) and the unrecorded internal dose estimated for any individual in a year shall not exceed the applicable monitoring threshold in Article 521.1						
<p>702(c) The records required by this section shall:</p> <p>(1) Be sufficient to evaluate compliance with subpart C of this part;</p> <p>(2) Be sufficient to provide dose information necessary to complete reports required by subpart I of this part;</p> <p>(3) Include the results of monitoring used to assess the following quantities for external dose received during the year:</p> <p>(i) The effective dose from external sources of radiation (equivalent dose to the whole body may be used as effective dose for external exposure);</p> <p>(ii) The equivalent dose to the lens of the eye;</p> <p>(iii) The equivalent dose to the skin; and</p> <p>(iv) The equivalent dose to the extremities.</p> <p>(4) Include the following information for internal dose</p>	<p>NNSS RCM 712.1.02. This program shall ensure that auditable records and reports are controlled through the stages of creation, distribution, use, arrangement, storage, retrieval, media conversion (if applicable), and disposition.</p> <p>NNSS RCM 722.1.02. These records shall be sufficient to evaluate compliance with applicable dose limits and monitoring and reporting requirements.</p> <p>NNSS RCM 722.4. The records shall include the following</p>	<p>By written agreement, the LLNL-Livermore Radiation Protection Functional Area Personnel Dosimetry Team records and maintains LLNL employee occupational dose provided by the NNSS RSPC.</p>	<p>This is outside the scope of the LANL Radiological Control Program. The LANL-New Mexico RP-2 Radiation Information Management Team records and maintains LANL employee occupational dose provided by the NNSS RSPC.</p>	<p>Primary dose records for SNL personnel at NNSS maintained and archived by RSPC. Doses received reported by RSPC to SNL-Albuquerque Dosimetry Records Organization.</p> <p>For internal doses received by SNL personnel at NNSS, only the assigned doses are reported to SNL-Albuquerque Dosimetry Records Organization. All records associated with whole body counts, specimen analysis results, etc. maintained by RSPC.</p> <p>For SNL personnel primary dose</p>	<p>Records generated by the RSPC for dosimetry services provided to N-I are maintained by the RSPC.</p>	<p>Dosimetry service is provided by the RSPC which is responsible for maintaining a sufficient staff of site-trained radiological control personnel to accommodate the needs of the TOs (NNSS RCM 141.3.e).</p> <p>Primary dose records for DRI personnel on NNSA/NSO projects are maintained and archived by RSPC. Doses received are reported by RSPC to DRI.</p>	<p>By written agreement, the RSPC provides dosimetry services to WSI-NV and maintains individual monitoring records.</p> <p>By written agreement, dosimetry records are generated and maintained by the RSPC.</p>

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<p>resulting from intakes received during the year:</p> <p>(i) Committed effective dose;</p> <p>(ii) Committed equivalent dose to any organ or tissue of concern; and</p> <p>(iii) Identity of radionuclides.</p> <p>(5) Include the following quantities for the summation of the external and internal dose:</p> <p>(i) Total effective dose in a year;</p> <p>(ii) For any organ or tissue assigned an internal dose during the year, the sum of the equivalent dose to the whole body from external exposures and the committed equivalent dose to that organ or tissue; and</p> <p>(iii) Cumulative total effective dose.</p> <p>(6) Include the equivalent dose to the embryo/fetus of a declared pregnant worker.</p>	<p>quantities for external dose received during the year:</p> <p>a. The effective dose from external sources of radiation (equivalent dose to the whole body may be used as effective dose for external exposure).</p> <p>b. The equivalent dose to the lens of the eye.</p> <p>c. The equivalent dose to the skin</p> <p>d. The equivalent dose to the extremities.</p> <p>NNSS RCM 722.5. Internal dose records shall include the following information for internal dose resulting from intakes received during the year:</p> <p>a. CED</p> <p>b. Committed equivalent dose to any organ or tissue of concern</p> <p>c. Identity of radionuclides.</p>			<p>records are maintained by Dosimetry Records Organization in Albuquerque.</p>			
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	<p>NNSS RCM 722.6. The TED received by each individual monitored in accordance with Article 511.1 or 521.1 shall be maintained for each year the individual is monitored.</p> <p>NNSS RCM 722.7. Records of the summation of external equivalent dose to the whole body and committed equivalent dose to any organ receiving a reportable dose shall be maintained for the individual receiving such dose.</p> <p>NNSS RCM 722.9 Individual dose records shall include the cumulative TED.</p> <p>NNSS RCM 722.8. Include the equivalent dose to the embryo/fetus of a declared pregnant worker.</p>						
702(d) Documentation of all occupational doses received during the current year, except for doses resulting from planned	NNSS RCM 721.1.01-02. Documentation of all occupational doses	By written agreement the LLNL-Livermore Radiation Protection Functional Area	This is outside the scope of the LANL Radiological Control Program. The	NNSS RCM 722.1.02. These records shall be sufficient to evaluate compliance	Records generated by the RSPC for dosimetry services provided to N-I are	Primary dose records for DRI personnel on NNSA/NSO projects	By written agreement, the RSPC provides dosimetry services

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<p>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.</p>	<p>received during the current year, except for doses resulting from planned special exposures and emergency exposures, shall be obtained to demonstrate compliance with occupational dose limits for general employees. 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.</p>	<p>Personnel Dosimetry Team records and maintains LLNL employee occupational dose provided by the NNSS RSPC.</p>	<p>LANL-New Mexico RP-2 Radiation Information Management Team records and maintains LANL employee occupational dose provided by the NNSS RSPC.</p>	<p>with all applicable dose limits and monitoring and reporting requirements. For SNL personnel primary dose records are maintained by Dosimetry Records Organization in Albuquerque.</p>	<p>maintained by the RSPC.</p>	<p>are maintained and archived by RSPC. Doses received are reported by RSPC to DRI.</p>	<p>to WSI-NV and maintains individual monitoring records.</p>
<p>702(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 dose.</p>	<p>NNSS RCM 721.03. Reasonable efforts shall be made to obtain complete records of previous years' occupational internal and external doses for radiological workers whose occupational dose is monitored according to 10 CFR 835.402.</p>	<p>By written agreement, the LLNL-Livermore Radiation Protection Functional Area Personnel Dosimetry Team records and maintains LLNL employee occupational dose provided by the NNSS RSPC.</p>	<p>This is outside the scope of the LANL Radiological Control Program. The LANL-New Mexico RP-2 Radiation Information Management Team records and maintains LANL employee occupational dose provided by the NNSS RSPC.</p>	<p>For SNL personnel primary dose records are maintained by Dosimetry Records Organization in Albuquerque.</p>	<p>Records generated by the RSPC for dosimetry services provided to N-I are maintained by the RSPC.</p>	<p>Cross reference NNSS RCM 721 and UNR RSM Procedure XIII, "Personnel Monitoring," Section 3, "Records," B. Records of Prior Exposure. Dosimetry services are provided to DRI by the RSPC. (NNSS RCM 141.3.e)</p>	<p>By written agreement, the RSPC provides dosimetry services to WSI-NV and maintains individual monitoring records.</p>

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						Records from these services are maintained by the RSPC.	
702(f) The records specified in this section that are identified with a specific individual shall be readily available to that individual.	NNSS RCM 781.1.b. Detailed information concerning an individual's exposure shall be made available to that individual, upon request, consistent with the Privacy Act of 1974, which contains requirements to protect the privacy of individual records.	By written agreement, the LLNL-Livermore Radiation Protection Functional Area Personnel Dosimetry Team records and maintains LLNL employee occupational dose provided by the NNSS RSPC.	This is outside the scope of the LANL Radiological Control Program. The LANL-New Mexico RP-2 Radiation Information Management Team records and maintains LANL employee occupational dose provided by the NNSS RSPC.	For SNL personnel primary dose records are maintained by Dosimetry Records Organization in Albuquerque.	Records generated by the RSPC for dosimetry services provided to N-I are maintained by the RSPC.	Cross reference NNSS RCM 781.1.b. DRI distributes individual records received from the RSPC as required by NAC 459.786, "Reporting of Certain Information," and UNR RSM Procedure XIII, Section 3, A. Personnel Exposure Records.	By written agreement, the RSPC provides dosimetry services and maintains individual monitoring records.
702(g) Data necessary for future verification or reassessment of the recorded doses shall be recorded.	NNSS RCM 722.3.02. Procedures, data, and supporting information needed to reconfirm a person's dose at a later date shall be maintained.	By written agreement, the LLNL-Livermore Radiation Protection Functional Area Personnel Dosimetry Team records and maintains LLNL employee occupational dose provided by the NNSS RSPC.	This is outside the scope of the LANL Radiological Control Program. The LANL-New Mexico RP-2 Radiation Information Management Team records and maintains LANL employee occupational dose provided by the NNSS RSPC.	These data are maintained by the RSPC for SNL personnel.	Records generated by the RSPC for dosimetry services provided to N-I are maintained by the RSPC.	Data are maintained by the RSPC for DRI personnel. DRI maintains any copies as required by 29 CFR 1910.1020.	By written agreement, the RSPC provides dosimetry services to WSI-NV and maintains individual monitoring records.
702(h) All records required by this section shall be transferred to the DOE upon cessation of activities at the site that could cause	NNSS RCM 711.03. Upon cessation of activities that could result in the	By written agreement, the LLNL-Livermore Radiation Protection	This is outside the scope of the LANL Radiological Control Program. The	For SNL personnel primary dose records are maintained by	Records generated by the RSPC for dosimetry services provided to N-I are	Dosimetry services are provided to DRI by the RSPC (NNSS RCM	By written agreement, the RSPC provides dosimetry services

