

# STANDARDS/REQUIREMENTS IDENTIFICATION DOCUMENT

**FUNCTIONAL AREA 20.0**

**ENVIRONMENTAL PROTECTION (U)**

**NOVEMBER 17, 2017**  
**REVISION 17-09**

*Alain E. Eden*  
*for P.E. Stedje*

\_\_\_\_\_  
Manager, Contractor Assurance

*11/20/2017*  
\_\_\_\_\_  
Date

Savannah River Remediation LLC  
Savannah River Site  
Aiken, SC 29808

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## 20.00 ENVIRONMENTAL PROTECTION

Standards/Requirements Identification Document (S/RID) Functional Area 00, S/RID Purpose and Development, contains general information on the development (including the type of source documents considered), assessment, approval, and maintenance of the Savannah River Remediation LLC (SRR) S/RID that is pertinent to the understanding of this S/RID functional area. The reader should refer to S/RID Functional Area 00 for a complete understanding of this S/RID functional area.

This document addresses the Environment, Safety, and Health (ES&H) requirements related to Environmental Protection activities undertaken by SRR on behalf of the United States Department of Energy (DOE) at the Savannah River Site (SRS) Liquid Waste Operations Facilities. The sources for the requirements included in Table 1 are from various environmental related DOE Orders/Directives Implementation Instructions and Federal/State environmental regulations. The Environmental Protection S/RID Functional Area is prepared in alignment with the Revision 0, July 30, 1993 version of the DOE-Headquarters ES&H Configuration Guide, with the following qualifications.

A Functional Service Agreement (FSA), G-FSP-G-00006, Environment, Safety, Health, Quality and Medical Services, has been prepared and signed by SRR and the SRS Management & Operations Contractor, Savannah River Nuclear Solutions, specifying services provided by both companies, including programs that will ensure that requirements associated with the Environmental Protection S/RID Functional Area are met.

Portions of the ES&H Configuration Guide for this S/RID functional area specify inclusion of requirements that were considered by the contractor as more appropriate for inclusion in other S/RID functional areas. Rather than repeating requirements in multiple functional areas, reference is made to the S/RID functional areas that contain requirements associated with the Environmental Protection S/RID Functional Area.

The Environmental Protection S/RID Functional Area includes activities required to protect the environment and the health of the public and workers. This S/RID functional area covers the technical and programmatic requirements from applicable standards, laws, and regulations. The scope of this S/RID functional area addresses nine major elements: 1) Environmental Policy Management, 2) Permits, 3) Environmental Monitoring, Surveillance, and Inspections, 4) Environmental Control Standards, 5) Pollution Prevention, 6) Recordkeeping, Reports, and Notifications, 7) Key Interfaces, 8) Some Major Sources of Environmental Requirements and Standards, and 9) Documents (references).

### 20.01 ENVIRONMENTAL POLICY MANAGEMENT

This section of the S/RID functional area addresses the management and administrative requirements necessary to advance environmental protection activities.

### 20.02 PERMITS

Regulations required to obtain permits to construct or operate facilities at SRS are included in section 20.08 of this S/RID functional area.

### 20.03 ENVIRONMENTAL MONITORING, SURVEILLANCE, AND INSPECTIONS

This section of the S/RID functional area identifies requirements for monitoring surveillance and inspections for the protection of the environment.

**20.04 ENVIRONMENTAL CONTROL STANDARDS**

Requirements for the environmental control standards for the release and control of effluent(s) are addressed in this S/RID functional area.

**20.05 POLLUTION PREVENTION**

No specific requirements are identified for this section.

**20.06 RECORDKEEPING, REPORTS, AND NOTIFICATIONS**

Reporting, record keeping, and notifications requirements are identified in this element of the EP S/RID functional area. Requirements are included for the creation of records, contents of records, duration of maintaining records, and the disposition of records.

**20.07 KEY INTERFACES**

Key interfaces with other S/RID functional areas include:

Requirements associated with management of radioactive waste, remedial actions, and decommissioning are found in the Waste Management, Environmental Restoration, and Facility Disposition S/RID Functional Areas respectively.

Requirements covering personnel protection from radioactivity are addressed in the Radiation Protection S/RID Functional Area. Requirements for Occupational Safety are addressed in the Occupational Safety and Health S/RID Functional Area. Transportation requirements from the Department of Transportation regulations are addressed in the Packaging and Transportation S/RID Functional Area.

Administrative and programmatic requirements for environmental protection, reporting and notification requirements pursuant to Comprehensive Environmental Recovery, Compensation, and Liability Act (CERCLA), Resource Conservation and Recovery Act, and Emergency Planning and Community Right-to-Know Act are found in the Quality Assurance, Management Systems, and Training and Qualifications S/RID Functional Areas.

**20.08 SOME MAJOR SOURCES OF ENVIRONMENTAL REQUIREMENTS AND STANDARDS**

At SRS, the majority of environmental regulations are implemented through the State of South Carolina environmental regulations. The State of South Carolina does not have primacy over either the CERCLA or the Toxic Substance Control Act requirements. Additional sources of environmental protection requirements are contained in DOE O 231.1B, [AChg 1](#), DOE O [436.1](#), and DOE O 458.1, [AChg 3](#).

**20.09 DOCUMENTS****20.09.01 Reference Documents**

|             |                                                                         |
|-------------|-------------------------------------------------------------------------|
| 10 CFR 1021 | NATIONAL ENVIRONMENTAL POLICY ACT IMPLEMENTING PROCEDURES               |
| 33 CFR 153  | CONTROL OF POLLUTION BY OIL AND HAZARDOUS SUBSTANCES, DISCHARGE REMOVAL |
| 33 CFR 320  | GENERAL REGULATORY POLICIES                                             |

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|            |                                                                                                                                               |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 33 CFR 322 | PERMITS FOR STRUCTURES OR WORK IN OR AFFECTED NAVIGABLE WATERS OF THE UNITED STATES                                                           |
| 33 CFR 323 | PERMITS FOR DISCHARGES OF DREDGED OR FILL MATERIAL INTO WATERS OF THE UNITED STATES                                                           |
| 33 CFR 325 | PROCESSING OF DEPARTMENT OF ARMY PERMITS                                                                                                      |
| 33 CFR 326 | ENFORCEMENT                                                                                                                                   |
| 33 CFR 327 | PUBLIC HEARINGS                                                                                                                               |
| 33 CFR 328 | DEFINITION OF WATERS OF THE UNITED STATES                                                                                                     |
| 33 CFR 329 | DEFINITION OF NAVIGABLE WATERS OF THE UNITED STATES                                                                                           |
| 33 CFR 330 | NATION WIDE PERMIT PROGRAM                                                                                                                    |
| 40 CFR 110 | DISCHARGE OF OIL                                                                                                                              |
| 40 CFR 112 | OIL POLLUTION PREVENTION                                                                                                                      |
| 40 CFR 116 | DESIGNATION OF HAZARDOUS SUBSTANCES                                                                                                           |
| 40 CFR 117 | DETERMINATION OF REPORTABLE QUANTITIES FOR HAZARDOUS SUBSTANCES                                                                               |
| 40 CFR 122 | EPA ADMINISTERED PERMIT PROGRAMS: THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM                                                         |
| 40 CFR 125 | CRITERIA AND STANDARDS FOR THE NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM                                                                |
| 40 CFR 129 | TOXIC POLLUTANT EFFLUENT STANDARDS                                                                                                            |
| 40 CFR 131 | WATER QUALITY STANDARDS                                                                                                                       |
| 40 CFR 133 | SECONDARY TREATMENT REGULATION                                                                                                                |
| 40 CFR 136 | GUIDELINES ESTABLISHING TEST PROCEDURES FOR THE ANALYSIS OF POLLUTANTS                                                                        |
| 40 CFR 141 | NATIONAL PRIMARY DRINKING WATER REGULATIONS                                                                                                   |
| 40 CFR 142 | NATIONAL PRIMARY DRINKING WATER REGULATIONS IMPLEMENTATION                                                                                    |
| 40 CFR 143 | NATIONAL SECONDARY DRINKING WATER REGULATIONS                                                                                                 |
| 40 CFR 144 | UNDERGROUND INJECTION CONTROL PROGRAM                                                                                                         |
| 40 CFR 146 | UNDERGROUND INJECTION CONTROL PROGRAM: CRITERIA AND STANDARDS                                                                                 |
| 40 CFR 148 | HAZARDOUS WASTE INJECTION RESTRICTIONS                                                                                                        |
| 40 CFR 149 | SOLE SOURCE AQUIFERS                                                                                                                          |
| 40 CFR 166 | EXEMPTION OF FEDERAL AND STATE AGENCIES FOR USE OF PESTICIDES UNDER EMERGENCY CONDITIONS                                                      |
| 40 CFR 170 | WORKER PROTECTION STANDARD                                                                                                                    |
| 40 CFR 171 | CERTIFICATION OF PESTICIDE APPLICATORS                                                                                                        |
| 40 CFR 191 | ENVIRONMENTAL RADIATION PROTECTION STANDARDS FOR MANAGEMENT AND DISPOSAL OF SPENT NUCLEAR FUEL, HIGH-LEVEL AND TRANSURANIC RADIOACTIVE WASTES |
| 40 CFR 230 | SECTION 404(B)(1) GUIDELINES FOR SPECIFICATION OF DISPOSAL FOR DREDGED OR FILL MATERIAL                                                       |
| 40 CFR 231 | SECTION 404(C) PROCEDURES                                                                                                                     |
| 40 CFR 243 | GUIDELINES FOR THE STORAGE AND COLLECTION OF RESIDENTIAL, COMMERCIAL, AND INSTITUTIONAL SOLID WASTE                                           |

**STANDARDS/REQUIREMENTS  
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|            |                                                                                                                       |
|------------|-----------------------------------------------------------------------------------------------------------------------|
| 40 CFR 246 | SOURCE SEPARATION FOR MATERIALS RECOVERY GUIDELINES                                                                   |
| 40 CFR 247 | COMPREHENSIVE PROCUREMENT GUIDELINE FOR PRODUCTS CONTAINING RECOVERED MATERIALS                                       |
| 40 CFR 257 | CRITERIA FOR CLASSIFICATION OF SOLID WASTE DISPOSAL FACILITIES AND PRACTICES                                          |
| 40 CFR 260 | HAZARDOUS WASTE MANAGEMENT SYSTEM: GENERAL                                                                            |
| 40 CFR 261 | IDENTIFICATION AND LISTING OF HAZARDOUS WASTE                                                                         |
| 40 CFR 262 | STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE                                                                 |
| 40 CFR 263 | STANDARDS APPLICABLE TO TRANSPORTERS OF HAZARDOUS WASTE                                                               |
| 40 CFR 264 | STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES                     |
| 40 CFR 265 | INTERIM STATUS STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES      |
| 40 CFR 266 | STANDARDS FOR THE MANAGEMENT OF SPECIFIC HAZARDOUS WASTES AND SPECIFIC TYPES OF HAZARDOUS WASTE MANAGEMENT FACILITIES |
| 40 CFR 268 | LAND DISPOSAL RESTRICTIONS                                                                                            |
| 40 CFR 270 | EPA ADMINISTERED PERMIT PROGRAMS: THE HAZARDOUS WASTE PERMIT PROGRAM                                                  |
| 40 CFR 273 | STANDARDS FOR UNIVERSAL WASTE MANAGEMENT                                                                              |
| 40 CFR 279 | STANDARDS FOR THE MANAGEMENT OF USED OIL                                                                              |
| 40 CFR 280 | TECHNICAL STANDARDS AND CORRECTIVE ACTION REQUIREMENTS FOR OWNERS AND OPERATORS OF UNDERGROUND STORAGE TANKS (UST)    |
| 40 CFR 300 | NATIONAL OIL AND HAZARDOUS SUBSTANCES POLLUTION CONTINGENCY PLAN                                                      |
| 40 CFR 302 | DESIGNATION, REPORTABLE QUANTITIES AND NOTIFICATION                                                                   |
| 40 CFR 355 | EMERGENCY PLANNING AND NOTIFICATION                                                                                   |
| 40 CFR 370 | HAZARDOUS CHEMICAL REPORTING: COMMUNITY RIGHT-TO-KNOW                                                                 |
| 40 CFR 372 | TOXIC CHEMICAL RELEASE REPORTING: COMMUNITY RIGHT-TO-KNOW                                                             |
| 40 CFR 401 | EFFLUENT GUIDELINES AND STANDARDS: GENERAL PROVISIONS                                                                 |
| 40 CFR 403 | GENERAL PRETREATMENT REGULATIONS FOR EXISTING AND NEW SOURCES OF POLLUTION                                            |
| 40 CFR 50  | NATIONAL PRIMARY AND SECONDARY AMBIENT AIR QUALITY STANDARDS                                                          |
| 40 CFR 503 | STANDARDS FOR THE USE OR DISPOSAL OF SEWAGE SLUDGE                                                                    |
| 40 CFR 58  | AMBIENT AIR QUALITY SURVEILLANCE                                                                                      |
| 40 CFR 60  | STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES                                                                   |
| 40 CFR 61  | NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS                                                              |
| 40 CFR 68  | CHEMICAL ACCIDENT PREVENTION PROVISIONS                                                                               |
| 40 CFR 69  | SPECIAL EXEMPTIONS FROM REQUIREMENTS OF THE CLEAN AIR ACT                                                             |
| 40 CFR 707 | CHEMICAL IMPORTS AND EXPORTS                                                                                          |

**STANDARDS/REQUIREMENTS  
IDENTIFICATION DOCUMENT**

|                  |                                                                                                                              |
|------------------|------------------------------------------------------------------------------------------------------------------------------|
| 40 CFR 717       | RECORDS AND REPORTS OF ALLEGATIONS THAT CHEMICAL SUBSTANCES CAUSE SIGNIFICANT ADVERSE REACTIONS TO HEALTH OR THE ENVIRONMENT |
| 40 CFR 747       | METALWORKING FLUIDS                                                                                                          |
| 40 CFR 761       | POLYCHLORINATED BIPHENYLS (PCBS) MANUFACTURING, PROCESSING, DISTRIBUTION IN COMMERCE, AND USE PROHIBITIONS                   |
| 40 CFR 763       | ASBESTOS                                                                                                                     |
| 40 CFR 82        | PROTECTION OF STRATOSPHERIC OZONE                                                                                            |
| 50 CFR 17        | ENDANGERED AND THREATENED WILDLIFE AND PLANTS                                                                                |
| DOEO231.1B-AChg1 | ENVIRONMENT, SAFETY AND HEALTH REPORTING, ADMIN CHANGE 1, 11/28/2012                                                         |
| <b>DOEO436.1</b> | <b>DEPARTMENTAL SUSTAINABILITY</b>                                                                                           |
| DOEO458.1-AChg3  | RADIATION PROTECTION OF THE PUBLIC AND THE ENVIRONMENT, ADMIN CHANGE 3, 1/15/2013                                            |
| SC R.19-450      | PERMITS FOR CONSTRUCTION IN NAVIGABLE WATERS                                                                                 |
| SC R.51          | SOUTH CAROLINA ENVIRONMENTAL CERTIFICATION BOARD                                                                             |
| SC R.61-101      | WATER QUALITY CERTIFICATION                                                                                                  |
| SC R.61-104      | HAZARDOUS WASTE MANAGEMENT LOCATIONS STANDARDS                                                                               |
| SC R.61-105      | INFECTIOUS WASTE MANAGEMENT REGULATIONS                                                                                      |
| SC R.61-107      | SOLID WASTE MANAGEMENT                                                                                                       |
| SC R.61-30       | ENVIRONMENTAL PROTECTION FEES                                                                                                |
| SC R.61-56       | INDIVIDUAL SEWAGE TREATMENT AND DISPOSAL SYSTEMS                                                                             |
| SC R.61-58       | STATE PRIMARY DRINKING WATER REGULATIONS                                                                                     |
| SC R.61-62       | AIR POLLUTION CONTROL REGULATIONS AND STANDARDS                                                                              |
| SC R.61-67       | STANDARDS FOR WASTEWATER FACILITY CONSTRUCTION                                                                               |
| SC R.61-68       | WATER CLASSIFICATIONS AND STANDARDS                                                                                          |
| SC R.61-69       | CLASSIFIED WATERS                                                                                                            |
| SC R.61-71       | WELL STANDARDS                                                                                                               |
| SC R.61-72       | PROCEDURES FOR CONTESTED CASES                                                                                               |
| SC R.61-79       | HAZARDOUS WASTE MANAGEMENT REGULATIONS                                                                                       |
| SC R.61-81       | STATE ENVIRONMENTAL LABORATORY CERTIFICATION PROGRAM                                                                         |
| SC R.61-82       | PROPER CLOSEOUT OF WASTEWATER TREATMENT FACILITIES                                                                           |
| SC R.61-86.1     | STANDARDS OF PERFORMANCE FOR ASBESTOS PROJECTS                                                                               |
| SC R.61-87       | UNDERGROUND INJECTION CONTROL REGULATIONS                                                                                    |
| SC R.61-9        | WATER POLLUTION CONTROL PERMITS                                                                                              |
| SC R.61-92       | UNDERGROUND STORAGE TANK CONTROL REGULATIONS                                                                                 |
| SC R.72-300      | STANDARDS FOR STORMWATER MANAGEMENT AND SEDIMENT REDUCTION                                                                   |

**TABLE 1 FORMAT AND CONTENT**

|                                    |                                                                                             |
|------------------------------------|---------------------------------------------------------------------------------------------|
| S/RID Requirement Number           | Unique number for each requirement that links the statement to the ES&H Configuration Guide |
| Source Document                    | Number of the source document                                                               |
| Source Document Requirement Number | Unique reference from the source document.                                                  |
| Requirement Text                   | Requirement statement                                                                       |

**Facility Categories \***

Requirement applicability is shown in relation to the following facility categories:

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nuclear HC-1,2,3     | Representing nuclear hazard category 1, 2 and 3 facilities (as defined by DOE Standard 1027-92) and includes any facility(s) required to support a nuclear facility(s).                                                                                                                                                                                                                                                                                                                                                 |
| Radiological         | Representing facilities below Hazard Category 3 but still contain quantities of radioactive material at or above the Reportable Quantity value as specified in 40 CFR 302.4, Appendix B.                                                                                                                                                                                                                                                                                                                                |
| High Hazard Chemical | Representing facilities with radiological hazards below 40 CFR 302.4 thresholds for radiological materials, but with any chemical hazard at or above threshold quantities listed in 29 CFR 1910.119 or 40 CFR 68. These facilities may also contain nuclear materials exempt from the nuclear facility definition, e.g., check and calibration sources, radioactive sources in research and experimental and analytical laboratory activities, electron microscopes, and x-ray machines, as defined by 10 CFR 830.3.    |
| Low Hazard Chemical  | Representing facilities with radiological hazards below 40 CFR 302.4 thresholds, but with chemical hazards both below 29 CFR 1910.119 or 40 CFR 68 thresholds and at or above reportable quantities in 40 CFR 302.4. These facilities may also contain nuclear materials exempt from the nuclear facility definition, e.g., check and calibration sources, radioactive sources in research and experimental and analytical laboratory activities, electron microscopes, and x-ray machines, as defined by 10 CFR 830.3. |
| Other Industrial     | Representing facilities with all radiological and chemical hazards below 40 CFR 302.4 thresholds. These facilities may also contain nuclear materials exempt from the nuclear facility definition, e.g., check and calibration sources, radioactive sources in research and experimental and analytical laboratory activities, electron microscopes, and x-ray machines, as defined by 10 CFR 830.3.                                                                                                                    |
| Facility Specific    | These are requirements that are applicable to specific facilities. Facility identification is included in this column, when applicable.                                                                                                                                                                                                                                                                                                                                                                                 |

**Phase I Compliance Approach**

|                   |                                                                                    |
|-------------------|------------------------------------------------------------------------------------|
| Common            | Implementation of these requirements is covered by common procedures and policies. |
| Facility Specific | Implementation of these requirements is covered by facility specific procedures.   |

\* Refer to the "SRR Facilities List" contained in Functional Area 00 for the category for specific SRR facilities/bldgs.

TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
|--------------------------|-----------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------|----------------------|---------------------|------------------|-------------------|--------------------|-------------------|
|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.01.112                | DOEO458.1-AChg3 | Att.1(1)                     | The provisions of this Contractor Requirements Document (CRD) apply to all radiological activities conducted by Department of Energy (DOE) and National Nuclear Security Administration (NNSA) contractors.<br><br>Regardless of the performer of the work, the contractor is responsible for complying with the requirements of this CRD and flowing down the CRD requirements to subcontractors at any tier to the extent necessary to ensure contractor compliance with the requirements. | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.01.113                | DOEO458.1-AChg3 | Att.1. 1.a                   | 1. GENERAL REQUIREMENTS<br><br>a. The contractor must establish and implement a program to protect the public and the environment against undue risk from radiation associated with DOE radiological activities through application of the Specific Requirements (paragraph 2) in this CRD.<br><br>Note: All the Specific Requirements of paragraph 2 are included in this functional area.                                                                                                  | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.01.114                | DOEO458.1-AChg3 | Att.1. 1.b                   | 1. GENERAL REQUIREMENTS<br><br>b. The contractor must provide a schedule for full implementation of the Specific Requirements in this CRD as directed by DOE.                                                                                                                                                                                                                                                                                                                                | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.01.115                | DOEO458.1-AChg3 | Att.1. 1.c                   | 1. GENERAL REQUIREMENTS<br><br>c. The contractor must develop documentation that demonstrates how the Specific Requirements in this CRD are implemented.                                                                                                                                                                                                                                                                                                                                     | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.01.116                | DOEO458.1-AChg3 | Att.1. 1.d                   | 1. GENERAL REQUIREMENTS<br><br>d. The contractor must obtain DOE line management approval of the documentation demonstrating compliance with the Specific Requirements in this CRD.                                                                                                                                                                                                                                                                                                          | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.01.117                | DOEO436.1       | Att.1.                       | <b>1. GENERAL REQUIREMENTS</b><br><br><b>The Provisions of the Contractor Requirements Document (CRD) apply to Department of Energy (DOE) contractors. Regardless of the performer of the work, the contractor is responsible for complying with the requirements of this CRD and flowing down the CRD requirements to subcontracts to the extent necessary to ensure contractor compliance with these requirements.</b>                                                                     | X                 | X             | X                    | X                   | X                |                   | X                  |                   |



**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
|--------------------------|-----------------|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------|----------------------|---------------------|------------------|-------------------|--------------------|-------------------|
|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.02.001                | DOEO458.1-AChg3 | Att.1. 2.a.(1)               | <p>2. SPECIFIC REQUIREMENTS</p> <p>a. Environmental Radiological Protection Program. The contractor conducting radiological activities must develop and implement a documented program which addresses compliance with the Specific Requirements in this CRD that are relevant to the particular activities being conducted.</p> <p>(1) The program, (documented by the contractor's plans, procedures, protocols and other documents developed to implement the relevant requirements of this CRD) must be tailored to these activities and reflect a graded approach commensurate with the hazard or risk to the public and the environment resulting from the DOE operations.</p>                                                                                                                                                                                                                                                                            | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.02.002                | DOEO458.1-AChg3 | Att.1. 2.a.(2)               | <p>2. SPECIFIC REQUIREMENTS</p> <p>a. Environmental Radiological Protection Program. The contractor conducting radiological activities must develop and implement a documented program which addresses compliance with the Specific Requirements in this CRD that are relevant to the particular activities being conducted.</p> <p>(2) Where long-term stewardship and institutional controls for protection of the public and the environment are necessary to meet the Specific Requirements in this CRD, the contractor must ensure that the need for the controls is documented and maintained and to the extent the contractor is responsible, implement the controls. If the contractor is not responsible for implementation of the controls, the contractor must provide reasonable assurance that necessary controls are being implemented by the responsible party prior to conducting activities that can affect the public or the environment.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
|--------------------------|-----------------|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------|----------------------|---------------------|------------------|-------------------|--------------------|-------------------|
|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.036                | DOEO458.1-AChg3 | Att.1. 2.b.(1)              | <p>2. SPECIFIC REQUIREMENTS</p> <p>b. Public Dose Limit. The contractor must establish and implement procedures and practices to address the following elements related to the public dose limit:</p> <p>(1) DOE radiological activities, including remedial actions and activities using Technologically Enhanced Naturally Occurring Radioactive Material (TENORM), must be conducted so that exposure of members of the public to ionizing radiation will:</p> <p>(a) Not cause a total effective dose (TED) exceeding 100 mrem (1mSv) in a year, an equivalent dose to the lens of the eye exceeding 1500 mrem (15 mSv) in a year, or an equivalent dose to the skin or extremities exceeding 5000 mrem (50 mSv) in a year, from all sources of ionizing radiation and exposure pathways that could contribute significantly to the total dose excepting:</p> <p>1 Dose from radon and its decay products in air [Radon is addressed separately e.g., under paragraphs 2.f. and 2.h. of the Specific Requirements in this CRD and under Title 40 Code of Federal Regulations (CFR) Part 61, Subparts Q and T];</p> <p>2 Dose received by patients from medical sources of radiation, and by volunteers in medical research programs;</p> <p>3 Dose from background radiation; and</p> <p>4 Dose from occupational exposure under Nuclear Regulatory Commission (NRC) or Agreement State license or to general employees regulated under 10 CFR Part 835, and</p> <p>(b) Comply with As Low As Reasonably Achievable (ALARA) requirements in paragraph 2.d. of the Specific Requirements in this CRD.</p> <p>Notes:</p> <p>1. All the Specific Requirements of paragraphs 2.f and 2.h. are included in this functional area.</p> <p>2. Title 40 Code of Federal Regulations (CFR) Part 61 Requirement is included in 20.08.134 of this functional area.</p> <p>3. All the Specific Requirements of paragraph 2.d. are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS