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exposure to individuals.	occupational exposure of individuals, all required records shall be transferred to NNSA/NSO.	Functional Area Personnel Dosimetry Team records and maintains LLNL employee occupational dose provided by the NNS RSPC.	LANL-New Mexico RP-2 Radiation Information Management Team records and maintains LANL employee occupational dose provided by the NNS RSPC.	Dosimetry Records Organization in Albuquerque.	maintained by the RSPC.	141.3.e) and records generated from these services are maintained by the RSPC, therefore the RSPC would be responsible for record transfer.	to WSI-NV and maintains individual monitoring records.
<p>835.703 Other Monitoring Records.</p> <p>The following information shall be documented and maintained:</p> <p>703(a) Results of monitoring for radiation and radioactive material as required by subpart E and L of this part, except for monitoring required by § 835.1102(d);</p>	<p>NNS RCM 751.1.01. Radiological control programs require the performance of radiation, airborne radioactivity, and contamination surveys to determine existing conditions in a given location.</p> <p>NNS RCM 751.2. Records shall be maintained to document the following information:</p> <p>a. Results of monitoring and surveys for radiation and radioactive materials.</p> <p>e. Results of surveys of radioactive material packages received from transportation.</p>	<p>Results of documented radiological surveys from Calendar Year 2010 to the present are provided to and maintained by the NNS RSPC.</p> <p>This is outside the scope of the LLNL Radiological Control Program.</p>	<p>Results of documented radiological surveys are provided to and maintained by the NNS RSPC.</p> <p>This is outside the scope of the LANL Radiological Control Program.</p> <p>The NNS RSPC provides trained and qualified RCTs to perform and document radiological surveys per NNS RSPC procedures compliant with 10 CFR 835.</p>	<p>SNL-NV depends on the expertise of the RSPC to perform radiological monitoring in the workplace, personnel monitoring, release of materials and equipment, and maintenance and calibration of instruments and individual monitoring devices. Records generated in performing these services are retained by the RSPC. SNL-NV retains summary reports provided by the RSPC following radiological activities.</p>	<p>Same as Column 2</p>	<p>DRI depends on the expertise of the RSPC to perform radiological monitoring in the workplace, personnel monitoring, release of materials and equipment, and maintenance and calibration of instruments and individual monitoring devices.</p> <p>Records generated in performing these services are retained by the RSPC. DRI retains summary reports provided by the RSPC following radiological activities.</p>	<p>By written agreement, the RSPC conducts monitoring for radiation and radioactive material. The RSPC will maintain all monitoring records.</p>

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703(b) Results of monitoring used to determine individual occupational dose from external and internal sources;	NNSS RCM 751.2. Records shall be maintained to document the following information: b. Results of monitoring and calculations used to determine individual occupational exposures.	By written agreement, the LLNL-Livermore Radiation Protection Functional Area Personnel Dosimetry Team records and maintains LLNL employee occupational dose provided by the NNSS RSPC.	This is outside the scope of the LANL Radiological Control Program. The LANL-New Mexico RP-2 Radiation Information Management Team records and maintains LANL employee occupational dose provided by the NNSS RSPC.	SNL-NV depends on the expertise of the RSPC to perform radiological monitoring in the workplace, personnel monitoring, release of materials and equipment, and maintenance and calibration of instruments and individual monitoring devices. Records generated in performing these services are retained by the RSPC. SNL-NV retains summary reports provided by the RSPC following radiological activities.	Same as Column 2. Records generated by the RSPC for dosimetry services provided to N-I are maintained by the RSPC.	DRI depends on the expertise of the RSPC to perform radiological monitoring in the workplace, personnel monitoring, release of materials and equipment, and maintenance and calibration of instruments and individual monitoring devices. Records generated in performing these services are retained by the RSPC. DRI retains summary reports provided by the RSPC following radiological activities.	By written agreement, the RSPC conducts monitoring and will maintain all monitoring records.
703(c) Results of monitoring for the release and control of material and equipment as required by § 835.1101; and	NNSS RCM 421.5. Results of monitoring for the release and control of material and equipment as required by Articles 421.1, 421.2, and 421.3 shall be documented and maintained. NNSS RCM 751.2. Records shall be	Results of documented radiological surveys from Calendar Year 2010 to the present are provided to and maintained by the NNSS RSPC. This is outside the scope of the LLNL Radiological Control Program.	Results of documented radiological surveys are provided to and maintained by the NNSS RSPC. This is outside the scope of the LANL Radiological Control Program.	SNL-NV depends on the expertise of the RSPC to perform radiological monitoring in the workplace, personnel monitoring, release of materials and equipment, and maintenance and calibration of instruments and individual monitoring devices. Records	Same as Column 2	Release surveys are obtained as a service from the RSPC. Records generated from these surveys are maintained by the RSPC.	By written agreement, the RSPC conducts monitoring and will maintain all monitoring records.

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	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
	maintained to document the following information: c. Results of surveys for release of materials from radiological areas.			generated in performing these services are retained by the RSPC. SNL-NV retains summary reports provided by the RSPC following radiological activities.			
703(d) Results of maintenance and calibration performed on instruments and equipment as required by § 835.401(b).	<p>NSS RCM 761.1. Calibration records for fixed, portable and laboratory radiation-measuring equipment and individual monitoring devices shall be maintained and include frequencies, method, dates, personnel, training, and traceability of calibration sources to NIST (see Article 562.1) or other acceptable standards.</p> <p>NSS RCM 761.4. Maintenance histories, corrective actions taken, and calibration results for each instrument shall be created and retained.</p>	The NSS RSPC provides instrument calibration services for the NSS and maintains the records of radiological survey instrument calibrations required by 10 CFR 835.401(b).	<p>This is outside the scope of the LANL Radiological Control Program.</p> <p>The NSS RSPC provides instrument calibration services for the NSS and maintains the records of radiological survey instrument calibrations in accordance with 10 CFR 835.</p>	SNL-NV depends on the expertise of the RSPC to perform radiological monitoring in the workplace, personnel monitoring, release of materials and equipment, and maintenance and calibration of instruments and individual monitoring devices. Records generated in performing these services are retained by the RSPC. SNL-NV retains summary reports provided by the RSPC following radiological activities.	Same as Column 2. Some calibrated instruments are provided by the RSPC. N-I maintains copies of the calibration certificates and records of routine performance testing.	DRI depends on the expertise of the RSPC to perform radiological monitoring in the workplace, personnel monitoring, release of materials and equipment, and maintenance and calibration of instruments and individual monitoring devices. Records generated in performing these services are retained by the RSPC. DRI retains summary reports provided by the RSPC following radiological activities.	Not applicable to WSI-NV. WSI-NV does not have radiation measuring instruments or equipment.
835.704 Administrative Records.	NSS RCM 725.1. The RSPC is specifically required	Radiological training is performed and documented by the	This is outside the scope of the LANL Radiological Control	Training records for SNL-NV personnel shall be maintained	The RSPC maintains all records of N-I radiological worker	Training records for DRI personnel shall be maintained by	Training records for WSI-NV shall be maintained by the

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704(a) Training records shall be maintained, as necessary, to demonstrate compliance with § 835.901.	to: c. Maintain a copy of worker training records, training materials, and revisions.	LLNL-Livermore Training Office or by the NNSS RSPC.	Program. This radiological training is performed and documented by LANL-New Mexico Training or by the NNSS RSPC.	by the organization providing the training.	training and N-I GERT training. N-I maintains records of Radiological Control Technician initial qualification, continuing training, and biennial requalification.	the organization providing the training.	organization providing the training.
704(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.	NNSS RCM 712.1. A radiological records management program shall be established by each NNSA/NSO TO. This program shall ensure that auditable records and reports are controlled through the stages of creation, distribution, use, arrangement, storage, retrieval, media conversion (if applicable), and disposition. The records management program shall include items a through k below, and should include the remaining items: d. ALARA records. (The records generated for the	The records generated for the NNSS Contractor's Site-Wide ALARA Committee (SWAC) shall be maintained by the RSPC.	ALARA design reviews are outside the scope of the LANL Radiological Control Program. The LANL-New Mexico RP-3 Radiological Engineering Team performs and documents the ALARA review of the design of new LANL facilities or the modification of existing LANL facilities. LANL performs and documents ALARA reviews of radiological jobs. The records generated for the NNSS Contractor's Site-Wide ALARA Committee (SWAC) shall be maintained by the RSPC.	The records generated for the NNSS Contractor's Site-Wide ALARA Committee (SWAC) shall be maintained by the RSPC.	Same as Column 2. The records generated for the NNSS Contractor's Site-Wide ALARA Committee (SWAC) shall be maintained by the RSPC. Records for the N-I internal ALARA Committee meetings are retained by N-I and are stored in Central Files.	Not applicable to DRI. Facility design and ALARA review are outside the scope of DRI NNSS activities. The records generated for the NNSS Contractor's Site-Wide ALARA Committee (SWAC) shall be maintained by the RSPC.	The records generated for the NNSS Contractor's Site-Wide ALARA Committee (SWAC) shall be maintained by the RSPC.

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	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
	NNSS Contractor's SWAC shall be maintained by the RSPC)						
704(c) Records shall be maintained to document the results of internal audits and other reviews of program content and implementation.	NNSS RCM 712.1.03. The records management program shall include items a through k below, and should include the remaining items: k. Records that document the results of internal audits, assessments, and other reviews of program content and implementation.	Same as Column 2	Same as Column 2	SNL-NV will participate in the NNSS RCM internal audit program. Records will be retained by the SNL-NV ES&H representative.	Same as Column 2. Results of internal and external audits and management assessments are also reviewed and stored by the N-I Quality Assurance group.	Cross reference NNSS RCM 712.1.03.k. DRI will participate in the NNSS RCM internal audit program. The RSPC will maintain the original copy of these assessments. Copies received by DRI will be retained by the DRI EH&S office for a minimum of three years after each assessment cycle has been completed.	Same as Column 2
704(d) Written declarations of pregnancy, including the estimated date of conception, and revocations of declarations of pregnancy shall be maintained.	NNSS RCM 723.2. Written declaration of pregnancy, including the estimated date of conception, and revocations of declaration of pregnancy shall be maintained.	Written declarations of pregnancy are maintained by LLNL-Livermore Occupational Medicine.	This is outside the scope of the LANL Radiological Control Program. Written declarations of pregnancy are maintained by LANL-New Mexico Occupational Medicine.	These records will be maintained by Albuquerque External Dosimetry Section.	Same as Column 2. These records are generated by N-I with copies submitted to and maintained by the RSPC.	DRI provides a copy of written declarations to the NNSS RSPC for their records and the original to the UNR RSO for inclusion in that individual's radiological records.	Same as Column 2
704(e) Changes in equipment, techniques, and procedures used for monitoring shall be documented.	NNSS RCM 551.3. The RCO shall document changes in equipment,	Same as Column 2	Same as Column 2	This service is provided to SNL-N by the RSPC.	Same as Column 2	Not applicable to DRI operations. This service is provided to DRI by the RSPC.	Not applicable to WSI-NV operations. By written agreement,

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	techniques, and procedures used for monitoring.						monitoring is provided by the RSPC. The RSPC is responsible for documenting changes in equipment, techniques, and procedures used for monitoring.
704(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.	NNSS RCM 755.01. Records shall be maintained as necessary to demonstrate compliance with Articles 431.01 and 431.2.a-e.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Sealed sources owned by DRI are licensed for use under the UNR Radioactive Material License number 16-13-0003-07. See UNR RSM Procedure III, Procedure VI, "Radiation Source Storage," and Procedure XII, "Leak Testing." The RSPC provides leak testing and inventory services for DRI sealed sources used and stored at the NNSS. Copies of these reports are forwarded to the UNR RSO upon receipt.	Not applicable to WSI-NV. WSI-NV is not a sealed radioactive source custodian and is not responsible for sealed radioactive source control, inventory, or source leak tests.
Subpart I-Reports to Individuals	NNSS RCM 781.1 Annual and Current Dosimetry Reports	LLNL has an agreement in place where the RSPC	The LANL-New Mexico RP-2 Radiation	This report shall be provided to SNL personnel by the	Records generated by the RSPC for dosimetry services	NNSS RCM 141.3.e and 781. Dosimetry services are	By written agreement, dosimetry services

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<p>835.801 Reports to individuals.</p> <p>801(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.</p>	<p>a. Personnel who are monitored by the personnel dosimetry program according to 10 CFR 835.402 shall be provided an annual report of their dose including the information required by 10 CFR 835.702(c). NNSC RCM 781.3. Reports of individual doses shall include the site or facility name, the individual's name and social security number or employee number or other unique identifiers.</p>	<p>provides dosimetry information to LLNL-Livermore who then generates all reports to individuals.</p>	<p>Information Management Team records and maintains LANL employee occupational dose provided by the NNSC RSPC.</p> <p>The LANL-New Mexico ESH-12 Radiation Information Management Team records and maintains LANL employee dose assessments.</p>	<p>Dosimetry Records Organization in Albuquerque.</p>	<p>provided to N-I are reported and maintained by the RSPC.</p>	<p>provided to DRI by RSPC. The RSPC mails these reports to the address of record for the monitored individual. If no address is on file, the reports are sent in sealed envelopes to DRI EH&S who then sends them on to the individual.</p>	<p>are provided by the RSPC.</p> <p>By written agreement, the RSPC provides dosimetry services to WSI-NV and maintains individual records.</p>
<p>801(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.</p>	<p>NNSC RCM 781.2. Termination Dosimetry Reports.</p> <p>a. 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.</p> <p>b. A written estimate of the radiation dose received by that employee based on</p>	<p>LLNL has an agreement in place where the RSPC provides dosimetry information to LLNL-Livermore who then generates all reports to individuals.</p>	<p>The LANL-New Mexico RP-2 Radiation Information Management Team records and maintains LANL employee occupational dose provided by the NNSC RSPC.</p>	<p>This report shall be provided to SNL personnel by the Dosimetry Records Organization in Albuquerque.</p>	<p>Records generated by the RSPC for dosimetry services provided to N-I are distributed and maintained by the RSPC.</p>	<p>NNSC RCM 141.3.e and 781.2. Dosimetry services are provided to DRI by RSPC. The RSPC mails these reports to the address of record for the monitored individual. If no address is on file, the reports are sent in sealed envelopes to DRI EH&S who then sends them on to the individual.</p>	<p>By written agreement, the RSPC provides dosimetry services to WSI-NV and maintains individual records.</p>

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	available information shall be provided at the time of termination, if requested.						
801(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.	NNSS RCM 781.1. Annual and Current Dosimetry Reports a. Personnel who are monitored by the personnel dosimetry program according to 10 CFR 835.402 shall be provided an annual report of their dose including the information required by 10 CFR 835.702(c).	LLNL has an agreement in place where the RSPC provides dosimetry information to LLNL-Livermore who then generates all reports to individuals.	The LANL-New Mexico RP-2 Radiation Information Management Team records and maintains LANL employee occupational dose provided by the NNSS RSPC.	This report shall be provided to SNL personnel by the Dosimetry Records Organization in Albuquerque.	Records generated by the RSPC for dosimetry services provided to N-I are reported and maintained by the RSPC.	NNSS RCM 141.3.e and 781.1. Dosimetry services are provided to DRI by RSPC. The RSPC mails these reports to the address of record for the monitored individual. If no address is on file, the reports are sent in sealed envelopes to DRI EH&S who then sends them on to the individual.	By written agreement, the RSPC provides dosimetry services to WSI-NV.
801(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).	NNSS RCM 781.1. Annual and Current Dosimetry Reports b. Detailed information concerning an individual's exposure shall be made available to that individual, upon request, consistent with the Privacy Act of 1974, which contains requirements to protect the privacy of individual records.	LLNL has an agreement in place where the RSPC provides dosimetry information to LLNL-Livermore who then generates all reports to individuals.	The LANL-New Mexico RP-2 Radiation Information Management Team records and maintains LANL employee occupational dose provided by the NNSS RSPC.	Provided by Dosimetry Records Organization in Albuquerque.	Records generated by the RSPC for dosimetry services provided to N-I are provided by the RSPC.	NNSS RCM 141.3.e and 781.1.b. Dosimetry services are provided to DRI by RSPC. The RSPC mails these reports to the address of record for the monitored individual. If no address is on file, the reports are sent in sealed envelopes to DRI EH&S who then sends them on to the individual.	Same as Column 2

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<p>801(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.</p>	<p>NNSS RCM 781.4. Reports of individual exposure to radiation or radioactive material required under DOE O 232.2, "Occurrence Reporting and Processing of Operations Information," shall be submitted to DOE or NNSA/NSO according to departmental occurrence reporting requirements. Copies of the individual dose information contained in these reports shall be provided to the affected individual at a time not later than transmittal of the report to the DOE or NNSA/NSO.</p>	<p>The requirement for a planned special exposure is outside the scope of LLNL activities. LLNL has an agreement in place where the RSPC provides dosimetry information to LLNL-Livermore who then generates all reports to individuals.</p>	<p>The requirement for a planned special exposure is outside the scope of LANL activities. The LANL-New Mexico RP-2 Radiation Information Management Team records and maintains LANL employee occupational dose provided by the NNSS RSPC.</p>	<p>Same as Column 2</p>	<p>Same as Column 2. N-I has established a reporting process.</p>	<p>Note: The requirement for a planned special exposure is outside the scope of DRI's NNSS activities and as such is not applicable.</p>	<p>Same as Column 2</p>
<p>Subpart J-Radiation Safety Training 835.901 Radiation Safety Training. 901(a) Each individual shall complete radiation safety training on the topics established at § 835.901(c) commensurate with</p>	<p>NNSS RCM 621. Individuals who may enter Controlled Areas and encounter radiological barriers, postings, or radioactive materials shall complete GERT unless RW-I,</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2- Note: DRI is in compliance with the training requirement. Except for GERT, which is done in-house using an RPSC-developed Web-Based Training</p>	<p>Same as Column 2</p>