| S/RID Requirement Number | Source Document | Source Document Reqt Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
|--------------------------|-----------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------|----------------------|---------------------|------------------|-------------------|--------------------|-------------------|
|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.037                | DOEO458.1-AChg3 | Att.1. 2.b.(2)              | <p>2. SPECIFIC REQUIREMENTS</p> <p>b. Public Dose Limit. The contractor must establish and implement procedures and practices to address the following elements related to the public dose limit:</p> <p>(2) The public dose limit applies to members of the public located off DOE sites and on DOE sites outside of controlled areas, and to those exposed to residual radioactive material subsequent to any remedial action or clearance of property.</p>                                                                                                                                                                                                                                                                                                                                                                                                                     | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.038                | DOEO458.1-AChg3 | Att.1. 2.c                  | <p>2. SPECIFIC REQUIREMENTS</p> <p>c. Temporary Dose Limits.</p> <p>If special circumstances could affect a DOE radiological activity in such a manner that the potential dose to a member of the public could exceed a TED of 100 mrem (1 mSv) in a year the contractor must submit a request for specific authorization for a temporary public dose limit higher than 100 mrem (1 mSv) in a year to the responsible Field Element Manager. This request must include documentation that justifies the need for the increase, the alternatives considered, and the application of the ALARA process. The specific exposure pathways excepted in paragraphs 2.b.(1)(a) 1-4 of the Specific Requirements in this CRD are also excepted for temporary dose limits.</p> <p>Note: All the Specific Requirements of paragraph 2.b.(1)(a) 1-4 are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.039                | DOEO458.1-AChg3 | Att.1. 2.d.(1)              | <p>2. SPECIFIC REQUIREMENTS</p> <p>d. As Low As Reasonably Achievable (ALARA).</p> <p>(1) An ALARA process must be implemented to optimize control and management of radiological activities so that doses to members of the public (both individual and collective) and releases to the environment are kept as low as reasonably achievable. The process must be applied to the design or modification of facilities and conduct of activities that can expose the public or the environment to radiation or radioactive material.</p>                                                                                                                                                                                                                                                                                                                                          | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.040                | DOEO458.1-AChg3 | Att.1. 2.d.(2)              | <p>2. SPECIFIC REQUIREMENTS</p> <p>d. As Low As Reasonably Achievable (ALARA).</p> <p>(2) The ALARA process must: consider DOE sources, modes of exposure and all pathways which potentially could result in the release of radioactive material into the environment, or exposure to the public; use a graded approach; and, to the extent practical and when appropriate, be coordinated with the 10 CFR Part 835 ALARA process.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                            | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Reqt Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.041                | DOEO458.1-AChg3 | Att.1. 2.e.( 1).(a)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>e. Demonstrating Compliance with the Public Dose Limit. The contractor must establish and implement procedures and practices to demonstrate compliance with the public dose limit and to address the following elements:</p> <p>(1) Dose evaluations to demonstrate compliance with the public dose limit in paragraph 2.b.(1) of the Specific Requirements in this CRD and assess collective dose must include the following:</p> <p>(a) The TED to members of the public from exposure to radiation, airborne effluents, and liquid effluents, of DOE origin.</p> <p>1 Compliance may be demonstrated by calculating dose to the representative person or to the maximally exposed individual (MEI).<br/>                     2 Determination of the representative person or the MEI must include members of the public both on DOE sites outside of controlled areas and off DOE sites.<br/>                     3 If it is suspected that any of the dose limits specified in paragraph 2.b.(1)(a) of the Specific Requirements in this CRD may be exceeded or the estimated TED for members of the public exceeds 25 mrem (0.25 mSv) in a year, then dose to the lens of the eye, skin, and extremities must be evaluated.</p> <p>Note: All the Specific Requirements of paragraph 2.b.(1) and 2.b.(1)(a) are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.042                | DOEO458.1-AChg3 | Att.1. 2.e.( 1).(b)          | <p>2. SPECIFIC REQUIREMENTS</p> <p>e. Demonstrating Compliance with the Public Dose Limit. The contractor must establish and implement procedures and practices to demonstrate compliance with the public dose limit and to address the following elements:</p> <p>(1) Dose evaluations to demonstrate compliance with the public dose limit in paragraph 2.b.(1) of the Specific Requirements in this CRD and assess collective dose must include the following:</p> <p>(b) Analytical models that consider likely exposure pathways, such as:</p> <p>1 Direct external radiation from sources located on-site;</p> <p>2 External radiation from airborne radioactive material;</p> <p>3 External radiation from radioactive material deposited on surfaces off-site;</p> <p>4 Internal radiation from inhaled airborne radioactive material;</p> <p>5 Internal radiation from radioactive material ingested with water, and with food from terrestrial crops or animal products (e.g., meat, eggs, milk);</p> <p>6 Internal radiation from radioactive material ingested with aquatic food products such as fish, shellfish, crustaceans (e.g., crayfish, shrimp, crab, lobsters), and aquatic plants and algae;</p> <p>7 External or internal radiation due to residual radioactive material on, or in, cleared real property; and</p> <p>8 Any other pathway unique to the DOE site or activity.</p> <p>Note: All the Specific Requirements of paragraph 2.b.(1) are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Reqt Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.043                | DOEO458.1-AChg3 | Att.1. 2.e.( 1).(c)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>e. Demonstrating Compliance with the Public Dose Limit. The contractor must establish and implement procedures and practices to demonstrate compliance with the public dose limit and to address the following elements:</p> <p>(1) Dose evaluations to demonstrate compliance with the public dose limit in paragraph 2.b.(1) of the Specific Requirements in this CRD and assess collective dose must include the following:</p> <p>(c)The dose to members of the public from DOE-related exposure sources only, if the projected DOE-related dose to the representative person or MEI is 25 mrem (0.25mSv) in a year or less. If the DOE-related dose is greater than 25 mrem in a year, the dose to members of the public must include both major non-DOE sources of exposure (excluding dose from radon and its decay products in air, background radiation dose, occupational doses and doses due to medical exposures) and dose from DOE-related sources;</p> <p>Note: All the Specific Requirements of paragraph 2.b.(1) are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.044                | DOEO458.1-AChg3 | Att.1. 2.e.( 1).(d)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>e. Demonstrating Compliance with the Public Dose Limit. The contractor must establish and implement procedures and practices to demonstrate compliance with the public dose limit and to address the following elements:</p> <p>(1) Dose evaluations to demonstrate compliance with the public dose limit in paragraph 2.b.(1) of the Specific Requirements in this CRD and assess collective dose must include the following:</p> <p>(d) Collective dose for members of the public resulting from radiation emitted and radioactive materials released from DOE radiological activities only (not including radon and its decay products). Collective dose for members of the public must be representative of the total dose and of adequate quality for supported comparisons, trending or decisions. Consistent with the graded approach, collective dose estimates may be truncated by distance (e.g., 50 miles) or individual dose level (e.g., 10 microrem) when integration of doses beyond such thresholds does not significantly affect data quality objectives. Where it is of concern, collective dose for members of the public resulting from radon and its decay products released by DOE radiological activities needs to be calculated separately from other radionuclides.</p> <p>Note: All the Specific Requirements of paragraph 2.b.(1) are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.045                | DOEO458.1-AChg3 | Att.1. 2.e.( 2)             | <p>2. SPECIFIC REQUIREMENTS</p> <p>e. Demonstrating Compliance with the Public Dose Limit. The contractor must establish and implement procedures and practices to demonstrate compliance with the public dose limit and to address the following elements:</p> <p>(2) The estimated individual dose to the MEI or representative person that is representative of the persons or group likely to receive the most dose and is based on pathway and exposure parameters that are not likely to underestimate or substantially overestimate the dose, and, the collective dose (population dose) that is a realistic as practicable estimate of the sum of the doses to all members of the actual exposed population.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | X                 | X             |                      |                     |                  |                   | X                  |                   |

TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.046                | DOEO458.1-AChg3 | Att.1. 2.e.( 3)             | <p>2. SPECIFIC REQUIREMENTS</p> <p>e. Demonstrating Compliance with the Public Dose Limit. The contractor must establish and implement procedures and practices to demonstrate compliance with the public dose limit and to address the following elements:</p> <p>(3) Site-specific information on radiation source dispersion patterns, location and demography of members of the public in the vicinity of DOE radiological activities, land use, food supplies, and exposure pathway information must be updated, as necessary, to document significant changes that could affect dose evaluations.</p>                                  | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.047                | DOEO458.1-AChg3 | Att.1. 2.e.( 4)             | <p>2. SPECIFIC REQUIREMENTS</p> <p>e. Demonstrating Compliance with the Public Dose Limit. The contractor must establish and implement procedures and practices to demonstrate compliance with the public dose limit and to address the following elements:</p> <p>(4) Values of assumed default or site-specific parameters used in calculations must be identified and included with the documentation of the calculations.</p>                                                                                                                                                                                                            | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.048                | DOEO458.1-AChg3 | Att.1. 2.e.( 5)             | <p>2. SPECIFIC REQUIREMENTS</p> <p>e. Demonstrating Compliance with the Public Dose Limit. The contractor must establish and implement procedures and practices to demonstrate compliance with the public dose limit and to address the following elements:</p> <p>(5) Direct measurements must be made, to the extent practicable, to obtain information characterizing source terms, exposures, exposure modes, and other information needed in evaluating dose.</p>                                                                                                                                                                       | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.049                | DOEO458.1-AChg3 | Att.1. 2.e.( 6)             | <p>2. SPECIFIC REQUIREMENTS</p> <p>e. Demonstrating Compliance with the Public Dose Limit. The contractor must establish and implement procedures and practices to demonstrate compliance with the public dose limit and to address the following elements:</p> <p>(6) Models for dose evaluation calculations must be appropriate for their purpose. Dose evaluation models that are codified or approved for use by regulators of DOE or by DOE must be used where applicable. Alternatives to such codified or approved dose evaluation models to be used for demonstrating compliance must be approved by the Field Element Manager.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | SRR Applicability |              |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Nuclear HC-1,2,3  | Radiological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.050                | DOEO458.1-AChg3 | Att.1. 2.e.( 7)             | <p>2. SPECIFIC REQUIREMENTS</p> <p>e. Demonstrating Compliance with the Public Dose Limit. The contractor must establish and implement procedures and practices to demonstrate compliance with the public dose limit and to address the following elements:</p> <p>(7) DOE-approved dose coefficients must be used to evaluate doses resulting from DOE radiological activities. Use of alternative dose coefficients must be approved by the Chief Health, Safety and Security Officer or by a Cognizant Secretarial Officer in consultation with the Chief Health, Safety and Security Officer.</p>                                                                                                                                                                                                                                                                                                                                                        | X                 | X            |                      |                     |                  |                   | X                  |                   |
| 20.03.051                | DOEO458.1-AChg3 | Att.1. 2.e.( 8)             | <p>2. SPECIFIC REQUIREMENTS</p> <p>e. Demonstrating Compliance with the Public Dose Limit. The contractor must establish and implement procedures and practices to demonstrate compliance with the public dose limit and to address the following elements:</p> <p>(8) Doses to members of the public from airborne effluents must be evaluated with the CAP-88 model or another EPA-approved model or method to demonstrate compliance with applicable subparts of 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants.</p> <p>Note: 40 CFR Part 61 Requirement is included in 20.08.134 of this functional area.</p>                                                                                                                                                                                                                                                                                                                  | X                 | X            |                      |                     |                  |                   | X                  |                   |
| 20.03.052                | DOEO458.1-AChg3 | Att.1. 2.e.( 9).(a)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>e. Demonstrating Compliance with the Public Dose Limit. The contractor must establish and implement procedures and practices to demonstrate compliance with the public dose limit and to address the following elements:</p> <p>(9) Environmental monitoring must be conducted to characterize routine and non-routine releases of radioactive material from radiological activities, estimate the dispersal pattern in the environs, characterize the pathway(s) of exposure to members of the public and estimate the doses to individuals and populations in the vicinity of the site or operation commensurate with the nature of the DOE radiological activities and the risk to the public and the environment. Radiological monitoring must be integrated with the general environmental and effluent monitoring. Environmental monitoring must include, but is not limited to:</p> <p>(a) Effluent Monitoring</p> | X                 | X            |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Reqt Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.053                | DOEO458.1-AChg3 | Att.1. 2.e.( 9).(b)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>e. Demonstrating Compliance with the Public Dose Limit. The contractor must establish and implement procedures and practices to demonstrate compliance with the public dose limit and to address the following elements:</p> <p>(9) Environmental monitoring must be conducted to characterize routine and non-routine releases of radioactive material from radiological activities, estimate the dispersal pattern in the environs, characterize the pathway(s) of exposure to members of the public and estimate the doses to individuals and populations in the vicinity of the site or operation commensurate with the nature of the DOE radiological activities and the risk to the public and the environment. Radiological monitoring must be integrated with the general environmental and effluent monitoring. Environmental monitoring must include, but is not limited to:</p> <p>(b) Environmental Surveillance</p>                                                                                                                                                                                                                                                                                                                                                                                                                  | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.054                | DOEO458.1-AChg3 | Att.1. 2.e.( 9).(c)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>e. Demonstrating Compliance with the Public Dose Limit. The contractor must establish and implement procedures and practices to demonstrate compliance with the public dose limit and to address the following elements:</p> <p>(9) Environmental monitoring must be conducted to characterize routine and non-routine releases of radioactive material from radiological activities, estimate the dispersal pattern in the environs, characterize the pathway(s) of exposure to members of the public and estimate the doses to individuals and populations in the vicinity of the site or operation commensurate with the nature of the DOE radiological activities and the risk to the public and the environment. Radiological monitoring must be integrated with the general environmental and effluent monitoring. Environmental monitoring must include, but is not limited to:</p> <p>(c) Meteorological Monitoring. Meteorological monitoring must be commensurate with the level of site radiological activities, the site topographical characteristics, and the distance to critical receptors. The scope must be sufficient to characterize atmospheric dispersion and model the dose to members of the public over distances commensurate with the magnitude of potential source terms and possible pathways to the atmosphere.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.055                | DOEO458.1-AChg3 | Att.1. 2.e.( 9).(d)          | <p>2. SPECIFIC REQUIREMENTS</p> <p>e. Demonstrating Compliance with the Public Dose Limit. The contractor must establish and implement procedures and practices to demonstrate compliance with the public dose limit and to address the following elements:</p> <p>(9) Environmental monitoring must be conducted to characterize routine and non-routine releases of radioactive material from radiological activities, estimate the dispersal pattern in the environs, characterize the pathway(s) of exposure to members of the public and estimate the doses to individuals and populations in the vicinity of the site or operation commensurate with the nature of the DOE radiological activities and the risk to the public and the environment. Radiological monitoring must be integrated with the general environmental and effluent monitoring. Environmental monitoring must include, but is not limited to:</p> <p>(d) Pre-operational Monitoring. Prior to the startup of a new site, facility or process with the potential to expose the public or environment to radiation or radioactive material, it is necessary to ensure that adequate knowledge exists to understand: 1) radiological background; 2) pertinent environmental and ecological parameters; and 3) potential pathways for human exposures or ecological/natural resource impacts either from existing data or documents (for example, NEPA evaluations or existing monitoring and surveillance programs, etc.) or from the conduct of a pre-operational study initiated at least one year prior to startup of a new operation.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.056                | DOEO458.1-AChg3 | Att.1. 2.e.(10)              | <p>2. SPECIFIC REQUIREMENTS</p> <p>e. Demonstrating Compliance with the Public Dose Limit. The contractor must establish and implement procedures and practices to demonstrate compliance with the public dose limit and to address the following elements:</p> <p>(10) Site-specific environmental monitoring criteria must be established to ensure that representative measurements of quantities and concentrations of radiological contaminants are conducted and that the effects from DOE radiological activities on members of the public and the environment are monitored sufficiently to demonstrate compliance with the Specific Requirements in this CRD.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.057                | DOEO458.1-AChg3 | Att.1. 2.f.(4)               | <p>2. SPECIFIC REQUIREMENTS</p> <p>f. Airborne Radioactive Effluents.</p> <p>The contractor must establish and implement procedures and practices related to airborne radioactive effluents so that radiological activities are conducted in a manner such that the release of radioactive material to the atmosphere will:</p> <p>(4) Not cause the radon-220 and radon-222 decay product concentration, including background, to exceed 0.03 WL in buildings that are being released from DOE control. Further, a reasonable effort must be made to meet a 0.02WL generic guideline for annual average radon-220 and radon-222 decay product concentration, including background, in such buildings;</p>                                                                                                                                  | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.058                | DOEO458.1-AChg3 | Att.1. 2.g.( 4)              | <p>2. SPECIFIC REQUIREMENTS</p> <p>g. Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must:</p> <p>(4) Conduct activities to ensure that liquid discharges containing radionuclides from DOE activities do not exceed an annual average (at the point of discharge) of either of the following:</p> <p>(a) 5 pCi (0.2 Bq) per gram above background of settleable solids for alpha-emitting radionuclides.</p> <p>(b) 50 pCi (2 Bq) per gram above background of settleable solids for beta-gamma-emitting radionuclides.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.059                | DOEO458.1-AChg3 | Att.1. 2.g.( 5)              | <p>2. SPECIFIC REQUIREMENTS</p> <p>g. Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must:</p> <p>(5) Except for tritium and sanitary sewers, apply Best Available Technology (BAT) if at the point of discharge:</p> <p>(a) The annual average concentration of a given radionuclide is greater than the DOE-approved derived concentration standard (DCS) value for water contained in the Derived Concentration Technical Standard, DOE-STD-1196-2011, or for multiple radionuclides, the composite DCS must be the sum of the fractional DCS values derived from DOE-approved DCS values;</p> <p>(b) The discharge contributes greater than 10 mrem (0.1 mSv) annual TED to members of the public; or</p> <p>(c) The collective dose from all DOE sources is greater than 100 person-rem (1 person-Sv) and the liquid discharge contributes 50 percent or more of this collective dose.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.060                | DOEO458.1-AChg3 | Att.1. 2.g.(11)              | <p>2. SPECIFIC REQUIREMENTS</p> <p>g. Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must:</p> <p>(11) Ensure that storm water runoff containing radionuclides from DOE activities is considered, as appropriate, as a pathway of exposure that has the potential for on- and off-site impacts. Using a graded approach, the receiving ecosystem including, but not limited to, wetlands, floodplains, streams, ponds, basins and lakes must be monitored to evaluate human or ecological impacts when warranted based on site specific risk.</p>                                                                                                                                                                                                                                                                                                                                               | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.061                | DOEO458.1-AChg3 | Att.1. 2.j.(1)              | <p>2. SPECIFIC REQUIREMENTS</p> <p>j. Protection of Biota. The contractor must establish and implement procedures and practices to ensure that biota are protected and to address the following elements:</p> <p>(1) Radiological activities that have the potential to impact the environment must be conducted in a manner that protects populations of aquatic animals, terrestrial plants, and terrestrial animals in local ecosystems from adverse effects due to radiation and radioactive material released from DOE operations.</p>                                                                                                                                                                                                                                                      | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.062                | DOEO458.1-AChg3 | Att.1. 2.j.(2).(a)          | <p>2. SPECIFIC REQUIREMENTS</p> <p>j. Protection of Biota. The contractor must establish and implement procedures and practices to ensure that biota are protected and to address the following elements:</p> <p>(2) When actions taken to protect humans from radiation and radioactive materials are not adequate to protect biota then evaluations must be done to demonstrate compliance with paragraph 2.j.(1) of the Specific Requirements in this CRD in one or more of the following ways:</p> <p>(a) Use DOE-STD-1153-2002, A Graded Approach for Evaluating Radiation Doses to Aquatic and Terrestrial Biota.</p> <p>Note: All the Specific Requirements of paragraph 2.j.(1) are included in this functional area.</p>                                                                | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.063                | DOEO458.1-AChg3 | Att.1. 2.j.(2).(b)          | <p>2. SPECIFIC REQUIREMENTS</p> <p>j. Protection of Biota. The contractor must establish and implement procedures and practices to ensure that biota are protected and to address the following elements:</p> <p>(2) When actions taken to protect humans from radiation and radioactive materials are not adequate to protect biota then evaluations must be done to demonstrate compliance with paragraph 2.j.(1) of the Specific Requirements in this CRD in one or more of the following ways:</p> <p>(b) Use an alternative approach to demonstrate that the dose rates to representative biota populations do not exceed the dose rate criteria in DOE-STD-1153-2002, Table 2.2.</p> <p>Note: All the Specific Requirements of paragraph 2.j.(1) are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Reqt Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.064                | DOEO458.1-AChg3 | Att.1. 2.j.(2).(c)          | <p>2. SPECIFIC REQUIREMENTS</p> <p>j. Protection of Biota. The contractor must establish and implement procedures and practices to ensure that biota are protected and to address the following elements:</p> <p>(2) When actions taken to protect humans from radiation and radioactive materials are not adequate to protect biota then evaluations must be done to demonstrate compliance with paragraph 2.j.(1) of the Specific Requirements in this CRD in one or more of the following ways:</p> <p>(c) Use an ecological risk assessment to demonstrate that radiation and radioactive material released from DOE operations will not adversely affect populations within the ecosystem.</p> <p>Note: All the Specific Requirements of paragraph 2.j.(1) are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.065                | DOEO458.1-AChg3 | Att.1. 2.k.( 1)             | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property. The contractor must establish and implement procedures and practices to ensure that release or clearance of property with the potential to contain residual radioactive material must be conducted in accordance with DOE direction and in accordance with the requirements in paragraph 2.k. of the Specific Requirements in this CRD &lt;4&gt;.</p> <p>(1) Property control and clearance processes must be developed and implemented in accordance with the dose limits in paragraph 2.b of the Specific Requirements in this CRD under any plausible use of the property and the ALARA process requirements in paragraph 2.d of the Specific Requirements in this CRD must be met before property is cleared.</p> <p>&lt;4&gt; In addition to paragraph 2.k of the Specific Requirements in this CRD, the following may have applicable requirements regarding clearance of property: 41 CFR Chapter 109, Department of Energy Property Management Regulations; DOE O 430.1B Chg 2, Real Property Asset Management; DOE O 580.1A Department of Energy Personal Property Management Program.</p> <p>Notes:</p> <p>1. All the Specific Requirements of paragraph 2.b. are included in this functional area.</p> <p>2. All the Specific Requirements of paragraph 2.d. are included in this functional area.</p> <p>3. All the Specific Requirements of paragraph 2.k. are included in this functional area.</p> <p>4. Requirements of DOE O 430.1B Chg 2 are included in Non-ESH document and S/RID FA 10 (Maintenance), FA 14 (Environmental Restoration) and FA 15 (Facility Disposition).</p> <p>5. <b>DOE N 251.118, dated 1/17/2017, cancelled</b> DOE O 580.1A.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.066                | DOEO458.1-AChg3 | Att.1. 2.k.( 2)             | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(2) Dose Constraints.</p> <p>Unless alternative dose constraints are approved by issuance of a directive or memorandum by the Chief Health, Safety and Security Officer or for NNSA, the Cognizant Secretarial Officer in consultation with the Chief Health, Safety and Security Officer, the following dose constraints for DOE residual radioactive material must be applied to each specific clearance of property for any actual or likely future use of the property:</p> <p>(a) Real property - a TED of 25 mrem (0.25 mSv) above background in any calendar year;</p> <p>(b) Personal property - a TED of 1 mrem (0.01 mSv) above background in any calendar year.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.067                | DOEO458.1-AChg3 | Att.1. 2.k.( 3)             | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(3) Residual Radioactive Material.</p> <p>Property potentially containing residual radioactive material must not be cleared from DOE control unless either:</p> <p>(a) The property is demonstrated not to contain residual radioactive material based on process and historical knowledge, radiological monitoring or surveys, or a combination of these; or</p> <p>(b)The property is evaluated and appropriately monitored or surveyed to determine:</p> <p>1 The types and quantities of residual radioactive material within the property;</p> <p>2 The quantities of removable and total residual radioactive material on property surfaces (including residual radioactive material present on and under any coating);</p> <p>3 That for property with potentially contaminated surfaces that are difficult to access for radiological monitoring or surveys, an evaluation of residual radioactive material on such surfaces is performed which is:</p> <p>a Based on process and historical knowledge meeting the requirements of paragraph 2.k.(5) of the Specific Requirements in this CRD and monitoring and or surveys, to the extent feasible and</p> <p>b Sufficient to demonstrate that applicable specific or pre-approved DOE Authorized Limits will not be exceeded; and</p> <p>4 That any residual radioactive material within or on the property is in compliance with applicable specific or pre-approved DOE Authorized Limits.</p> <p>Note: All the Specific Requirements of paragraph 2.k.(5) are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.068                | DOEO458.1-AChg3 | Att.1. 2.k.( 4)              | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(4) Evaluation of the Need for Maintaining Institutional Controls for Real Property.</p> <p>Real property under evaluation for clearance from DOE radiological controls must be evaluated against the need for maintaining institutional controls or impacting long-term stewardship of adjacent DOE real property. In situations where transfer of the real property to other use would impact long-term radiological protection of adjacent DOE properties, it must be demonstrated that the impact of the property clearance would not result in noncompliance for the adjacent property with the requirements of applicable statutes, regulations or DOE directives.</p>                     | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.069                | DOEO458.1-AChg3 | Att.1. 2.k.( 5).(a)          | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(5) Process and Historical Knowledge. Contractors responsible for radiological clearance of property, when they rely in part, on process knowledge as a basis for clearance decisions, must establish a documented evaluation process, using a graded approach, for applying process and historical knowledge to determine if property potentially contains residual radioactive material.</p> <p>(a) This process must include procedures for evaluating operational records and operating history, including the use of any radioactive materials or radiation generating devices.</p>                                                                                                         | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.070                | DOEO458.1-AChg3 | Att.1. 2.k.( 5).(b)          | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(5) Process and Historical Knowledge. Contractors responsible for radiological clearance of property, when they rely in part, on process knowledge as a basis for clearance decisions, must establish a documented evaluation process, using a graded approach, for applying process and historical knowledge to determine if property potentially contains residual radioactive material.</p> <p>(b) For real property, this process must address each specific property individually. If several parcels of land are contiguous, or if several structures are located in the same area and have a common operational history, a single evaluation for all of the properties is acceptable.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.071                | DOEO458.1-AChg3 | Att.1. 2.k.( 5).(c)          | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(5) Process and Historical Knowledge. Contractors responsible for radiological clearance of property, when they rely in part, on process knowledge as a basis for clearance decisions, must establish a documented evaluation process, using a graded approach, for applying process and historical knowledge to determine if property potentially contains residual radioactive material.</p> <p>(c) If available process and historical knowledge cannot demonstrate that property does not contain residual radioactive materials, radiological monitoring or surveys must be conducted to supplement process and historical knowledge evaluations.</p>                                                                                                                                                                                                                                                                                                                                             | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.072                | DOEO458.1-AChg3 | Att.1. 2.k.( 5).(d)          | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(5) Process and Historical Knowledge. Contractors responsible for radiological clearance of property, when they rely in part, on process knowledge as a basis for clearance decisions, must establish a documented evaluation process, using a graded approach, for applying process and historical knowledge to determine if property potentially contains residual radioactive material.</p> <p>(d) If not supplemented by radiological surveys, process and historical knowledge evaluations must be adequate to determine:</p> <p>1 Whether the property has ever been used for radiological activities or in areas that could have resulted in the presence of residual radioactive material within or on the property or</p> <p>2 Whether property formerly containing residual radioactive material has been decontaminated and demonstrated to meet DOE Authorized Limits, and has not been used in a manner or in areas that could have resulted in the re-contamination of the property.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.073                | DOEO458.1-AChg3 | Att.1. 2.k.( 5).(e)          | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(5) Process and Historical Knowledge. Contractors responsible for radiological clearance of property, when they rely in part, on process knowledge as a basis for clearance decisions, must establish a documented evaluation process, using a graded approach, for applying process and historical knowledge to determine if property potentially contains residual radioactive material.</p> <p>(e) For property that is determined to potentially contain residual radioactive material under paragraph 2.k.(5)(d)1 of the Specific Requirements in this CRD or determined to be re-contaminated under paragraph 2.k.(5)(d)2 of the Specific Requirements in this CRD, the process and historical knowledge evaluation must also include an assessment of the types and quantities of residual radioactive material and the sources and pathways by which the property became contaminated.</p> <p>Note: All the Specific Requirements of paragraph 2.k.(5)(d)1 and 2.k.(5)(d)2 are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.074                | DOEO458.1-AChg3 | Att.1. 2.k.( 6).(a)          | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(6) Authorized Limits.</p> <p>(a) Authorized Limits for the clearance of any property with residual radioactive material must provide reasonable assurance that the requirements of paragraphs 2.k.(1) and 2.k.(2) of the Specific Requirements in this CRD are met. Authorized Limits may be applied to property for which process knowledge cannot establish the absence of residual radioactive material and in which the presence of residual radioactive material cannot be determined.</p> <p>Note: All the Specific Requirements of paragraph 2.k.(1) and 2.k.(2) are included in this functional area.</p>                                                                                                                                                                                                                                                                                                                                                                                                           | X                 | X             |                      |                     |                  |                   | X                  |                   |

TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.075                | DOEO458.1-AChg3 | Att.1. 2.k.( 6).(b).1        | 2. SPECIFIC REQUIREMENTS<br>k. Release and Clearance of Property.<br><br>(6) Authorized Limits.<br><br>(b) Authorized Limits must:<br><br>1 Be developed in accordance with the ALARA requirements in paragraph 2.d. of the Specific Requirements in this CRD.<br><br>Note: All the Specific Requirements of paragraph 2.d. are included in this functional area.                                                                                                                                                              | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.076                | DOEO458.1-AChg3 | Att.1. 2.k.( 6).(b).2        | 2. SPECIFIC REQUIREMENTS<br>k. Release and Clearance of Property.<br><br>(6) Authorized Limits.<br><br>(b) Authorized Limits must:<br><br>2 Be based on the applicable dose constraint, supported by a complete exposure pathway analysis using appropriate methodologies, techniques, parameters and models (such as the RESRAD family of codes) that meet DOE quality assurance requirements under the CRD to DOE O 414.1D, Quality Assurance, dated 4-25-11.<br><br><b>Note: DOE O 414.1D, Chg 1 replaced DOE O 414.1D.</b> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.077                | DOEO458.1-AChg3 | Att.1. 2.k.( 6).(b).3        | 2. SPECIFIC REQUIREMENTS<br>k. Release and Clearance of Property.<br><br>(6) Authorized Limits.<br><br>(b) Authorized Limits must:<br><br>3 Be expressed in terms of concentration of radioactivity per unit surface area (e.g., dpm per 100 cm<2>), radioactivity per unit mass (e.g., pCi per gram) or volume (e.g., pCi per ml), total radioactivity, or DOE controls and restrictions, if applicable.                                                                                                                      | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.078                | DOEO458.1-AChg3 | Att.1. 2.k.( 6).(b).4        | 2. SPECIFIC REQUIREMENTS<br>k. Release and Clearance of Property.<br><br>(6) Authorized Limits.<br><br>(b) Authorized Limits must:<br><br>4 Explicitly state any restrictions or conditions on future use of the property necessary to ensure the basic dose limit and applicable dose constraint are not exceeded.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.079                | DOEO458.1-AChg3 | Att.1. 2.k.( 6).(b).5        | 2. SPECIFIC REQUIREMENTS<br>k. Release and Clearance of Property.<br><br>(6) Authorized Limits.<br><br>(b) Authorized Limits must:<br><br>5 In addition to paragraphs 2.k.(6)(b)1-4 of the Specific Requirements in this CRD for clearance of personal property only:<br><br>a Be based on expected annual quantity of property to be cleared or<br>b Be based on expected total amount of property cleared over the life of the project for specific remedial action or decontamination and decommissioning projects and<br>c Prior to clearance of metals, the contractor must provide the necessary information to support a determination by the Field Element Manager that there is no practical internal DOE opportunity for reuse or recycle of the material or equipment.<br><br>Note: All the Specific Requirements of paragraph 2.k.(6)(b)1-4 are included in this functional area. | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.080                | DOEO458.1-AChg3 | Att.1. 2.k.( 6).(b).6        | 2. SPECIFIC REQUIREMENTS<br>k. Release and Clearance of Property.<br><br>(6) Authorized Limits.<br><br>(b) Authorized Limits must:<br><br>6 Authorized limits must be submitted to the Field Element Manager to obtain DOE approval.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                 | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                  | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.081                | DOEO458.1-AChg3 | Att.1. 2.k.( 6).(c).1        | 2. SPECIFIC REQUIREMENTS<br>k. Release and Clearance of Property.<br><br>(6) Authorized Limits.<br><br>(c) Applications for DOE approval of Authorized Limits must contain the following:<br><br>1 A description of the property.                                                                                                                                                                                                | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.082                | DOEO458.1-AChg3 | Att.1. 2.k.( 6).(c).2        | 2. SPECIFIC REQUIREMENTS<br>k. Release and Clearance of Property.<br><br>(6) Authorized Limits.<br><br>(c) Applications for DOE approval of Authorized Limits must contain the following:<br><br>2 Specific limits proposed for each radionuclide or group of radionuclides and/or external radiation exposure, surrogate metrics, or conditions used to limit radionuclides.                                                    | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.083                | DOEO458.1-AChg3 | Att.1. 2.k.( 6).(c).3        | 2. SPECIFIC REQUIREMENTS<br>k. Release and Clearance of Property.<br><br>(6) Authorized Limits.<br><br>(c) Applications for DOE approval of Authorized Limits must contain the following:<br><br>3 Potential collective dose to the exposed population and the potential dose to a member of the public most likely to receive the highest dose for both: actual or likely future use, and plausible future use of the property. | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.084                | DOEO458.1-AChg3 | Att.1. 2.k.( 6).(c).4        | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(6) Authorized Limits.</p> <p>(c) Applications for DOE approval of Authorized Limits must contain the following:</p> <p>4 ALARA assessments conducted under paragraph 2.d. of the Specific Requirements in this CRD for the proposed clearance action to include, at a minimum, the effects of:</p> <p>a Implementing the proposed Authorized Limits;</p> <p>b Implementing alternative levels of residual radioactive material instead of the proposed Authorized Limits;</p> <p>c Not implementing the proposed Authorized Limits, i.e., not proceeding with the proposed clearance action.</p> <p>Note: All the Specific Requirements of paragraph 2.d. are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.085                | DOEO458.1-AChg3 | Att.1. 2.k.( 6).(c).5        | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(6) Authorized Limits.</p> <p>(c) Applications for DOE approval of Authorized Limits must contain the following:</p> <p>5 A description of the procedures and radiological monitoring or surveys to be used to demonstrate compliance with proposed limits.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                      | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.086                | DOEO458.1-AChg3 | Att.1. 2.k.( 6).(c).6        | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(6) Authorized Limits.</p> <p>(c) Applications for DOE approval of Authorized Limits must contain the following:</p> <p>6 Identification of any restrictions or conditions on the future use of the property upon which the proposed limits are based, and the means by which the restrictions or conditions will be implemented and maintained.</p>                                                                                                                                                                                                                                                                                                                                                 | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.087                | DOEO458.1-AChg3 | Att.1. 2.k.( 6).(c).7       | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(6) Authorized Limits.</p> <p>(c) Applications for DOE approval of Authorized Limits must contain the following:</p> <p>7 An estimated date for when the property will be cleared and an estimate of when the property will be released from DOE control. &lt;5&gt;</p> <p>&lt;5&gt; This information is needed to support the DOE expectation stated at 72 FR 31904, 31906 (10 CFR Part 835, June 8, 2007) that the material, equipment, or real property to which the 10 CFR Part 835.1(b)(6) exclusion is applied will be released from DOE control according to a specified time interval.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.088                | DOEO458.1-AChg3 | Att.1. 2.k.( 6).(d)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(6) Authorized Limits.</p> <p>(d) Property covered by Authorized Limits is subject to 10 CFR Part 835 requirements unless the criteria in paragraphs 2 k.(6)(a) through (c) of the Specific Requirements in this CRD have been met and the Authorized Limits have been approved by a Cognizant Secretarial Officer in consultation with the Chief Health, Safety and Security Officer as required by the 10 CFR Part 835 exclusion.</p> <p>Note: All the Specific Requirements of paragraphs 2.k.(6)(a) through (c) are included in this functional area.</p>                                      | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Reqt Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.089                | DOEO458.1-AChg3 | Att.1. 2.k.(6).(e).1        | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(6) Authorized Limits.</p> <p>(e) Revision of Authorized Limits. If established Authorized Limits are found to be not protective, appropriate or practical to apply for a specific type or portion of property, further clearance for that specific type or portion of property must not proceed without revised Authorized Limits.</p> <p>1 An application for revised Authorized Limits must be submitted in accordance with the requirements in paragraphs 2.k.(6)(a) through (d) of the Specific Requirements in this CRD.</p> <p>Note: All the Specific Requirements of paragraph 2.k.(6)(a) through (d) are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.090                | DOEO458.1-AChg3 | Att.1. 2.k.(6).(e).2        | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(6) Authorized Limits.</p> <p>(e) Revision of Authorized Limits. If established Authorized Limits are found to be not protective, appropriate or practical to apply for a specific type or portion of property, further clearance for that specific type or portion of property must not proceed without revised Authorized Limits.</p> <p>2 In addition to the requirements of applicable paragraphs of 2.k.(6) of the Specific Requirements in this CRD, requests for approval of revised Authorized Limits must include a justification for the need for the revised Authorized Limits. Justifications for revised Authorized Limits must be based upon one of the following:</p> <p>a Complying with existing Authorized Limits would pose a clear and present risk of injury to general employees or members of the public; or</p> <p>b Complying with existing Authorized Limits, would produce environmental harm (e.g., destruction of artifacts, ecological damage, loss of cultural assets) that is clearly excessive compared to the potential health benefits to persons exposed to affected properties; or</p> <p>c Complying with existing Authorized Limits is unreasonably costly relative to long-term benefits and where the residual radioactive material does not pose a clear present or future potential of exceeding the public dose limit of paragraph 2.b. of the Specific Requirements in this CRD; or</p> <p>d Portions of the project or activity for which the scenarios or assumptions used to establish the existing Authorized Limits are overly conservative, or where more appropriate scenarios or assumptions indicate that other limits are applicable or appropriate for protection of the public and the environment; or</p> <p>e New information which indicates the existing Authorized Limits are not sufficient to meet the protective requirements established by DOE.</p> <p>Note: All the Specific Requirements of paragraph 2.k.(6) and 2.b are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.091                | DOEO458.1-AChg3 | Att.1. 2.k.(6).(f).1         | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(6) Authorized Limits.</p> <p>(f) Pre-Approved Authorized Limits.</p> <p>1 The following values have been pre-approved by DOE for use as Authorized Limits, and may be used as specified below instead of developing specific Authorized Limits.</p> <p>a For radium-226 and radium-228 in soil - 5 pCi/gram (0.2 Bq/gram) in excess of background levels, averaged over 100 m2, in the first 15 cm depth of the surface layer of soil; and 15 pCi/gram (0.56 Bq/gram) in excess of background levels, averaged over any subsequent 15 cm subsurface layer of soil plus an ALARA assessment. If both thorium-230 and radium-226 or both thorium-232 and radium-228 are present and not in secular equilibrium, the appropriate pre-approved limit must be applied to the radionuclide with the higher concentration.</p> <p>b Previously approved guidelines and limits (such as the surface activity guidelines) may continue to be applied and used as Pre-Approved Authorized Limits until they are replaced or revised by Pre-Approved Authorized Limits issued by the Department.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.092                | DOEO458.1-AChg3 | Att.1. 2.k.(6).(f).2         | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(6) Authorized Limits.</p> <p>(f) Pre-Approved Authorized Limits.</p> <p>2 Pre-Approved Authorized Limits may be used for any radiological activity instead of developing specific Authorized Limits if their use is documented in the environmental radiological protection program and the specific application of the Authorized Limits is approved by the responsible Field Element Manager.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.093                | DOEO458.1-AChg3 | Att.1. 2.k.( 6).(g)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(6) Authorized Limits.</p> <p>(g) Documentation of Approved Authorized Limits.</p> <p>Approved Authorized Limits and approved revised Authorized Limits and supporting documentation must be made available to the public.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.094                | DOEO458.1-AChg3 | Att.1. 2.k.( 7).(a)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(7) Clearance of Environmental Restoration, Deactivation and Decommissioning, and Other Cleanup Materials.</p> <p>(a) Clearance of property with residual radioactive material from environmental restoration activities, including deactivation and decommissioning, must meet the Specific Requirements in this CRD. Environmental restoration activities using the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process may demonstrate compliance with the Specific Requirements in this CRD (including public dose assessments, ALARA analysis, and consideration of scenarios) using documentation from the CERCLA process and any necessary supplemental information.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.095                | DOEO458.1-AChg3 | Att.1. 2.k.( 7).(b)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(7) Clearance of Environmental Restoration, Deactivation and Decommissioning, and Other Cleanup Materials.</p> <p>(b) For the purpose of clearance of real or personal property, approved CERCLA remediation criteria may be considered equivalent to Authorized Limits if the appropriate Field Element Manager has determined that the criteria meet the Specific Requirements in this CRD for Authorized Limits, and provided that the use of the criteria as DOE Authorized Limits is documented and approved as would be an Authorized Limit. Compliance with all Specific Requirements in this CRD not met through the CERCLA process must also be demonstrated.</p>                                         | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.096                | DOEO458.1-AChg3 | Att.1. 2.k.( 7).(c)          | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(7) Clearance of Environmental Restoration, Deactivation and Decommissioning, and Other Cleanup Materials.</p> <p>(c) If the contractor performs environmental restoration activities involving clearance of real or personal property with residual radioactive material under CERCLA that use the CERCLA analysis and documentation in lieu of analysis and documentation developed specifically to demonstrate compliance with the Specific Requirements in this CRD, the contractor must submit the relevant CERCLA documentation and any additional information necessary to demonstrate that the requirements for Authorized Limits have been met to the responsible Field Element Manager.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.03.097                | DOEO458.1-AChg3 | Att.1. 2.k.( 8).(a)          | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(8) Radiological Monitoring or Surveys.</p> <p>(a) All radiological monitoring or surveys performed in support of clearance of property must:</p> <p>1 Use methodologies sufficient to meet measurement objectives such as those in the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM), the Multi-Agency Radiation Survey and Assessment of Materials and Equipment Manual (MARSAME) or other methodologies approved by DOE;</p> <p>2 Meet Measurement Quality Objectives;</p> <p>3 Use DOE-approved sampling and analysis techniques, if applicable; and</p> <p>4 Include an evaluation of non-uniformly distributed residual radioactive material, if applicable.</p>        | X                 | X             |                      |                     |                  |                   | X                  |                   |

TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SRR Applicability |              |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Nuclear HC-1,2,3  | Radiological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.098                | DOEO458.1-AChg3 | Att.1. 2.k.( 8).(b)         | 2. SPECIFIC REQUIREMENTS<br>k. Release and Clearance of Property.<br><br>(8) Radiological Monitoring or Surveys.<br><br>(b) Instrumentation used for radiological monitoring or surveys must be capable of detecting and quantifying residual radioactive material consistent with the applicable Authorized Limits, and be:<br><br>1 Periodically maintained and calibrated on an established frequency;<br>2 Appropriate for the type(s), levels, and energies of the radiation(s) encountered; and<br>3 Appropriate for existing environmental conditions and routinely tested for operability. | X                 | X            |                      |                     |                  |                   | X                  |                   |
| 20.03.099                | DOEO458.1-AChg3 | Att.1. 2.k.( 9)             | 2. SPECIFIC REQUIREMENTS<br>k. Release and Clearance of Property.<br><br>(9) Documentation and Verification.<br><br>Any contractor responsible for radiological clearance of property must ensure that final radiological monitoring or surveys are conducted and that documentation is prepared that shows that the clearance meets applicable DOE Authorized Limits, or other applicable requirements including associated restrictions or institutional controls (See DOE P 454.1).<br><br><b>Note: DOE P 454.1, Chg 1 replaced DOE P 454.1.</b>                                                | X                 | X            |                      |                     |                  |                   | X                  |                   |
| 20.03.100                | DOEO458.1-AChg3 | Att.1. 2.k.(10)             | 2. SPECIFIC REQUIREMENTS<br>k. Release and Clearance of Property.<br><br>(10) Public Notification of Clearance of Property.<br><br>Information on approved Authorized Limits, any approved revised Authorized Limits, use of pre-approved Authorized Limits, results of radiological monitoring and surveys of cleared property with type and quantity of property cleared, and independent verification results must be summarized in the Annual Site Environmental Report.                                                                                                                       | X                 | X            |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.03.101                | DOEO458.1-AChg3 | Att.1. 2.k.(11)             | <p>2. SPECIFIC REQUIREMENTS</p> <p>k. Release and Clearance of Property.</p> <p>(11) Final Clearance Documentation.</p> <p>Clearance of property must be documented. The contents of the documentation or the mechanism for documenting information may be tailored to the need, situation, and type of property being cleared. For ongoing, routine clearances, e.g., clearance of personal property from controlled areas, such documentation may be based on the general process(es) rather than each specific clearance. In general, the documentation must describe the clearance process(es) and the property being cleared. The documentation must serve to demonstrate requirements have been met, show criteria used for clearance, identify the property's destination or disposition, as appropriate, and provide additional confidence to DOE and assurance to other interested parties that the public and the environment are being protected. The documentation must indicate any Authorized Limits, including any revised or pre-approved Authorized Limits, used for the clearance, and include information and data supporting the clearance of property such as radiological certification and independent verification results. An annual summary of cleared property must be prepared and submitted to the Field Element Manager.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.04.030                | DOEO458.1-AChg3 | Att.1. 2.f.(1)              | <p>2. SPECIFIC REQUIREMENTS</p> <p>f. Airborne Radioactive Effluents.</p> <p>The contractor must establish and implement procedures and practices related to airborne radioactive effluents so that radiological activities are conducted in a manner such that the release of radioactive material to the atmosphere will:</p> <p>(1) Be evaluated using the ALARA process established in paragraph 2.d. of the Specific Requirements in this CRD;</p> <p>Note: All the Specific Requirements of paragraph 2.d. are included in this functional area.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SRR Applicability |              |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Nuclear HC-1,2,3  | Radiological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.04.031                | DOEO458.1-AChg3 | Att.1. 2.f.(2)               | <p>2. SPECIFIC REQUIREMENTS</p> <p>f. Airborne Radioactive Effluents.</p> <p>The contractor must establish and implement procedures and practices related to airborne radioactive effluents so that radiological activities are conducted in a manner such that the release of radioactive material to the atmosphere will:</p> <p>(2) Not cause radon-222 flux rates to exceed 20 pCi (0.7 Bq)/m&lt;2&gt; -sec averaged over the surface area overlaying waste, including the covering or other confinement structures, wherever radium-226 wastes are accepted for storage or disposal (See 40 CFR Part 61, Subparts Q and T);</p> <p>Note: 40 CFR Part 61 Requirement is included in 20.08.134 of this functional area.</p> | X                 | X            |                      |                     |                  |                   | X                  |                   |
| 20.04.032                | DOEO458.1-AChg3 | Att.1. 2.f.(3)               | <p>2. SPECIFIC REQUIREMENTS</p> <p>f. Airborne Radioactive Effluents.</p> <p>The contractor must establish and implement procedures and practices related to airborne radioactive effluents so that radiological activities are conducted in a manner such that the release of radioactive material to the atmosphere will:</p> <p>(3) Meet compliance agreements under 40 CFR Part 61, Subparts H, Q, and T;</p> <p>Note: 40 CFR Part 61 Requirement is included in 20.08.134 of this functional area.</p>                                                                                                                                                                                                                    | X                 | X            |                      |                     |                  |                   | X                  |                   |
| 20.04.033                | DOEO458.1-AChg3 | Att.1. 2.f.(5)               | <p>2. SPECIFIC REQUIREMENTS</p> <p>f. Airborne Radioactive Effluents.</p> <p>The contractor must establish and implement procedures and practices related to airborne radioactive effluents so that radiological activities are conducted in a manner such that the release of radioactive material to the atmosphere will:</p> <p>(5) Not exceed 3 pCi/L annual average radon-220 and radon-222 concentration, not including background, at the site boundary if DOE activities release radon-220 and radon-222 or their decay products.</p>                                                                                                                                                                                  | X                 | X            |                      |                     |                  |                   | X                  |                   |

TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.04.034                | DOEO458.1-AChg3 | Att.1. 2.g.( 1)              | <p>2. SPECIFIC REQUIREMENTS</p> <p>g. Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must:</p> <p>(1) Characterize planned and unplanned releases of liquids containing radionuclides from DOE activities, consistent with the potential for on- and off-site impacts, and provide an assessment of radiological consequences as necessary to demonstrate compliance with the Specific Requirements of this CRD.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.04.035                | DOEO458.1-AChg3 | Att.1. 2.g.( 2)              | <p>2. SPECIFIC REQUIREMENTS</p> <p>g. Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must:</p> <p>(2) Comply with the ALARA process requirements in paragraph 2.d. of the Specific Requirements in this CRD.</p> <p>Note: All the Specific Requirements of paragraph 2.d. are included in this functional area.</p>                                                                                                  | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.04.036                | DOEO458.1-AChg3 | Att.1. 2.g.( 3)              | <p>2. SPECIFIC REQUIREMENTS</p> <p>g. Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must:</p> <p>(3) Conduct activities to ensure that liquid releases containing radionuclides from DOE activities are managed in a manner that protects ground water resources now and in the future, based on use and value considerations.</p>                                                                                  | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.04.037                | DOEO458.1-AChg3 | Att.1. 2.g.( 6)             | <p>2. SPECIFIC REQUIREMENTS</p> <p>g. Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must:</p> <p>(6) Control releases of tritium in a manner that has been established by application of the ALARA process.</p>                                                                                                                                                                                                                                                                                   | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.04.038                | DOEO458.1-AChg3 | Att.1. 2.g.( 7)             | <p>2. SPECIFIC REQUIREMENTS</p> <p>g. Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must:</p> <p>(7) Conduct radiological activities to ensure that radionuclides from DOE activities contained in liquid effluents do not cause private or public drinking water systems to exceed the drinking water maximum contaminant levels in 40 CFR Part 141, National Primary Drinking Water Regulations.</p> <p>Note: 40 CFR Part 141 Requirement is included in 20.08.104 of this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.04.039                | DOEO458.1-AChg3 | Att.1. 2.g.( 8).(a).1        | <p>2. SPECIFIC REQUIREMENTS</p> <p>g. Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must:</p> <p>(8) Control discharges into sanitary sewers in accordance with the following requirements:</p> <p>(a) Except for excreta from patients and medical research volunteers treated with radioactive material, discharges of liquids containing radionuclides from DOE activities into non-Federally owned sanitary sewers are prohibited unless:</p> <p>1 The material is readily soluble (or readily dispersed biological materials) in water:</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.04.040                | DOEO458.1-AChg3 | Att.1. 2.g.( 8).(a).2        | <p>2. SPECIFIC REQUIREMENTS</p> <p>g. Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must:</p> <p>(8) Control discharges into sanitary sewers in accordance with the following requirements:</p> <p>(a) Except for excreta from patients and medical research volunteers treated with radioactive material, discharges of liquids containing radionuclides from DOE activities into non-Federally owned sanitary sewers are prohibited unless:</p> <p>2 Such discharges comply with ALARA process requirements;</p>                               | X                 | X             |                      |                     |                  |                   | X                  |                   |

TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.04.041                | DOEO458.1-AChg3 | Att.1. 2.g.( 8).(a).3       | <p>2. SPECIFIC REQUIREMENTS</p> <p>g. Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must:</p> <p>(8) Control discharges into sanitary sewers in accordance with the following requirements:</p> <p>(a) Except for excreta from patients and medical research volunteers treated with radioactive material, discharges of liquids containing radionuclides from DOE activities into non-Federally owned sanitary sewers are prohibited unless:</p> <p>3 BAT is applied to discharges of liquid releases containing radionuclides from DOE activities if the average monthly concentration level at the point of discharge into the sanitary sewer is greater than five times the DOE-approved DCS values for ingestion except for tritium which is addressed under paragraph 2.g.(6);</p> <p>Note: All the Specific Requirements of paragraph 2.g.(6) are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.04.042                | DOEO458.1-AChg3 | Att.1. 2.g.( 8).(a).4       | <p>2. SPECIFIC REQUIREMENTS</p> <p>g. Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must:</p> <p>(8) Control discharges into sanitary sewers in accordance with the following requirements:</p> <p>(a) Except for excreta from patients and medical research volunteers treated with radioactive material, discharges of liquids containing radionuclides from DOE activities into non-Federally owned sanitary sewers are prohibited unless:</p> <p>4 Releases do not result in an annual discharge (above background) into sanitary sewers in excess of 5 Ci (185 GBq) of tritium; 1 Ci (37 GBq) carbon-14 or 1 Ci (37 GBq) of all other radionuclides combined;</p>                                                                                                                                                                                                                         | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.04.043                | DOEO458.1-AChg3 | Att.1. 2.g.( 8).(a).5       | <p>2. SPECIFIC REQUIREMENTS</p> <p>g. Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must:</p> <p>(8) Control discharges into sanitary sewers in accordance with the following requirements:</p> <p>(a) Except for excreta from patients and medical research volunteers treated with radioactive material, discharges of liquids containing radionuclides from DOE activities into non-Federally owned sanitary sewers are prohibited unless:</p> <p>5 DOE operations are conducted to minimize long-term buildup of radionuclides in the sewage treatment plants that may create handling and disposal issues or interfere with plant operations;</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.04.044                | DOEO458.1-AChg3 | Att.1. 2.g.( 8).(a).6       | <p>2. SPECIFIC REQUIREMENTS</p> <p>g. Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must:</p> <p>(8) Control discharges into sanitary sewers in accordance with the following requirements:</p> <p>(a) Except for excreta from patients and medical research volunteers treated with radioactive material, discharges of liquids containing radionuclides from DOE activities into non-Federally owned sanitary sewers are prohibited unless:</p> <p>6 The contractor notifies the responsible Field Element Manager of unusual discharges to sanitary sewers from DOE facilities;</p>                                                                 | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.04.045                | DOEO458.1-AChg3 | Att.1. 2.g.( 8).(a).7       | <p>2. SPECIFIC REQUIREMENTS</p> <p>g. Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must:</p> <p>(8) Control discharges into sanitary sewers in accordance with the following requirements:</p> <p>(a) Except for excreta from patients and medical research volunteers treated with radioactive material, discharges of liquids containing radionuclides from DOE activities into non-Federally owned sanitary sewers are prohibited unless:</p> <p>7 The contractor prepares and provides a report that describes and summarizes such discharge to sanitary sewers to the responsible Field Element Manager at least annually;</p>                                                          | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.04.046                | DOEO458.1-AChg3 | Att.1. 2.g.( 8).(a).8       | <p>2. SPECIFIC REQUIREMENTS</p> <p>g. Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must:</p> <p>(8) Control discharges into sanitary sewers in accordance with the following requirements:</p> <p>(a) Except for excreta from patients and medical research volunteers treated with radioactive material, discharges of liquids containing radionuclides from DOE activities into non-Federally owned sanitary sewers are prohibited unless:</p> <p>8 Existing agreements, contracts, statements of understanding or other formal arrangements with other agencies concerning the discharge of liquids containing radionuclides from DOE activities to sanitary sewers are not violated.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.04.047                | DOEO458.1-AChg3 | Att.1. 2.g.( 8).(b)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>g. Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must:</p> <p>(8) Control discharges into sanitary sewers in accordance with the following requirements:</p> <p>(b) DOE facilities discharging liquids containing radionuclides from DOE activities into sanitary sewer systems owned by the Federal government are not subject to the requirements in paragraph 2.g.(8)(a) of the Specific Requirements in this CRD if:</p> <p>1 The system provides treatment in accordance with the environmental radiological protection program and<br/>2 Sludge from the system is disposed of in accordance with the Specific Requirements in this CRD and applicable Federal, State, and municipal regulations.</p> <p>Note: All the Specific Requirements of paragraph 2.g.(8)(a) are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.04.048                | DOEO458.1-AChg3 | Att.1. 2.g.( 9)             | <p>2. SPECIFIC REQUIREMENTS</p> <p>g. Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must:</p> <p>(9) Prohibit the use of soil columns.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.04.049                | DOEO458.1-AChg3 | Att.1. 2.g.(10)             | <p>2. SPECIFIC REQUIREMENTS</p> <p>g. Control and Management of Radionuclides from DOE Activities in Liquid Discharges. The contractor must establish and implement procedures and practices related to control and management of radionuclides from DOE activities in liquid discharges. Operators of DOE facilities discharging or releasing liquids containing radionuclides from DOE activities must:</p> <p>(10) Manage the disposition of non-process water potentially containing radionuclides from DOE activities to protect soil and ground water and prevent the creation of future cleanup sites.</p>                                                                                                                             | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.04.050                | DOEO458.1-AChg3 | Att.1. 2.h.(1)              | <p>2. SPECIFIC REQUIREMENTS</p> <p>h. Radioactive Waste and Spent Nuclear Fuel. The contractor must establish and implement procedures and practices to ensure that management, storage and disposal of radioactive waste and spent nuclear fuel on DOE sites address the following elements:</p> <p>(1) Radiological activities must be conducted in a manner such that radiation exposure to members of the public from management and storage of radioactive waste complies with ALARA process requirements and does not result in a TED greater than 25 mrem (0.25 mSv) in a year from all exposure pathways and radiation sources associated with the waste, except for transportation and radon and its decay products.</p>             | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.04.051                | DOEO458.1-AChg3 | Att.1. 2.h.(2)              | <p>2. SPECIFIC REQUIREMENTS</p> <p>h. Radioactive Waste and Spent Nuclear Fuel. The contractor must establish and implement procedures and practices to ensure that management, storage and disposal of radioactive waste and spent nuclear fuel address the following elements:</p> <p>(2) Management of spent nuclear fuel, and high-level and transuranic wastes at a disposal facility which is not regulated by the NRC must comply with the requirements of this CRD and 40 CFR Part 191, Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-level and Transuranic Radioactive Wastes.</p> <p>Note: 40 CFR Part 191 Requirement is included in 20.08.149 of this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.04.052                | DOEO458.1-AChg3 | Att.1. 2.h.(3)               | <p>2. SPECIFIC REQUIREMENTS</p> <p>h. Radioactive Waste and Spent Nuclear Fuel. The contractor must establish and implement procedures and practices to ensure that management, storage and disposal of radioactive waste and spent nuclear fuel address the following elements:</p> <p>(3) Management, storage and disposal of low-level radioactive waste must be conducted in a manner such that exposure to members of the public to radiation from radioactive waste complies with ALARA process requirements, and does not exceed a TED of 25 mrem (0.25 mSv) in a year from all exposure pathways and radiation sources associated with the waste, except for transportation and radon and its decay products.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.04.053                | DOEO458.1-AChg3 | Att.1. 2.h.(4).(a).1         | <p>2. SPECIFIC REQUIREMENTS</p> <p>h. Radioactive Waste and Spent Nuclear Fuel. The contractor must establish and implement procedures and practices to ensure that management, storage and disposal of radioactive waste and spent nuclear fuel address the following elements:</p> <p>(4) Management, storage and disposal of 1 e.(2) byproduct material, as defined in Section 1 e.(2) of the AEA and other wastes containing uranium and thorium and their decay products which are not subject to the requirements of 40 CFR Part 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, are not at facilities licensed by the NRC, or are not disposed of at DOE low-level waste disposal facilities, must be in accordance with the requirements of paragraph 2.h. of the Specific Requirements in this CRD and DOE-approved plans.</p> <p>(a) Disposal facilities for uranium and thorium wastes must be designed to:</p> <p>1 Remain effective for 1,000 years, to the extent reasonably achievable, and, in any case, for at least 200 years,</p> <p>Note: All the Specific Requirements of paragraph 2.h. are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.04.054                | DOEO458.1-AChg3 | Att.1. 2.h.(4).(a).2         | <p>2. SPECIFIC REQUIREMENTS</p> <p>h. Radioactive Waste and Spent Nuclear Fuel. The contractor must establish and implement procedures and practices to ensure that management, storage and disposal of radioactive waste and spent nuclear fuel address the following elements:</p> <p>(4) Management, storage and disposal of 1 1e.(2) byproduct material, as defined in Section 1 1e.(2) of the AEA and other wastes containing uranium and thorium and their decay products which are not subject to the requirements of 40 CFR Part 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, are not at facilities licensed by the NRC, or are not disposed of at DOE low-level waste disposal facilities, must be in accordance with the requirements of paragraph 2.h. of the Specific Requirements in this CRD and DOE-approved plans.</p> <p>(a) Disposal facilities for uranium and thorium wastes must be designed to:</p> <p>2 Provide reasonable assurance that releases of radon-222 to the atmosphere will not:</p> <p>a Exceed an average release rate of 20 picocuries per square meter per second or</p> <p>b Increase the annual average concentration of radon-222 in air at or above any location outside the disposal site by more than one-half picocurie per liter.</p> <p>Note: All the Specific Requirements of paragraph 2.h. are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |  |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |  |
| 20.04.055                | DOEO458.1-AChg3 | Att.1. 2.h.(4).(b)           | <p>2. SPECIFIC REQUIREMENTS</p> <p>h. Radioactive Waste and Spent Nuclear Fuel. The contractor must establish and implement procedures and practices to ensure that management, storage and disposal of radioactive waste and spent nuclear fuel address the following elements:</p> <p>(4) Management, storage and disposal of 1 e.(2) byproduct material, as defined in Section 1 e.(2) of the AEA and other wastes containing uranium and thorium and their decay products which are not subject to the requirements of 40 CFR Part 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, are not at facilities licensed by the NRC, or are not disposed of at DOE low-level waste disposal facilities, must be in accordance with the requirements of paragraph 2.h. of the Specific Requirements in this CRD and DOE-approved plans.</p> <p>(b) For wastes containing significant concentrations of radium and thorium, special considerations must be given to measures to prevent inadvertent human intrusion.</p> <p>Note: All the Specific Requirements of paragraph 2.h. are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   |                    | X                 |  |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.04.056                | DOEO458.1-AChg3 | Att.1. 2.h.(4).(c)          | <p>2. SPECIFIC REQUIREMENTS</p> <p>h. Radioactive Waste and Spent Nuclear Fuel. The contractor must establish and implement procedures and practices to ensure that management, storage and disposal of radioactive waste and spent nuclear fuel address the following elements:</p> <p>(4) Management, storage and disposal of 1 e.(2) byproduct material, as defined in Section 1 e.(2) of the AEA and other wastes containing uranium and thorium and their decay products which are not subject to the requirements of 40 CFR Part 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, are not at facilities licensed by the NRC, or are not disposed of at DOE low-level waste disposal facilities, must be in accordance with the requirements of paragraph 2.h. of the Specific Requirements in this CRD and DOE-approved plans.</p> <p>(c) Before any potentially biodegradable contaminated wastes are placed in a disposal facility, such wastes must be conditioned so that the generation and escape of biogenic gases will not cause the emission or dose limits in paragraph 2.h. of the Specific Requirements in this CRD to be exceeded and that bio-degradation within the facility will not result in premature structural failure.</p> <p>Note: All the Specific Requirements of paragraph 2.h. are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.04.057                | DOEO458.1-AChg3 | Att.1. 2.h.(4).(d)          | <p>2. SPECIFIC REQUIREMENTS</p> <p>h. Radioactive Waste and Spent Nuclear Fuel. The contractor must establish and implement procedures and practices to ensure that management, storage and disposal of radioactive waste and spent nuclear fuel address the following elements:</p> <p>(4) Management, storage and disposal of 1 e.(2) byproduct material, as defined in Section 1 e.(2) of the AEA and other wastes containing uranium and thorium and their decay products which are not subject to the requirements of 40 CFR Part 192, Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, are not at facilities licensed by the NRC, or are not disposed of at DOE low-level waste disposal facilities, must be in accordance with the requirements of paragraph 2.h. of the Specific Requirements in this CRD and DOE-approved plans.</p> <p>(d) All plans for the management and disposal of these wastes must provide for institutional controls and long-term stewardship of the disposal facility necessary to ensure continued performance.</p> <p>Note: All the Specific Requirements of paragraph 2.h. are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.04.058                | DOEO458.1-AChg3 | Att.1. 2.h.(5)              | <p>2. SPECIFIC REQUIREMENTS</p> <p>h. Radioactive Waste and Spent Nuclear Fuel. The contractor must establish and implement procedures and practices to ensure that management, storage and disposal of radioactive waste and spent nuclear fuel address the following elements:</p> <p>(5) Discrete sources of radium-226, accelerator produced radioactive material, or naturally-occurring radioactive material (NORM) that pose a threat similar to discrete sources of radium-226, which are defined as Section 11e.(3) or 1 e.(4) byproduct material in the AEA, must be managed as high-level waste, low-level waste or 1 e.(2) material as appropriate under DOE AEA authorities and in compliance with the Specific Requirements in this CRD and the requirements in the CRD to DOE O 435.1 Chg 1.</p> <p>Note: The requirements of DOE O 435.1 Chg 1 are included in FA 16 (Waste Management).</p>                                                                                                                                                                                                                                                                                    | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.04.059                | DOEO458.1-AChg3 | Att.1. 2.i.(1)              | <p>2. SPECIFIC REQUIREMENTS</p> <p>i. Protection of Drinking Water and Ground Water.</p> <p>(1) The contractor must establish and implement procedures and practices to ensure that DOE sites provide a level of radiation protection for persons consuming water from a drinking water system operated by DOE, directly or through a DOE contractor, which is equivalent to that provided to members of the public by the community drinking water standards of 40 CFR Part 141, National Primary Drinking Water Regulations (that is, not exceed the radionuclide maximum contaminant levels (MCLs)).</p> <p>Note: 40 CFR Part 141 Requirement is included in 20.08.104 of this functional area.</p>                                                                                                                                       | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.04.060                | DOEO458.1-AChg3 | Att.1. 2.i.(2)              | <p>2. SPECIFIC REQUIREMENTS</p> <p>i. Protection of Drinking Water and Ground Water.</p> <p>(2) The contractor must protect ground water from radiological contamination to ensure compliance with dose limits in the Specific Requirements in this CRD and consistent with ALARA process requirements. To that end the contractor must ensure that:</p> <p>(a) Baseline conditions of the ground water quantity and quality are documented;</p> <p>(b) Possible sources of, and potential for, radiological contamination are identified and assessed;</p> <p>(c) Strategies to control radiological contamination are documented and implemented;</p> <p>(d) Monitoring methodologies are documented and implemented; and</p> <p>(e) Ground water monitoring activities are integrated with other environmental monitoring activities.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.06.007                | DOEO458.1-AChg3 | Att.1. 2.1.( 1)             | <p>2. SPECIFIC REQUIREMENTS</p> <p>1. Records, Retention and Reporting Requirements.</p> <p>The contractor must establish and implement recordkeeping, retention and reporting procedures and practices to ensure that the following elements are addressed:</p> <p>(1) Records must be maintained to document compliance with the Specific Requirements in this CRD.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.06.008                | DOEO458.1-AChg3 | Att.1. 2.1.( 2).(a)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>1. Records, Retention and Reporting Requirements.</p> <p>The contractor must establish and implement recordkeeping, retention and reporting procedures and practices to ensure that the following elements are addressed:</p> <p>(2) Required records include the following:</p> <p>(a) Information and data necessary to identify and characterize releases of radioactive material to the environment, their fate in the environment, and their probable impact on radiation dose to members of the public, and any impacts on ecological systems.</p>                                                                                                                          | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.06.009                | DOEO458.1-AChg3 | Att.1. 2.1.( 2).(b)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>1. Records, Retention and Reporting Requirements.</p> <p>The contractor must establish and implement recordkeeping, retention and reporting procedures and practices to ensure that the following elements are addressed:</p> <p>(2) Required records include the following:</p> <p>(b) Documentation of individual and collective dose to members of the public due to radiological activities. This includes documentation of site-specific information on radiation source dispersion patterns, location and demography of members of the public in the vicinity of the radiological activity and assumed default values or site-specific parameters used in calculations.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.06.010                | DOEO458.1-AChg3 | Att.1. 2.1.( 2).(c)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>1. Records, Retention and Reporting Requirements.</p> <p>The contractor must establish and implement recordkeeping, retention and reporting procedures and practices to ensure that the following elements are addressed:</p> <p>(2) Required records include the following:</p> <p>(c) Requests for specific authorization for temporary public dose limits, and subsequent approvals and other related actions.</p>                                                                                                                                                                                                                                                             | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Reqt Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.06.011                | DOEO458.1-AChg3 | Att.1. 2.1.( 2).(d)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>1. Records, Retention and Reporting Requirements.</p> <p>The contractor must establish and implement recordkeeping, retention and reporting procedures and practices to ensure that the following elements are addressed:</p> <p>(2) Required records include the following:</p> <p>(d) Identification of radiological activities subject to environmental radiological protection program requirements, and descriptions of the measures to be used in implementing these requirements.</p>                                                            | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.06.012                | DOEO458.1-AChg3 | Att.1. 2.1.( 2).(e)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>1. Records, Retention and Reporting Requirements.</p> <p>The contractor must establish and implement recordkeeping, retention and reporting procedures and practices to ensure that the following elements are addressed:</p> <p>(2) Required records include the following:</p> <p>(e) Documentation of actions taken to implement the ALARA process identified in paragraph 2.d. of the Specific Requirements in this CRD.</p> <p>Note: All the Specific Requirements of paragraph 2.d. are included in this functional area.</p>                     | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.06.013                | DOEO458.1-AChg3 | Att.1. 2.1.( 2).(f)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>1. Records, Retention and Reporting Requirements.</p> <p>The contractor must establish and implement recordkeeping, retention and reporting procedures and practices to ensure that the following elements are addressed:</p> <p>(2) Required records include the following:</p> <p>(f) Documentation of actions taken to demonstrate compliance with the public dose limit (See paragraph 2.e.(1) of the Specific Requirements in this CRD).</p> <p>Note: All the Specific Requirements of paragraph 2.e.(1) are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.06.014                | DOEO458.1-AChg3 | Att.1. 2.1.(2).(g)          | <p>2. SPECIFIC REQUIREMENTS</p> <p>1. Records, Retention and Reporting Requirements.</p> <p>The contractor must establish and implement recordkeeping, retention and reporting procedures and practices to ensure that the following elements are addressed:</p> <p>(2) Required records include the following:</p> <p>(g) Documentation of actions taken to implement the BAT selection process in regulating liquid discharges, including documentation of analyses and factors considered to be important, including alternative processes, for the BAT selection process.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                          | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.06.015                | DOEO458.1-AChg3 | Att.1. 2.1.(2).(h)          | <p>2. SPECIFIC REQUIREMENTS</p> <p>1. Records, Retention and Reporting Requirements.</p> <p>The contractor must establish and implement recordkeeping, retention and reporting procedures and practices to ensure that the following elements are addressed:</p> <p>(2) Required records include the following:</p> <p>(h) Effluent monitoring and environmental surveillance information and data, including:</p> <p>1 Results of effluent monitoring for determining sources of radiation and radioactive material that provide direct exposure to members of the public and releases of radioactive material in liquid or airborne effluent;</p> <p>2 Results of surveys for radiation and radioactive material in the environment;</p> <p>3 Results of surveys, measurements, and calculations used to determine the dose to members of the public and ecological receptors from external and internal radiation sources;</p> <p>4 Meteorological data used in assessing dose; and</p> <p>5 Results of pre-operational monitoring.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req# Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.06.016                | DOEO458.1-AChg3 | Att.1. 2.1.( 2).(i)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>1. Records, Retention and Reporting Requirements.</p> <p>The contractor must establish and implement recordkeeping, retention and reporting procedures and practices to ensure that the following elements are addressed:</p> <p>(2) Required records include the following:</p> <p>(i) Documentation related to the long-term management of radioactive waste and residual radioactive material.</p>                                                                                                                                                  | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.06.017                | DOEO458.1-AChg3 | Att.1. 2.1.( 2).(j)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>1. Records, Retention and Reporting Requirements.</p> <p>The contractor must establish and implement recordkeeping, retention and reporting procedures and practices to ensure that the following elements are addressed:</p> <p>(2) Required records include the following:</p> <p>(j) Final documentation for clearance of property containing residual radioactive material.</p>                                                                                                                                                                    | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.06.018                | DOEO458.1-AChg3 | Att.1. 2.1.( 2).(k)         | <p>2. SPECIFIC REQUIREMENTS</p> <p>1. Records, Retention and Reporting Requirements.</p> <p>The contractor must establish and implement recordkeeping, retention and reporting procedures and practices to ensure that the following elements are addressed:</p> <p>(2) Required records include the following:</p> <p>(k) Documentation of:</p> <p>1 Approved Authorized Limits for routine clearance of property for unrestricted or restricted use and the scenarios evaluated in selecting the limits; and</p> <p>2 Approved revised Authorized Limits for clearance of property.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                  | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                   | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.06.019                | DOEO458.1-AChg3 | Att.1. 2.1.(2).(1)           | 2. SPECIFIC REQUIREMENTS<br>1. Records, Retention and Reporting Requirements.<br><br>The contractor must establish and implement recordkeeping, retention and reporting procedures and practices to ensure that the following elements are addressed:<br><br>(2) Required records include the following:<br><br>(1) Annual summaries related to clearance of property.                                                            | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.06.020                | DOEO458.1-AChg3 | Att.1. 2.1.(3)               | 2. SPECIFIC REQUIREMENTS<br>1. Records, Retention and Reporting Requirements.<br><br>The contractor must establish and implement recordkeeping, retention and reporting procedures and practices to ensure that the following elements are addressed:<br><br>(3) Records required by the Specific Requirements in this CRD must be maintained by, or transferred to, DOE upon cessation of a DOE radiological activity at a site. | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.06.021                | DOEO458.1-AChg3 | Att.1. 2.1.(4)               | 2. SPECIFIC REQUIREMENTS<br>1. Records, Retention and Reporting Requirements.<br><br>The contractor must establish and implement recordkeeping, retention and reporting procedures and practices to ensure that the following elements are addressed:<br><br>(4) Records must be retained until final disposition is authorized by DOE.                                                                                           | X                 | X             |                      |                     |                  |                   | X                  |                   |

TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS

| S/RID Requirement Number | Source Document | Source Document Reqt Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                 |                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.06.022                | DOEO458.1-AChg3 | Att.1. 2.1.( 5)             | <p>2. SPECIFIC REQUIREMENTS</p> <p>1. Records, Retention and Reporting Requirements.</p> <p>The contractor must establish and implement recordkeeping, retention and reporting procedures and practices to ensure that the following elements are addressed:</p> <p>(5) Reporting.</p> <p>(a) Reporting requirements are contained in the CRDs to DOE O 232.2, Occurrence Reporting and Processing of Operations Information, dated 8-30-11, and DOE O 231.1B, Environment, Safety and Health Reporting, dated 6-27-11.</p> <p>(b) The contractor must notify the Field Element Manager within 30 calendar days when it has been identified that any Specific Requirement in this CRD that is not required to be reported under paragraph 2.1.(5)(a) has not been met.</p> <p>Notes:</p> <p>1. The requirements of DOE O 232.2A are included in FA 01 (Management Systems).</p> <p>2. DOE O 232.2A replaced DOE O 232.2.</p> <p>3. DOE O 231.1B, AChg 1 replaced DOE O 231.1B.</p> <p>4. The requirements of DOE O 231 1B, AChg 1 are included in FA 11 (Radiation Protection), FA 12 (Fire Protection), FA 19 (Occupational Safety and Health), and this functional area.</p> <p>5. All the Specific Requirements of paragraph 2.1.(5)(a) are included in this functional area.</p> | X                 | X             |                      |                     |                  |                   | X                  |                   |
| 20.06.023                | DOEO458.1-AChg3 | Att.1. 2.1.( 6)             | <p>2. SPECIFIC REQUIREMENTS</p> <p>1. Records, Retention and Reporting Requirements.</p> <p>The contractor must establish and implement recordkeeping, retention and reporting procedures and practices to ensure that the following elements are addressed:</p> <p>(6) Units. Unless otherwise specified, the quantities used in the reports and records required by the Specific Requirements of this CRD must 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 cm&lt;2&gt;, or mass units. The SI units, becquerel (Bq), gray (Gy), and sievert (Sv) may be provided parenthetically for reference with scientific standards.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | X                 | X             |                      |                     |                  |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document  | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                  |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.06.024                | DOEO231.1B-AChg1 | Att.1.1                      | <p>1. Reporting Annual Site Environmental Information</p> <p>Contractors must comply with the requirements in Attachment 2 that pertain to reporting annual site environmental information.</p> <p>Note: Attachment 2 is added as S/RID requirements 20.06.025 to 20.06.029 in this Functional Area.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.06.025                | DOEO231.1B-AChg1 | Att.2.1                      | <p>Reporting Annual Site Environmental Information</p> <p>Annual Site Environmental Reporting</p> <p>The following information must be made available to the public, and submitted to the Chief Health, Safety and Security Officer by October 1 of each year for the preceding calendar year, developed in accordance with the most recent applicable guidance provided by the Chief, Health Safety and Security Officer and as directed by the Head of Headquarters Element or Head of DOE Field Element, and support partial or full preparation of the Annual Site Environmental Report (ASER):</p> <p>1. Site environmental management performance. Data must include effluent releases, environmental monitoring, and types and quantities of radioactive materials emitted or discharged to the environment, the estimated or calculated total effective dose to a representative person or maximally exposed member(s) of the public and the calculated collective dose to members of the public from exposure to radiation sources identified under DOE O 458.1, and, where it is of concern, releases of radon and its decay products from DOE sources and the resultant individual and collective dose from these radionuclides, which need not be combined with dose estimates from other sources.</p> <p><b>Note: DOE O 458.1, AChg 3 replaced O DOE 458.1.</b></p> | X                 | X             | X                    | X                   | X                |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document  | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
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|                          |                  |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.06.026                | DOEO231.1B-AChg1 | Att.2.2                      | <p>Reporting Annual Site Environmental Information</p> <p>Annual Site Environmental Reporting</p> <p>The following information must be made available to the public, and submitted to the Chief Health, Safety and Security Officer by October 1 of each year for the preceding calendar year, developed in accordance with the most recent applicable guidance provided by the Chief, Health Safety and Security Officer and as directed by the Head of Headquarters Element or Head of DOE Field Element, and support partial or full preparation of the Annual Site Environmental Report (ASER):</p> <p>2. Environmental occurrences and responses. Information must include a summary of environmental occurrences and responses reported during the calendar year.</p> | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.06.027                | DOEO231.1B-AChg1 | Att.2.3                      | <p>Reporting Annual Site Environmental Information</p> <p>Annual Site Environmental Reporting</p> <p>The following information must be made available to the public, and submitted to the Chief Health, Safety and Security Officer by October 1 of each year for the preceding calendar year, developed in accordance with the most recent applicable guidance provided by the Chief, Health Safety and Security Officer and as directed by the Head of Headquarters Element or Head of DOE Field Element, and support partial or full preparation of the Annual Site Environmental Report (ASER):</p> <p>3. Environmental compliance. Information must confirm compliance with environmental standards and requirements.</p>                                              | X                 | X             | X                    | X                   | X                |                   | X                  |                   |

TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS

| S/RID Requirement Number | Source Document  | Source Document Req't Number | Requirement Text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
|--------------------------|------------------|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------|----------------------|---------------------|------------------|-------------------|--------------------|-------------------|
|                          |                  |                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.06.028                | DOEO231.1B-AChg1 | Att.2.4                      | Reporting Annual Site Environmental Information<br><br>Annual Site Environmental Reporting<br><br>The following information must be made available to the public, and submitted to the Chief Health, Safety and Security Officer by October 1 of each year for the preceding calendar year, developed in accordance with the most recent applicable guidance provided by the Chief, Health Safety and Security Officer and as directed by the Head of Headquarters Element or Head of DOE Field Element, and support partial or full preparation of the Annual Site Environmental Report (ASER):<br><br>4. Significant programs and efforts. Information must highlight significant environmental performance indicators and/or performance measures that reflect the size and extent of programs at a particular site.                                                                                                                                              | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.06.029                | DOEO231.1B-AChg1 | Att.2.5                      | Reporting Annual Site Environmental Information<br><br>Annual Site Environmental Reporting<br><br>The following information must be made available to the public, and submitted to the Chief Health, Safety and Security Officer by October 1 of each year for the preceding calendar year, developed in accordance with the most recent applicable guidance provided by the Chief, Health Safety and Security Officer and as directed by the Head of Headquarters Element or Head of DOE Field Element, and support partial or full preparation of the Annual Site Environmental Report (ASER):<br><br>5. Property clearance activities. Information must include a summary of approved Authorized Limits, results of radiological monitoring and surveys of cleared property, types and quantities of property cleared, and independent verification program results in accordance with DOE O 458.1.<br><br><b>Note: DOE O 458.1, AChg 3 replaced O DOE 458.1.</b> | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.047                | 40 CFR 131       | All                          | Comply with requirements of 40 CFR 131                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.048                | 40 CFR 144       | All                          | Comply with requirements of 40 CFR 144                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.049                | 40 CFR 146       | All                          | Comply with requirements of 40 CFR 146.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.050                | 40 CFR 401       | All                          | Comply with requirements of 40 CFR 401                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.054                | SC R.61-68       | All                          | Complies with requirements of SC R.61-68                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.055                | SC R.61-71       | All                          | Comply with requirements of SC R.61-71                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.057                | SC R.61-82       | All                          | Comply with requirements of SC R.61-82                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.058                | 40 CFR 122       | All                          | Comply with requirements of 40 CFR 122                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.059                | 40 CFR 125       | All                          | Comply with requirements of 40 CFR 125                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | X                 | X             | X                    | X                   | X                |                   | X                  |                   |

TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                                | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
|--------------------------|-----------------|------------------------------|-------------------------------------------------|-------------------|---------------|----------------------|---------------------|------------------|-------------------|--------------------|-------------------|
|                          |                 |                              |                                                 | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.08.060                | 40 CFR 129      | All                          | Comply with requirements of 40 CFR 129          | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.061                | 40 CFR 171      | All                          | Comply with requirements of 40 CFR 171          | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.063                | 40 CFR 266      | All                          | Comply with requirements of 40 CFR 266          | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.064                | 40 CFR 268      | All                          | Comply with requirements of 40 CFR 268          | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.065                | 40 CFR 270      | All                          | Comply with requirements of 40 CFR 270          | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.066                | 40 CFR 279      | All                          | Comply with requirements of 40 CFR 279          | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.067                | SC R.61-79      | 260-270                      | Comply with requirements of SC R.61-79.260-270. | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.068                | SC R.61-105     | All                          | Comply with requirements of SC R.61-105         | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.069                | SC R.61-107     | All                          | Comply with requirements of SC R.61-107         | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.070                | 40 CFR 302      | All                          | Comply with requirements of 40 CFR 302          | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.071                | 40 CFR 355      | All                          | Comply with requirements of 40 CFR 355          | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.072                | 40 CFR 370      | All                          | Comply with requirements of 40 CFR 370          | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.073                | 40 CFR 372      | All                          | Comply with requirements of 40 CFR 372          | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.074                | 40 CFR 50       | All                          | Comply with requirements of 40 CFR 50           | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.075                | 40 CFR 69       | All                          | Comply with requirements of 40 CFR 69           | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.076                | 40 CFR 82       | All                          | Comply with requirements of 40 CFR 82           | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.077                | 40 CFR 707      | All                          | Comply with requirements of 40 CFR 707          | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.078                | 40 CFR 717      | All                          | Comply with requirements of 40 CFR 717          | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.079                | 40 CFR 747      | All                          | Comply with requirements of 40 CFR 747          | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.080                | 40 CFR 763      | All                          | Comply with requirements of 40 CFR 763          | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.081                | 10 CFR 1021     | All                          | Comply with the requirements of 10 CFR 1021     | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.082                | 33 CFR 153      | All                          | Comply with the requirements of 33 CFR 153      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.087                | 33 CFR 320      | All                          | Comply with the requirements of 33 CFR 320      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.088                | 33 CFR 322      | All                          | Comply with the requirements of 33 CFR 322      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.089                | 33 CFR 323      | All                          | Comply with the requirements of 33 CFR 323      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.091                | 33 CFR 325      | All                          | Comply with the requirements of 33 CFR 325      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.092                | 33 CFR 326      | All                          | Comply with the requirements of 33 CFR 326      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.093                | 33 CFR 327      | All                          | Comply with the requirements of 33 CFR 327      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.094                | 33 CFR 328      | All                          | Comply with the requirements of 33 CFR 328      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.095                | 33 CFR 329      | All                          | Comply with the requirements of 33 CFR 329      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.096                | 33 CFR 330      | All                          | Comply with the requirements of 33 CFR 330      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.097                | 40 CFR 110      | All                          | Comply with the requirements of 40 CFR 110      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.098                | 40 CFR 112      | All                          | Comply with the requirements of 40 CFR 112      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.099                | 40 CFR 116      | All                          | Comply with the requirements of 40 CFR 116      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.100                | 40 CFR 117      | All                          | Comply with the requirements of 40 CFR 117      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.102                | 40 CFR 133      | All                          | Comply with the requirements of 40 CFR 133      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.103                | 40 CFR 136      | All                          | Comply with the requirements of 40 CFR 136      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.104                | 40 CFR 141      | All                          | Comply with the requirements of 40 CFR 141      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.105                | 40 CFR 142      | All                          | Comply with the requirements of 40 CFR 142      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.106                | 40 CFR 143      | All                          | Comply with the requirements of 40 CFR 143      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |

TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                              | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
|--------------------------|-----------------|------------------------------|-----------------------------------------------|-------------------|---------------|----------------------|---------------------|------------------|-------------------|--------------------|-------------------|
|                          |                 |                              |                                               | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.08.107                | 40 CFR 148      | All                          | Comply with the requirements of 40 CFR 148    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.108                | 40 CFR 149      | All                          | Comply with the requirements of 40 CFR 149    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.109                | 40 CFR 166      | All                          | Comply with the requirements of 40 CFR 166    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.110                | 40 CFR 170      | All                          | Comply with the requirements of 40 CFR 170    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.111                | 40 CFR 230      | All                          | Comply with the requirements of 40 CFR 230    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.112                | 40 CFR 231      | All                          | Comply with the requirements of 40 CFR 231    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.114                | 40 CFR 243      | All                          | Comply with the requirements of 40 CFR 243    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.116                | 40 CFR 246      | All                          | Comply with the requirements of 40 CFR 246    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.117                | 40 CFR 247      | All                          | Comply with the requirements of 40 CFR 247    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.119                | 40 CFR 257      | All                          | Comply with the requirements of 40 CFR 257    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.120                | 40 CFR 260      | All                          | Comply with the requirements of 40 CFR 260    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.121                | 40 CFR 262      | All                          | Comply with the requirements of 40 CFR 262    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.122                | 40 CFR 263      | All                          | Comply with the requirements of 40 CFR 263    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.123                | 40 CFR 264      | All                          | Comply with the requirements of 40 CFR 264    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.124                | 40 CFR 265      | All                          | Comply with the requirements of 40 CFR 265    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.125                | 40 CFR 300      | All                          | Comply with the requirements of 40 CFR 300    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.126                | 40 CFR 403      | All                          | Comply with the requirements of 40 CFR 403    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.129                | 40 CFR 503      | All                          | Comply with the requirements of 40 CFR 503    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.132                | 40 CFR 58       | All                          | Comply with the requirements of 40 CFR 58     | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.133                | 40 CFR 60       | All                          | Comply with the requirements of 40 CFR 60     | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.134                | 40 CFR 61       | All                          | Comply with the requirements of 40 CFR 61     | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.135                | 40 CFR 68       | All                          | Comply with the requirements of 40 CFR 68     | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.136                | 40 CFR 761      | All                          | Comply with the requirements of 40 CFR 761    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.137                | 50 CFR 17       | All                          | Comply with the requirements of 50 CFR 17     | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.138                | 40 CFR 280      | All                          | Comply with the requirements of 40 CFR 280    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.139                | SC R.61-104     | All                          | Comply with the requirements of SC R.61-104   | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.140                | SC R.61-81      | All                          | Comply with the requirements of SC R.61-81    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.141                | 40 CFR 261      | All                          | Comply with the requirements of 40 CFR 261    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.142                | SC R.61-62      | All                          | Comply with the requirements of SC R.61-62.   | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.143                | SC R.61-86.1    | All                          | Comply with the requirements of SC R.61-86.1. | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.144                | SC R.19-450     | All                          | Comply with the requirements of SC R.19-450.  | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.145                | SC R.61-101     | All                          | Comply with the requirements of SC R.61-101.  | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.146                | 40 CFR 273      | All                          | Comply with the requirements of 40 CFR 273.   | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.147                | SC R.61-30      | All                          | Comply with the requirements of SC R.61-30.   | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.148                | SC R.61-56      | All                          | Comply with the requirements of SC R.61-56.   | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.149                | 40 CFR 191      | All                          | Comply with the requirements of 40 CFR 191    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.150                | SC R.61-58      | All                          | Comply with the requirements of SC R.61-58.   | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.151                | SC R.61-67      | All                          | Comply with the requirements of SC R.61-67.   | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.152                | SC R.61-9       | All                          | Comply with the requirements of SC R.61-9.    | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.153                | SC R.61-92      | All                          | Comply with the requirements of SC R.61-92.   | X                 | X             | X                    | X                   | X                |                   | X                  |                   |

**TABLE 1 - S/RID FUNCTIONAL AREA 20 (ENVIRONMENTAL PROTECTION) REQUIREMENTS**

| S/RID Requirement Number | Source Document | Source Document Req't Number | Requirement Text                            | SRR Applicability |               |                      |                     |                  |                   | Phase I Compliance |                   |
|--------------------------|-----------------|------------------------------|---------------------------------------------|-------------------|---------------|----------------------|---------------------|------------------|-------------------|--------------------|-------------------|
|                          |                 |                              |                                             | Nuclear HC-1,2,3  | Radi-ological | High Hazard Chemical | Low Hazard Chemical | Other Industrial | Facility Specific | Common             | Facility Specific |
| 20.08.154                | SC R.61-72      | All                          | Comply with the requirements of SC R.61-72. | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.155                | SC R.51         | All                          | Comply with requirements of SC R.51         | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.156                | SC R.61-69      | All                          | Comply with requirements of SC R.61-69      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.157                | SC R.61-87      | All                          | Comply with requirements of SC R.61-87      | X                 | X             | X                    | X                   | X                |                   | X                  |                   |
| 20.08.158                | SC R.72-300     | All                          | Comply with requirements of SC R.72-300     | X                 | X             | X                    | X                   | X                |                   | X                  |                   |