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<p>the hazards in the area and the required controls:</p> <p>(1) Before being permitted unescorted access to controlled areas; and</p> <p>(2) Before receiving occupational dose during access to controlled areas at a DOE site or facility.</p>	<p>RW-II, or RCT training is current. This training shall be successfully completed before receiving occupational radiation dose.</p> <p>NNSS RCM 612.3.02. Documentation of previous training shall include the individual's name, date of training, topics covered, and the name of the certifying official.</p>					<p>(WBT), training is provided by the RSPC. GERT records are submitted to the RPSC, and with the balance of training generated by them, records are maintained by the RSPC. Records received by DRI attendees are entered into a training database by the DRI Classified and Unclassified Security Officer or designee.</p>	
<p>901(b) Each individual shall demonstrate knowledge of the radiation safety training topics established in § 835.901(c), commensurate with the hazards in the area and required controls, by successful completion of an examination and performance demonstrations:</p> <p>(1) Before being permitted unescorted access to radiological areas; and</p> <p>(2) Before performing unescorted assignments as a radiological worker.</p>	<p>NNSS RCM 613.1.01. Examinations for RW-I and RW-II training and RCT qualification shall be used to demonstrate knowledge of the radiation-safety training topics presented in the course material.</p> <p>NNSS RCM 613.1.04. The examination process should require:</p> <p>d. In addition to an examination, RW-I, RW-II, and RCT personnel in training</p>	<p>Radiological training is performed and documented by the LLNL-Livermore Training Office or by the NNSS RSPC.</p>	<p>This is outside the scope of the LANL Radiological Control Program. This radiological training is performed and documented by LANL-New Mexico Training or by the NNSS RSPC.</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2- Note: DRI is in compliance with this training requirement. Except for GERT, which is done in-house using an RPSC-developed WBT, training is provided by the RSPC. GERT records are submitted to the RPSC, and with the balance of training generated by them, records are maintained by the RSPC. Records</p>	<p>Same as Column 2</p>

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	<p>classes shall be required to complete performance demonstrations commensurate with their duties.</p> <p>NNSS RCM 631.1. RW-I or RW-II training is required for unescorted entry into areas as stated in Table 6-1.</p> <p>NNSS RCM 632.01. Workers whose job assignments involve working with radioactive materials or entry into Radiation Areas or RMAs and URMAs (greater than 100 mrem/yr), shall complete RW-I training.</p> <p>NNSS RCM 632.2.01. Unescorted access to High Radiation Areas is permitted upon successful completion of RSPC or equivalent RW-I training.</p> <p>NNSS RCM 633. Workers whose job assignments involve</p>					<p>received by DRI attendees are entered into a training data base by the DRI Classified and Unclassified Security Officer or designee.</p>	
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	entry to Contamination Areas, High Contamination Areas, and Airborne Radioactivity Areas shall complete RW-II training. See Table 6-1.						
<p>901(c) Radiation safety training shall include the following topics, to the extent appropriate to each individual's prior training, work assignments, and degree of exposure to potential radiological hazards:</p> <p>(1) Risks of exposure to radiation and radioactive materials, including prenatal radiation exposure;</p> <p>(2) Basic radiological fundamentals and radiation protection concepts;</p> <p>(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;</p> <p>(4) Individual rights and responsibilities as related to implementation of the facility radiation protection program;</p> <p>(5) Individual responsibilities for implementing ALARA measures required by § 835.101; and</p>	<p>NNSS RCM 612.1. Standardized core course training material shall be used for GERT, RW-I, RW-II, and RCT training. The standardized core courses are presented and site-specific information is added.</p>	<p>This is outside the scope of the LLNL Radiological Control Program. This radiological training is performed and documented by LLNL-Livermore or by the NNSS RSPC.</p>	<p>This radiological training is performed and documented by LANL-New Mexico Training or by the NNSS RSPC. LANL is responsible to assure that radiological training is current (has been performed within the previous 24 months).</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Not applicable to DRI Radiation Safety Training content is not developed by DRI as radiation safety training for DRI employees is provided by the RSPC and/or the UNR RSO dependent on what the affected employee's job entails.</p>	<p>WSI-NV or the RSPC may provide GERT training for WSI-NV employees. The RSPC provides RW-I and RW-II training.</p>

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	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
(6) Individual exposure reports that may be requested in accordance with § 835.801.							
<p>901(d) When an escort is used in lieu of training in accordance with paragraph (a) or (b) of this section, the escort shall:</p> <p>(1) Have completed radiation safety training, examinations, and performance demonstrations required for entry to the area and performance of the work; and</p> <p>(2) Ensure that all escorted individuals comply with the documented radiation protection program.</p>	<p>NNSS RCM 657. When an escort is used in lieu of training according to Chapter 3, Part 3, "Entry and Exit Requirements" (Articles 331, 333, 334, 335, 336, and 365), the escort shall:</p> <p>1. Have completed radiation safety training, examinations, and performance demonstrations required for entry into the area and performance of the work.</p> <p>2. Ensure that all escorted individuals comply with the documented radiation protection program.</p>	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2
<p>901(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)</p>	<p>NNSS RCM 613.3. GERT, RW-I, RW-II, and RCT training shall be completed every 24 months.</p> <p>a. Changes to the program shall be incorporated as they are identified and a</p>	Radiological training is performed and documented by the LLNL-Livermore Training Office or by the RSPC.	This radiological training is performed and documented by LANL-New Mexico Training or by the NNSS RSPC.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2

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and (b) (2) shall include successful completion of an examination.	decision made by the RadCon Managers' Council whether retraining before the expiration of the 24-month period is needed.						
835.902-835.903 [Reserved]							
<p>Subpart K--Design and Control.</p> <p>835.1001 Design and control.</p> <p>1001(a) Measures shall be taken to maintain radiation exposure in controlled areas ALARA through engineered and administrative controls. 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.</p>	<p>NSS RCM 311</p> <p>1. Measures shall be taken to maintain radiation exposure in controlled areas ALARA through engineered and administrative controls.</p> <p>2. The primary methods used shall be engineered controls (e.g., confinement, ventilation, remote handling, and shielding).</p> <p>3. Administrative controls shall be employed only as supplemental methods to control radiation exposure.</p>	<p>Actions taken to maintain personnel exposures ALARA through administrative controls are documented through the NSS RPP LLNL Appendix B, Section 4.0 ALARA Commitment and NSS RPP Narrative Section 7.0 ALARA Program. LLNL will be responsible for looking at all ALARA reviews made on the design of all facilities for which LLNL has operational responsibility and commenting on and providing appropriate input to the review process.</p>	<p>LANL and the LANL-New Mexico RP-3 Radiological Engineering Team will perform and document the ALARA reviews of the design of new NSS facilities or the modification of existing NSS facilities by LANL.</p>	<p>Same as Column 2</p>	<p>Same as Column 2.</p> <p>Also, NSS RCM 316.2. Administrative controls, including access restrictions and the use of specific work practices designed to minimize airborne radioactivity, shall be used as the secondary method to minimize worker internal exposure.</p>	<p>Not applicable to DRI. Facility and equipment design to achieve ALARA are outside the scope of DRI activities.</p> <p>Actions taken to maintain personnel exposures ALARA through administrative controls are documented through DRI Appendix F, Section 4.0 ALARA Commitment and NSS RPP Narrative Section 7.0, ALARA Program.</p>	<p>Facility and equipment design and control to maintain radiation exposure in controlled areas ALARA is beyond the scope of WSI-NV radiological control responsibilities. The WSI-NV ES&H section will review all operations including WSI-NV personnel to maintain radiation exposure ALARA.</p> <p>WSI-NV will comply with all administrative controls employed by the TO with radiological control responsibilities.</p>
1001(b) For specific activities where use of-engineered controls	NSS RCM 311.4. For specific	Actions taken to maintain personnel	LANL and the LANL-New Mexico	NSS RCM 311 Technical	Same as Column 2	NSS RCM 311 Technical	NSS RCM 311 Technical

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<p>is demonstrated to be impractical, administrative controls shall be used to maintain radiation exposures ALARA.</p>	<p>activities where use of engineered controls is demonstrated to be impractical, administrative controls shall be used to maintain radiation exposures ALARA.</p>	<p>exposures ALARA through administrative controls are documented through NNSS RPP LLNL Appendix B, Section 4.0 ALARA Commitment and NNSS RPP Narrative Section 7.0 ALARA Program.</p>	<p>RP-3 Radiological Engineering Team will perform and document the ALARA review of the design of new LANL facilities or the modification of existing LANL facilities.</p>	<p>requirements for the conduct of work, including construction, modifications, operations, maintenance, and decommissioning shall incorporate radiological criteria to ensure safety and maintain radiation exposures ALARA. The primary methods used to maintain exposures ALARA shall be facility and equipment design features. These features shall be augmented by administrative and procedural requirements. The design and planning processes shall incorporate radiological considerations in the early planning stages.</p>		<p>requirements for the conduct of work, including construction, modifications, operations, maintenance, and decommissioning shall incorporate radiological criteria to ensure safety and maintain radiation exposures ALARA. The primary methods used to maintain exposures ALARA shall be facility and equipment design features. These features shall be augmented by administrative and procedural requirements. The design and planning processes shall incorporate radiological considerations in the early planning stages.</p>	<p>requirements for the conduct of work, including construction, modifications, operations, maintenance, and decommissioning shall incorporate radiological criteria to ensure safety and maintain radiation exposures ALARA. The primary methods used to maintain exposures ALARA shall be facility and equipment design features. These features shall be augmented by administrative and procedural requirements. The design and planning processes shall incorporate radiological considerations in the early planning stages.</p>
<p>835.1002 Facility design and modifications. During the design of new facilities or modification of existing facilities, the following objectives shall be adopted:</p>	<p>NNSS RCM 312.9. Optimization methods shall be used to ensure that occupational exposure is maintained ALARA</p>	<p>LLNL will be responsible for reviewing all ALARA reviews made on the design of all facilities for which LLNL has</p>	<p>This is outside the scope of the LANL Radiological Control Program. LANL and the LANL-New Mexico</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Not applicable to DRI. Facility and equipment design to achieve ALARA are outside the scope of DRI activities.</p>	<p>Not applicable to WSI-NV operations. Facility design and modifications are outside the scope of WSI-NV radiological control</p>

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1002(a) Optimization methods shall be used to assure that occupational exposure is maintained ALARA in developing and justifying facility design and physical controls.	in developing and justifying facility design and physical controls for new facilities or modifications of existing facilities.	operational responsibility and commenting on and providing appropriate input to the review process.	RP-3 Radiological Engineering Team will perform and document the ALARA review of the design of new LANL facilities or the modification of existing LANL facilities.				responsibilities.
1002(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 millirem (5 µSv) 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.	NNSS RCM 128.1. General design criteria for new facilities and major modifications to existing facilities are contained in 10 CFR 835 and DOE O 420.1C, "Facility Safety." In addition, the following radiological control design criteria are provided for new facilities and major modifications to existing facilities: a. For areas of continuous occupancy (2,000 hours per year), the design objective shall be to maintain the average exposure levels ALARA and shall not exceed 0.5 mrem per hour.	LLNL will be responsible for reviewing all ALARA reviews made on the design of all facilities for which LLNL has operational responsibility and commenting on and providing appropriate input to the review process.	This is outside the scope of the LANL Radiological Control Program. LANL and the LANL-New Mexico RP-3 Radiological Engineering Team will perform and document the ALARA review of the design of new LANL facilities or the modification of existing LANL facilities.	Same as Column 2	Same as Column 2	Not applicable to DRI. Facility and equipment design to achieve ALARA are outside the scope of DRI activities.	Not applicable to WSI-NV operations. Facility design and modifications are outside the scope of WSI-NV radiological control responsibilities.

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	b. If occupancy is not continuous, the design objective shall be to maintain doses ALARA and shall not exceed 20 percent of the occupational dose limits provided in Table 2-1.						
1002(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.	NNSS RCM 316.1. Engineered controls, including containment of radioactive material at the source, shall be the primary method of minimizing airborne radioactivity and internal exposure to workers.	LLNL will be responsible for reviewing all ALARA reviews made on the design of all facilities for which LLNL has operational responsibility and commenting on and providing appropriate input to the review process.	This is outside the scope of the LANL Radiological Control Program. LANL and the LANL-New Mexico RP-3 Radiological Engineering Team will perform and document the ALARA review of the design of new LANL facilities or the modification of existing LANL facilities.	Same as Column 2	Same as Column 2	Not applicable to DRI. Facility and equipment design to achieve ALARA are outside the scope of DRI activities.	Not applicable to WSI-NV operations. Facility design and modifications are outside the scope of WSI-NV radiological control responsibilities.
1002(d) The design or modification of a facility and the selection of materials shall include features that facilitate operations, maintenance, decontamination, and decommissioning.	NNSS RCM 128.1.e. Efficiency of maintenance, decontamination, operations, and decommissioning shall be maximized.	LLNL will be responsible for reviewing all ALARA reviews made on the design of all facilities for which LLNL has operational responsibility and commenting on and providing appropriate input to	This is outside the scope of the LANL Radiological Control Program. LANL and the LANL-New Mexico RP-3 Radiological Engineering Team will perform and document the ALARA review of the design of new	Same as Column 2	Same as Column 2	Not applicable to DRI. Facility and equipment design to achieve ALARA are outside the scope of DRI activities.	Not applicable to WSI-NV operations. Facility design and modifications are outside the scope of WSI-NV radiological control responsibilities.

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		the review process.	LANL facilities or the modification of existing LANL facilities.				
<p>835.1003 Workplace controls</p> <p>During routine operations, the combination of engineered and administrative controls shall provide that:</p> <p>1003(a) The anticipated occupational dose to general employees shall not exceed the limits established at § 835.202;and</p>	<p>NNSS RCM 213.1. Except for emergency exposures authorized according to 10 CFR 835.1302, the occupational dose received by general employees shall be controlled such that the following limits are not exceeded in a year.</p> <p>a. A TED of 5 rem (0.05 sievert);</p> <p>b. The sum of the equivalent dose to the whole body for external exposures and the committed equivalent dose to any organ or tissue other than the skin or the lens of the eye of 50 rem (0.5 sievert);</p> <p>c. An equivalent dose to the lens of the eye of 15 rem (0.15 sievert);</p> <p>d. The sum of the equivalent dose to the skin or to an</p>	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2

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	<p>extremity for external exposures and the committed equivalent dose to the skin or to any extremity of 50 rem (0.5 sievert).</p> <p>Equivalent dose to the whole body may be used as the effective dose for external exposures. The TED during a year shall be determined by summing the effective dose from external exposures and the committed effective dose (CED) from intakes during the year and shall be used when demonstrating compliance with Table 2-1 dose limits. All occupational doses received during the current year except emergency exposures authorized according to 10 CFR 835.1302 shall be included. Occupational dose limits are summarized in Table 2-1.</p>						
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	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
	NNSS RCM 311.5. During routine operations, the combination of engineered and administrative controls shall provide that the anticipated occupational dose to general employees shall not exceed the limits established in Table 2-1 and that doses are maintained ALARA.						
1003(b) The ALARA process is utilized for personnel exposures to ionizing radiation.	NNSS RCM 111.03. As Low As Reasonably Achievable: Radiation exposure of the work force and public shall be controlled such that radiation exposures are maintained within acceptable limits and as far below these limits as is reasonably achievable.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2 Also see N-I Appendix E, Section 4.0 ALARA Commitment	DRI Appendix F, Section 4.0 ALARA Commitment	Same as Column 2
Subpart L-Radioactive Contamination Control. 835.1101 Control of material and equipment. 1101(a) Except as provided in paragraphs (b) and (c) of this	NNSS RCM 421.1. Except as provided in Articles 421.2 and 421.3, material and equipment in Contamination Areas, High	Same as Column 2	Same as Column 2	SNL-NV does not release materials and equipment from radiological areas at NNSS. This service is provided for SNL by the RSPC.	Same as Column 2	Not applicable. DRI does not release materials and equipment from radiological areas at NNSS. This service is provided to DRI by	Not applicable. Release of material and equipment is beyond the scope of WSI-NV radiological control responsibilities.

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	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
<p>section, material and equipment in contamination areas, high contamination areas, and airborne radioactivity areas shall not be released to a controlled area if:</p> <p>(1) Removable surface contamination levels on accessible surfaces exceed the removable surface contamination values specified in appendix D of this part; or</p> <p>(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.</p>	<p>Contamination Areas, and Airborne Radioactivity Areas shall not be released to a Controlled Area if:</p> <p>a. Removable surface contamination levels on accessible surfaces exceed the removable surface contamination values specified in Table 4-2.</p> <p>b. Prior use suggests that the removable surface contamination levels on the inaccessible surfaces are likely to exceed the removable surface contamination values specified in Table 4-2.</p>					the RSPC.	
<p>1101(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.</p>	<p>NNSS RCM 421.3. Material and equipment exceeding the removable contamination values specified in Table 4-2 may be conditionally released for movement onsite from one radiological area for immediate</p>	Same as Column 2	Same as Column 2	SNL-NV does not release materials and equipment from radiological areas at NNSS. This service is provided for SNL by the RSPC.	Same as Column 2	Not applicable. DRI does not release materials and equipment from radiological areas at NNSS. This service is provided to DRI by the RSPC.	Not applicable. Release of material and equipment is beyond the scope of WSI-NV radiological control responsibilities.

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	placement in another radiological area only if appropriate monitoring is performed and appropriate controls for movement are established and exercised.						
<p>1101(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:</p> <p>(1) Removable surface contamination levels are below the removable surface contamination values specified in appendix D of this part; and</p> <p>(2) The material or equipment is routinely monitored and clearly marked or labeled to alert personnel of the contaminated status.</p>	<p>NNSS RCM 421.2. Material and equipment with fixed contamination levels that exceed the total surface contamination values specified in Table 2-2 may be released for use in Controlled Areas outside of radiological areas only under the following conditions:</p> <p>a. Removable surface contamination levels are below the removable surface contamination values specified in Table 2-2.</p> <p>b. The material or equipment is routinely monitored and clearly marked</p>	Same as Column 2	Same as Column 2	SNL-NV does not release materials and equipment from radiological areas at NNSS. This service is provided for SNL by the RSPC.	Same as Column 2	Not applicable. DRI does not release materials and equipment from radiological areas at NNSS. This service is provided to DRI by the RSPC.	Not applicable. Release of material and equipment is beyond the scope of WSI-NV radiological control responsibilities.

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	or labeled to alert personnel of the contaminated status.						
<p>835.1102 Control of areas.</p> <p>1102(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.</p>	<p>NNSS RCM 337.01. Controls shall be implemented as necessary to prevent the spread of removable contamination outside of Contamination Areas, High Contamination Areas, and Airborne Radioactivity areas under normal operating conditions.</p> <p>NNSS RCM 551.1. Monitoring of individuals and areas shall be performed to:</p> <p>e. Verify the effectiveness of engineered and administrative controls in containing radioactive material and reducing radiation exposures.</p>	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	<p>Not applicable. WSI-NV does not have any radiological areas under its jurisdiction. WSI-NV will comply with all controls employed by the RSPC or TO who has radiological control responsibilities for an area.</p>
<p>1102(b) Any area in which contamination levels exceed the values specified in appendix D of this part shall be controlled in a</p>	<p>NNSS RCM 235.1. Areas shall be posted to alert personnel to</p>	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	<p>Not applicable. WSI-NV does not have any radiological areas</p>

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manner commensurate with the physical and chemical characteristics of the contaminant, the radionuclides present, and the fixed and removable surface contamination levels.	contamination according to Table 2-4 and Article 231. 2. The physical and chemical characteristics of, and the radionuclides present in, the contamination will be considered in determining the limiting conditions and/or access controls to be specified on the RWP.						under its jurisdiction. WSI-NV will comply with all controls employed by the RSPC or TO who has radiological control responsibilities for an area.
1102(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.	NNSS RCM 222.3. Areas or items 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 Table 2-2, shall be controlled as follows when located outside of radiological areas: a. The area or item shall be routinely	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not applicable. WSI-NV does not have any radiological areas under its jurisdiction. WSI-NV will comply with all controls employed by the RSPC or TO who has radiological control responsibilities for an area.

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	monitored to ensure the removable surface contamination level remains below the removable surface contamination values specified in Table 2-2. b. The area or item shall be conspicuously marked to warn individuals of the contaminated status.						
1102(d) Individuals exiting contamination, high contamination, or airborne radioactivity areas shall be monitored, as appropriate, for the presence of surface contamination.	NNSS RCM 338.1. Individuals exiting Contamination, High Contamination, or Airborne Radioactivity Areas shall be monitored, as appropriate, for the presence of surface contamination.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Not applicable. WSI-NV does not have any radiological areas under its jurisdiction. WSI-NV will comply with all controls employed by the RSPC or TO who has radiological control responsibilities for an area.
1102(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.	NNSS RCM 325.1. Personnel shall wear PC during the following activities: a. Handling of contaminated materials with removable	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2 and/or as directed by the RCO or as required by the RWP. See also NNSS RCM Appendix 3B,	Maintaining and verifying appropriate controls, such as use of protective clothing, are beyond the scope of WSI-NV radiological control responsibilities.

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	contamination in excess of Table 2-2 levels. b. Work in Contamination, High Contamination, and Airborne Radioactivity Areas.					Table 3B-1.	WSI-NV will comply with all controls employed by the RSPC or TO who has radiological control responsibilities for an area.
<p>Subpart M—Sealed Radioactive Source Control</p> <p>835.1201 Sealed Radioactive Source Control.</p> <p>Sealed radioactive sources shall be used, handled, and stored in a manner commensurate with the hazards associated with operations involving sources.</p>	NNSS RCM 431.01. Sealed radioactive sources shall be used, handled, and stored in a manner commensurate with the hazards associated with operations involving the sources.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2
<p>835.1202 Accountable Sealed Radioactive Sources.</p> <p>1202(a) Each accountable sealed radioactive source shall be inventoried at intervals not to exceed six months. This inventory shall:</p> <p>(1) Establish the physical location of each accountable sealed radioactive source;</p> <p>(2) Verify the presence and adequacy of associated postings and labels; and</p> <p>(3) Establish the adequacy of storage locations, containers, and devices.</p>	<p>NNSS RCM 431.3. The requirements for inventory and leak testing of accountable sealed sources are:</p> <p>a. Each accountable sealed radioactive source shall be inventoried at intervals not to exceed six months. The inventory shall:</p> <p>(1) Establish the physical location of each accountable sealed radioactive source.</p>	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Sealed sources owned by DRI are licensed for use under the UNR Radioactive Material License number 16-13-0003-07. See UNR RSM Procedure III. The RSPC provides inventory services for DRI sealed sources used and stored at the NNSS. Copies of these reports are forwarded to the UNR RSO upon receipt.	Not applicable to WSI-NV operations. WSI-NV does not maintain custody of accountable sealed sources used in its operations; therefore, the inventory of accountable sealed radioactive sources is beyond the scope of WSI-NV radiological control responsibilities.

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	(2) Verify the appropriate postings and labels. (3) Establish the adequacy of storage locations, containers, and devices.						
1202(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 µCi.	NNSS RCM 431.3. The requirements for inventory and leak testing of accountable sealed sources are: b. Except for sealed radioactive sources consisting solely of gaseous radioactive material or tritium, each accountable sealed radioactive source shall be leak tested 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 ≥ 0.005 µCi.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Sealed sources owned by DRI are licensed for use under the UNR Radioactive Material License number 16-13-0003-07. See UNR RSM Procedure XII. The RSPC provides leak testing services for DRI sealed sources used and stored at the NNSS. Copies of these reports are forwarded to the UNR RSO upon receipt.	Not applicable to WSI-NV operations. WSI-NV does not maintain custody of accountable sealed sources used in its operations; therefore source leak tests are beyond the scope of WSI-NV radiological control responsibilities.
1202(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	NNSS RCM 431.3. The requirements for inventory and leak testing of accountable sealed sources are:	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Sealed sources owned by DRI are licensed for use under the UNR Radioactive Material License number 16-	Not applicable to WSI-NV operations. WSI-NV does not maintain custody of accountable sealed sources used in its

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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.	c. An accountable sealed radioactive source that has been removed from service is not subject to periodic leak testing. It must, however be stored in a controlled location and be inventoried according to Article 431.3a. An accountable sealed radioactive source must be leak tested before restoring it to service.					13-0003-07. See UNR RSM Procedure XII. The RSPC provides leak testing and inventory services for DRI sealed sources used and stored at the NNSS. Copies of these reports are forwarded to the UNR RSO upon receipt.	operations; therefore, source leak tests are beyond the scope of WSI-NV radiological control responsibilities.
1202(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.	NNSS RCM 431.3. The requirements for inventory and leak testing of accountable sealed sources are: d. An accountable sealed radioactive source that is located in an area that is unsafe for human entry or is inaccessible is not subject to inventory or leak testing requirements.	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Sealed sources owned by DRI are licensed for use under the UNR Radioactive Material License number 16-13-0003-07. See UNR RSM Procedure XII.	Not applicable to WSI-NV operations. WSI-NV does not maintain custody of accountable sealed sources used in its operations; therefore, source leak tests are beyond the scope of WSI-NV radiological control responsibilities.
1202(e) An accountable sealed radioactive source found to be leaking radioactive material shall be controlled in a manner that	NNSS RCM 431.3. The requirements for inventory and leak testing of	Same as Column 2	Same as Column 2	Same as Column 2	Same as Column 2	Any sealed source used by DRI fall under the UNR Radioactive Material	Not applicable to WSI-NV operations. WSI-NV does not maintain custody of

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minimizes the spread of radioactive contamination.	accountable sealed sources are: e. An accountable sealed radioactive source found to be leaking radioactive material at any level of measured contamination shall be controlled in a manner that minimizes the spread of contamination.					License number 16-13-0003-07. The RSPC provides leak testing services for DRI. Any sealed source found to be leaking must be immediately reported to the UNR RSO, who will make the required notifications to the state and will deal with the situation per UNR RSM Procedure XII.	accountable sealed sources used in its operations; therefore, source leak tests are beyond the scope of WSI-NV radiological control responsibilities.
<p>Subpart N--Emergency Exposure Situations</p> <p>835.1301 General provisions.</p> <p>1301(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:</p> <p>(1) Approval is first obtained from the contractor management and the Head of the responsible DOE field organization;</p> <p>(2) The individual receives counseling from radiological protection and medical personnel</p>	<p>NNSS RCM 213.5. A general employee whose occupational dose has exceeded any of the limits specified in Table 2-1 or Appendix 2C, Table 2C-1, 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:</p> <p>a. Approval is first obtained from the TO SSE and the NNSA/NSO</p>	<p>Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of LLNL activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal</p>	<p>This is outside the scope of the LANL Radiological Control Program.</p> <p>Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of LANL activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards</p>	<p>Same as Column 2</p>	<p>Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of N-I activities. N-I will not conduct activities which could result such emergency operations without revision and subsequent approval of this RPP.</p>	<p>Not applicable to DRI. Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of DRI activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by</p>	<p>WSI-NV does not have a procedure for emergency exposure situations. In the unlikely event that this situation did occur, WSI-NV would follow the requirements in NNSC RCM 213.5.</p>

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<p>regarding the consequences of receiving additional occupational exposure during the year; and (3) The affected employee agrees to return to radiological work.</p>	<p>Manager. b. The individual receives counseling from radiological protection and medical personnel regarding the consequences of receiving additional occupational exposure during the year. c. The affected employee agrees to return to radiological work.</p>	<p>protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.</p>	<p>could not be mitigated by engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.</p>			<p>engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.</p>	
<p>1301(b) All doses exceeding the limits specified in § 835.202 shall be recorded in the affected individual's occupation dose record.</p>	<p>NNSS RCM 722.1.01. Records of doses received by all individuals for whom individual monitoring was performed shall be recorded in the individual's occupational dose record and shall be maintained by the RSPC.</p>	<p>Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of LLNL activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal</p>	<p>This is outside the scope of the LANL Radiological Control Program. Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of LANL activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards</p>	<p>These records shall be maintained by the dosimetry records section in Albuquerque.</p>	<p>Emergency exposures are outside of the scope of N-I work.</p>	<p>Not applicable to DRI. Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of DRI activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by</p>	<p>By written agreement, the RSPC provides dosimetry services to WSI-NV and maintains dosimetry records generated from these services.</p>

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		protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.	could not be mitigated by engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.			engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.	
1301(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.	NNSC RCM Appendix 2A, Table 2A-1 Note 3.01. When the condition under which a dose was received in excess of the limits specified in 10 CFR 835.202 has been eliminated, operating management shall notify the NNSA/NSO Manager.	Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of LLNL activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures	This is outside the scope of the LANL Radiological Control Program. Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of LANL activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal	Same as Column 2	Emergency exposures are outside of the scope of N-I work.	Not applicable to DRI. Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of DRI activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal protective equipment sufficient to avoid the	Not applicable to WSI-NV operations. Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of WSI-NV activities.

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		in excess of the 10 CFR 835.202 Occupational Exposure Limits.	protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.			requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.	
1301(d) Operations which have been suspended as a result of a dose 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 the DOE	NNSC RCM Appendix 2-A, Table 2A-1 Note 3.02. Operations after a dose was received in excess of the limits specified in 10 CFR 835.202 may be resumed only with the approval of NNSA/NSO.	Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of LLNL activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202	This is outside the scope of the LANL Radiological Control Program. Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of LANL activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures	Same as Column 2	Emergency exposures are outside of the scope of N-I work.	Not applicable to DRI. Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of DRI activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures	Not applicable to WSI-NV operations. Operations which could potentially require emergency exposures to personnel in excess of the limits specified in 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of WSI-NV activities.

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		Occupational Exposure Limits.	in excess of the 10 CFR 835.202 Occupational Exposure Limits.			in excess of the 10 CFR 835.202 Occupational Exposure Limits.	
<p>835.1302 Emergency exposure situations.</p> <p>1302(a) The risk of injury to those individuals involved in rescue and recovery operations shall be minimized.</p>	<p>NSS RCM 213.4.02. For compliance with 10 CFR 835.1302, in emergency exposure situations the following must apply:</p> <p>a. The risk of injury to those individuals involved in rescue and recovery operations shall be minimized.</p>	<p>Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of LLNL activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.</p>	<p>This is outside the scope of the LANL Radiological Control Program.</p> <p>Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of LANL activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.</p>	<p>There are currently no operations being performed at SNL/NNSS facilities, operations or processes wherein emergency exposures to personnel in excess of 10 CFR 835.202 occupational dose limits can be envisioned. "SNL Radiological Protection Procedures Manual, MN 471016, Chapter 11, Radiological Incidents, Section 4.12 Emergency Exposure Situations" implements the requirements of 10 CFR 835.1302.</p>	<p>Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of N-I activities. N-I will not conduct activities which could result such emergency operations without revision and subsequent approval of this RPP.</p>	<p>Not applicable to DRI. Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of DRI activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.</p>	<p>Not applicable to WSI-NV operations. WSI-NV has a contractual agreement with NNSA/NSO that precludes rescue and recovery activities, or other activities that may result in emergency exposure situations. Rescue and recovery operations for security related incidents are delegated to the Federal Bureau of Investigation through a Memorandum of Agreement.</p>

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1302 (b) Operating management shall weigh actual and potential risks against the benefits to be gained.	NNSS RCM 213.4.02. For compliance with 10 CFR 835.1302, in emergency exposure situations, the following must apply: b. Operating management shall weigh actual and potential risks against the benefits to be gained.	Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of LLNL activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.	This is outside the scope of the LANL Radiological Control Program. Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of LANL activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.	There are currently no operations being performed at SNL/NNSS facilities, operations or processes wherein emergency exposures to personnel in excess of 10 CFR 835.202 occupational dose limits can be envisioned. "SNL Radiological Protection Procedures Manual, MN 471016, Chapter 11, Radiological Incidents, Section 4.12 Emergency Exposure Situations" implements the requirements of 10 CFR 835.1302.	Emergency exposures are outside of the scope of N-I work.	Not applicable to DRI. Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of DRI activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.	Not applicable to WSI-NV operations. WSI-NV has a contractual agreement with NNSA/NSO that precludes rescue and recovery activities, or other activities that may result in emergency exposure situations. Rescue and recovery operations for security related incidents are delegated to the Federal Bureau of Investigation through a Memorandum of Agreement.
1302 (c) No individual shall be required to perform rescue action that might involve substantial personal risk.	NNSS RCM 213.4.02. For compliance with 10 CFR 835.1302, in	Operations which could potentially require emergency exposures to	This is outside the scope of the LANL Radiological Control Program.	There are currently no operations being performed at SNL/NNSS facilities,	Emergency exposures are outside of the scope of N-I work.	Not applicable to DRI. Operations which could potentially require	Not applicable to WSI-NV operations. WSI-NV has a contractual

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	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference

	<p>emergency exposure situations, the following must apply:</p> <p>c. No individual shall be required to perform rescue action that might involve substantial personal risk.</p>	<p>personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of LLNL activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.</p>	<p>Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of LANL activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.</p>	<p>operations or processes wherein emergency exposures to personnel in excess of 10 CFR 835.202 occupational dose limits can be envisioned. "SNL Radiological Protection Procedures Manual, MN 471016, Chapter 11, Radiological Incidents, Section 4.12 Emergency Exposure Situations" implements the requirements of 10 CFR 835.1302.</p>		<p>emergency exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of DRI activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.</p>	<p>agreement with NNSA/NSO that precludes rescue and recovery activities, or other activities that may result in emergency exposure situations. Rescue and recovery operations for security related incidents are delegated to the Federal Bureau of Investigation through a Memorandum of Agreement.</p>
<p>1302(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)</p>	<p>NNSC RCM 213.4.02. For compliance with 10 CFR 835.1302, in emergency exposure situations, the following must</p>	<p>Operations which could potentially require emergency exposures to personnel in excess of the 10 CFR 835.202,</p>	<p>This is outside the scope of the LANL Radiological Control Program. Operations which could potentially require emergency</p>	<p>In the extremely unlikely case that an SNL-NV employee should be exposed to high levels of radiation during an emergency, that</p>	<p>Emergency exposures are outside of the scope of N-I work.</p>	<p>Not applicable to DRI. Operations which could potentially require emergency exposures to personnel in excess</p>	<p>Not applicable to WSI-NV operations.</p>

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<p>and briefed beforehand on the known or anticipated hazards to which the individual will be subjected.</p>	<p>apply: d. Each individual authorized to perform emergency actions likely to result in occupational doses exceeding the values of the limits provided in 10 CFR 835.202(a) shall be trained according to 10 CFR 835.901(b) and briefed beforehand on the known or anticipated hazards to which the individual will be subjected.</p>	<p>Occupational Exposure Limits, are outside the scope of LLNL activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.</p>	<p>exposures to personnel in excess of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of LANL activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.</p>	<p>individual shall have been trained at the Radiation Worker II level and shall be briefed beforehand on the known or anticipated hazards to which the individual will be subjected. Such rescue and recovery action shall be performed by volunteers.</p>		<p>of the 10 CFR 835.202, Occupational Exposure Limits, are outside the scope of DRI activities. The activities and radioactive materials do not present an opportunity for an emergency situation in which the radiological hazards could not be mitigated by engineering controls or personal protective equipment sufficient to avoid the requirement for individual exposures in excess of the 10 CFR 835.202 Occupational Exposure Limits.</p>	
835.1303 [Reserved]							
<p>835.1304 Nuclear accident dosimetry. 1304(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</p>	<p>NNSS RCM 515.1. Facilities possessing sufficient quantities of fissile material to potentially constitute a critical mass, such that the excessive</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>No contractor commitment required. The RSPC provides nuclear accident dosimetry.</p>	<p>Same as Column 2. The RSPC provides nuclear accident dosimetry.</p>	<p>No contractor commitment required. The RSPC provides nuclear accident dosimetry.</p>	<p>No contractor commitment required. The RSPC provides nuclear accident dosimetry.</p>

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accident is possible, shall provide nuclear accident dosimetry for those individuals.	exposure of individuals to radiation from a nuclear accident is possible, shall provide nuclear accident dosimetry for those personnel.						
<p>1304(b) Nuclear accident dosimetry shall include the following:</p> <p>(1) A method to conduct initial screening of individuals involved in a nuclear accident to determine whether significant exposures to radiation occurred;</p> <p>(2) Methods and equipment for analysis of biological materials;</p> <p>(3) A system of fixed nuclear accident dosimeter units; and</p> <p>(4) Personal nuclear accident dosimeters.</p>	<p>NNSS RCM 515.2. Nuclear accident dosimetry shall include the following:</p> <p>a. A method to conduct initial screening of individuals involved in a nuclear accident to determine whether significant exposures to radiation occurred</p> <p>b. Methods and equipment for analysis of biological materials</p> <p>c. A system of fixed nuclear accident dosimeter units</p> <p>d. A method to ensure that personal nuclear accident dosimeters are worn by all individuals who enter locations in which the requisite quantities of fissile material are contained</p>	No contractor commitment required. The RSPC will provide nuclear accident dosimetry as necessary.	No contractor commitment required. The RSPC will provide nuclear accident dosimetry as necessary.	No contractor commitment required. The RSPC will provide nuclear accident dosimetry as necessary.	Same as Column 2. The RSPC provides nuclear accident dosimetry.	No contractor commitment required. The RSPC will provide nuclear accident dosimetry as necessary.	No contractor commitment required. The RSPC will provide nuclear accident dosimetry as necessary.

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	<p>Implementation Reference</p>	<p>Implementation Reference</p>	<p>Implementation Reference</p>	<p>Implementation Reference</p>	<p>Implementation Reference</p>	<p>Implementation Reference</p>	<p>Implementation Reference</p>

<p>Appendix A to Part 835-- Derived Air Concentrations (DAC) for Controlling Radiation Exposures to Workers at DOE Facilities.</p> <p>The data presented in appendix A are to be used for controlling individual internal doses in accordance with § 835.209, identifying the need for air monitoring in accordance with § 835.403, and identifying and posting airborne radioactivity areas in accordance with § 835.603(d).</p> <p>The DAC values are given for individual radionuclides. For known mixtures of radionuclides, determine the sum of the ratio of the observed concentration of a particular radionuclide and its corresponding DAC for all radionuclides in the mixture. If this sum exceeds unity (1), then DAC has been exceeded. For unknown radionuclides, the most restrictive DAC (lowest value) for those isotopes not known to be absent shall be used. For any single radionuclide not listed in appendix A with decay mode other than alpha emission or spontaneous fission and with radioactive half-life greater than two hours, the DAC value shall be $4 \times 10^{-11} \mu\text{Ci/mL}$ (1 Bq/m^3). For any single radionuclide not listed in appendix A that decays by</p>	<p>NNSS RCM 223.1. The data presented in 10 CFR 835 Appendix A, "Derived Air Concentrations (DACs) for Controlling Radiation Exposure to Workers at DOE Facilities," are to be used for controlling individual internal doses and 10 CFR 835 Appendix C, "Derived Air Concentrations (DAC) for Workers From External Exposure During Immersion in a Cloud of Airborne Radioactive Material," are to be used for controlling individual external doses according to 10 CFR 835.209, identifying the need for air monitoring according to 10 CFR 835.403, and identifying and controlling Airborne Radioactivity Areas according to 10 CFR 835.603(d).</p> <p>NNSS RCM 223.3. For known mixtures</p>	<p>Same as Column 2</p>	<p>Same as Column 2 and Identifying the need for air monitoring and identifying and posting airborne radioactivity areas are beyond the scope of WSI-NV operations.</p>				
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<p>alpha emission or spontaneous fission the DAC value shall be $2 \times 10^{-13} \mu\text{Ci/mL}$ ($8 \times 10^{-3} \text{Bq/m}^3$).</p> <p>The DACs for limiting radiation exposures through inhalation of radionuclides by workers are listed in this appendix. The values are based on either a stochastic (committed effective dose) dose limit of 5 rems (0.05 Sv) or a deterministic (organ or tissue) dose limit of 50 rems (0.05 Sv) per year, whichever is more limiting.</p> <p>Note: The 15 rems (0.15 Sv) dose limit for the lens of the eye does not appear as a critical organ dose limit.</p> <p>The columns in this appendix contain the following information: (1) Radionuclide; (2) inhaled air DAC for type F (fast), type M (moderate), and type S (slow) materials in units of $\mu\text{Ci/mL}$; (3) inhaled air DAC for type F (fast), type M (moderate), and type S (slow) materials in units of Bq/m^3; (4) an indication of whether or not the DAC for each class is controlled by the stochastic (effective dose) or deterministic (organ or tissue) dose. The absorption types (F, M, and S) have been established to describe the absorption type of the materials from the respiratory tract into the blood— The range of half-times for the absorption</p>	<p>of radionuclides, the sum of the ratio of the observed concentration of a particular radionuclide and its corresponding DAC, for all radionuclides in the mixture, must not exceed 1.0. For unknown radionuclides, the most restrictive DAC (lowest value) for those isotopes not known to be absent shall be used. For any single radionuclide not listed in Appendix A with decay mode other than alpha emission or spontaneous fission and with radioactive half-life greater than two hours, the DAC value shall be $4 \times 10^{-11} \mu\text{Ci/mL}$ (1Bq/m^3). For any single radionuclide not listed in Appendix A that decays by alpha emission or spontaneous fission, the DAC value shall be $2 \times 10^{-13} \mu\text{Ci/mL}$ ($8 \times 10^{-3} \text{Bq/m}^3$).</p>						
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	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference	Implementation Reference
<p>types correspond to: Type F, 100% at 10 minutes; Type M, 10% at 10 minutes and 90% at 140 days; and Type S, 0.1% at 10 minutes and 99.9% at 7000 days. The DACs are listed by radionuclide, in order of increasing atomic mass, and are based on the assumption that the particle size distribution of 5 micrometers AMAD is used. For situations where the particle size distribution is known to differ significantly from 5 micrometers AMAD, appropriate corrections may be made to both the estimated dose to workers and the DACs.</p>							
APPENDIX B TO PART 835 [RESERVED]							
<p>Appendix C- to Part 835— Derived Air Concentrations (DAC) for Workers From External Exposure During Immersion in a Cloud of Airborne Radioactive Material</p> <p>a. The data presented in appendix C are to be used for controlling occupational exposures in accordance with § 835.209, identifying the need for air monitoring in accordance with § 835.403 and identifying the need for posting of airborne radioactivity areas in accordance with § 835.603(d).</p>	<p>NNSS RCM 223.2. Airborne Radioactivity Area means any area, accessible to individuals, where either:</p> <p>a. the concentration of airborne radioactivity, above natural background, exceeds or is likely to exceed the DAC values listed in 10 CFR 835, Appendix A or Appendix C.</p>	<p>Currently, not applicable to LLNL operations.</p>	<p>Same as Column 2</p>	<p>Currently, not applicable to SNL operations at the NNSS.</p>	<p>Same as Column 2</p>	<p>Currently, not applicable to DRI operations at the NNSS.</p>	<p>Currently, not applicable to WSI-NV operations at the NNSS.</p>

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<p>b. The air immersion DAC values shown in this appendix are based on the stochastic dose limit of 5 rems (0.05 sievert) per year. Four columns of information are presented:</p> <p>(1) radionuclide; (2) half-life in units of seconds (s), minutes (min), hours (h), days (d), or years (yr); (3) air immersion DAC in units of $\mu\text{Ci/ml}$; and (4) air immersion DAC in units of Bq/m^3. The data are listed by radionuclide in order of increasing atomic mass. The air immersion DACs were calculated for a continuous, nonshielded exposure via immersion in a semi-infinite cloud of airborne radioactive material. The DACs listed in this appendix may be modified to allow for submersion in a cloud of finite dimensions.</p> <p>c. The DAC values are given for individual radionuclides. For known mixtures of radionuclides, determine the sum of the ratio of the observed concentration of a particular radionuclide and its corresponding DAC for all radionuclides in the mixture. If this sum exceeds unity (1), then the DAC has been exceeded. For unknown radionuclides, the most restrictive DAC (lowest value) for those isotopes not known to be absent shall be used.</p>							
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<p>Appendix D to Part 835-Surface Contamination Values.</p> <p>The data presented in appendix D are to be used for identifying and posting contamination and high contamination areas in accordance with § 835.603(e) and (f) and identifying the need for surface contamination monitoring and control in accordance with §§ 835.1101 and 1102.</p>	<p>NNSS RCM Table 2-2, Surface Contamination Values in dpm/100 cm²</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>No Contractor Commitment Required. The RSPC provides this service.</p>	<p>By written agreement, the RSPC provides this service to WSI-NV.</p>
<p>Appendix E - Values for Establishing Sealed Radioactive Source Accountability and Radioactive Material Posting and Labeling Requirements.</p> <p>The data presented in appendix E are to be used for identifying accountable sealed radioactive sources and radioactive material areas as those terms are defined at § 835.2(a), establishing the need for radioactive material area posting in accordance with § 835.603(g), and establishing the need for radioactive material labeling in accordance with § 835.605.</p> <p>Any alpha emitting radionuclide not listed in appendix E and mixtures of alpha emitters of unknown composition have a value of 10 µCi.</p> <p>With the exception that any type of STC has a value of 10 Ci, any</p>	<p>NNSS RCM Appendix 4A, Values for Establishing Sealed Radioactive Source Accountability and Radioactive Material Posting and Labeling Requirements</p> <p>01. Any alpha emitting radionuclide not listed here and mixtures of alpha emitters of unknown composition have a value of 10 uCi.</p> <p>02. With the exception that any type of STC has a value of 10 Ci, any radionuclide other than alpha emitting radionuclides not listed here and</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>Same as Column 2</p>	<p>DRI sealed sources fall under the requirements of the UNR Radioactive Material License number 16-13-0003-07, however, we do participate in the source accountability inventory at the NNSS via the services provided by the RSPC.</p>	<p>Not applicable to WSI-NV operations. WSI-NV is not a sealed source custodian.</p>

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<p>radionuclide other than alpha emitting radionuclides not listed in appendix E and mixtures of beta emitters of unknown composition have a value of 100 μCi.</p> <p>Note: Where there is involved a mixture of radionuclides in known amounts, derive the value for the mixture as follows: determine, for each radionuclide in the mixture, the ratio between the quantity present in the mixture and the value otherwise established for the specific radionuclide when not in the mixture. If the sum of such ratios for all radionuclides in the mixture exceeds unity (1), then the accountability criterion has been exceeded.</p>	<p>mixtures of beta emitters of unknown composition have a value of 100 uCi.</p> <p>Note: Where there is involved a mixture of radionuclides in known amounts, derive the value for the mixture as follows: determine, for each radionuclide in the mixture, the ration between the quantity present in the mixture and the value otherwise established for the specific radionuclide when not in the mixture. If the sum of such ratios for all radionuclides in the mixture exceeds unity (1), then the accountability criterion has been exceeded.</p>						
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