



## Department of Energy

Washington, DC 20585

May 31, 1996

The Honorable John T. Conway  
Chairman  
Defense Nuclear Facilities Safety Board  
625 Indiana Avenue, N.W., Suite 700  
Washington, D.C. 20004

Dear Mr. Chairman:

Enclosed is the "Policy for Demonstrating Compliance with DOE Order 5820.2A for Onsite Management and Disposal of Environmental Restoration Low-Level Wastes under the Comprehensive Environmental Response, Compensation, and Liability Act." This policy is a deliverable pursuant to the commitment in Task Initiative VI.B.3 identified in the Department of Energy's Implementation Plan, Revision I, for the Defense Nuclear Facilities Safety Board Recommendation 94-2.

This policy was developed to avoid duplication of effort where internal requirements and procedures of DOE Order 5820.2A for management and disposal of low-level waste overlap with the Comprehensive Environmental Response, Compensation, and Liability Act. The Department determined that the Comprehensive Environmental Response, Compensation, and Liability Act process can be used to demonstrate compliance with the requirements of DOE Order 5820.2A with regard to the safe management and disposal onsite of low-level waste from environmental restoration activities.

This policy is also being transmitted to the Operations Offices along with guidance for implementation by field installations.

The Department has completed the actions identified under this commitment and proposes closure of the commitment.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard J. Guimond".

Richard J. Guimond  
Assistant Surgeon General, USPHS  
Principal Deputy Assistant Secretary  
for Environmental Restoration

Enclosure



**POLICY FOR DEMONSTRATING COMPLIANCE  
WITH DOE ORDER 5820.2A FOR ONSITE  
MANAGEMENT AND DISPOSAL OF ENVIRONMENTAL  
RESTORATION LOW-LEVEL WASTE UNDER THE  
COMPREHENSIVE ENVIRONMENTAL RESPONSE,  
COMPENSATION, AND LIABILITY ACT  
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**POLICY FOR DEMONSTRATING COMPLIANCE WITH DOE ORDER 5820.2A FOR ONSITE  
MANAGEMENT AND DISPOSAL OF ENVIRONMENTAL RESTORATION LOW-LEVEL WASTE UNDER THE  
COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT**

**Purpose**

As a part of implementing Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 94-2, Conformance with Safety Standards at the Department of Energy Low-Level Nuclear Waste and Disposal Sites, the Office of Environmental Restoration analyzed the applicability of DOE Order 5820.2A, Radioactive Waste Management, to the management and disposal of low-level waste (LLW) resulting from environmental restoration activities (Task VI.B.3 in the Department's Implementation Plan (IP) Revision I). Because of the similarity of goals of DOE Order 5820.2A and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) for protecting human health and the environment, the purpose of this policy is to avoid duplication of effort.

**Background**

The Department has two primary sources of authority which apply to the management and disposal of LLW resulting from environmental restoration activities (including decommissioning). The Department has responsibilities derived from the Atomic Energy Act (AEA) that are implemented through DOE Order 5820.2A. Equally as important, the Department has responsibilities under CERCLA, which are derived from Section 120 of CERCLA and Executive Order 12580. These responsibilities are coordinated with and regulated by the Environmental Protection Agency (EPA) and State authorities for responding to releases or threatened releases of hazardous substances, including radionuclides, to the environment.

DOE Order 5820.2A ensures protection by requiring attainment of specified performance objectives and other substantive requirements. These include an annual exposure limit of 25 millirem (mrem), limits for exposure of an inadvertent intruder, and application of the As Low As Reasonably Achievable (ALARA) principle.

The CERCLA process ensures protection by developing remedies that: (1) comply with identified Applicable or Relevant and Appropriate Requirements (ARARs) of promulgated Federal and State environmental and facility siting laws; (2) reduce risks posed by carcinogens to the generally acceptable range of  $10^{-6}$  to  $10^{-4}$  based on site-specific risk assessments which account for cumulative impacts; and (3) are reviewed no less than every five years (CERCLA Section 121(c)) if contamination/waste is left at a site, to ensure the remedy is functioning as intended and remains effective in complying with ARARs and reducing risks.

Based on a review of the technical requirements of these authorities, the Office of Environmental Restoration has determined that the management and disposal of LLW performed in accordance with either CERCLA or AEA/DOE Order 5820.2A requirements and procedures achieves protection of human health and the environment.

### Policy

It is the policy of the Department that the CERCLA process shall be used to demonstrate compliance with the requirements and intent of DOE Order 5820.2A with regard to the safe management and disposal onsite of environmental restoration LLW. To the extent practical and consistent with site-specific technical and regulatory issues, the substantive requirements of DOE Order 5820.2A should be directly incorporated into the CERCLA process.<sup>2,3</sup> The substantive requirements of DOE Order 5820.2A which are incorporated into or otherwise complied with through the CERCLA process need not be applied separately to environmental restoration activities which manage and dispose of LLW onsite pursuant to CERCLA.

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<sup>1</sup> The DOE Order 5820.2A annual exposure limit of 25 mrem falls within the  $10^{-4}$  risk band, which under comparable scenarios is approximately equivalent to an annual exposure of 3 to 30 mrem.

<sup>2</sup> Consistent with the Department Memorandum, *Compliance with DOE Orders as Part of Environmental Restoration Projects Conducted Under CERCLA* dated April 22, 1993.

<sup>3</sup> In selecting ARARs for LLW disposal cells, and in accord with EPA's guidance in the CERCLA Compliance with Other Laws Manual, performance objectives and substantive requirements of DOE Order 5820.2A are included as information to be considered (TBC) rather than specific ARARs since DOE Orders are not promulgated pursuant to the Administrative Procedures Act. However, to meet its AEA responsibilities, the Department must still demonstrate compliance with the substantive requirements of the Order.

This policy applies to onsite<sup>4</sup> management and disposal of LLW in disposal facilities evaluated, designed, constructed, and operated pursuant to CERCLA. Management and disposal of environmental restoration LLW at offsite DOE disposal facilities shall be conducted under both the substantive and procedural requirements of DOE Order 5820.2A. Disposal of LLW at commercial facilities shall be in accordance with applicable regulatory requirements.

This policy: (1) avoids duplication of effort (i.e., the CERCLA process can be used to satisfy the requirements of DOE Order 5820.2A); (2) eases EPA and State concerns about the overlap of CERCLA regulations and the Department requirements; and (3) enables the Department to better achieve its goals of ensuring managerial and financial control and fulfilling enforceable milestones.

### **IMPLEMENTATION REQUIREMENTS AND GUIDANCE**

The office manager of each field or operations office is directed to implement this policy and to identify field elements specifically responsible for ensuring that environmental restoration LLW management and disposal activities are conducted in accordance with this policy and applicable radiation protection and waste management requirements. The revised DOE Order 5820.2A will include the key components of this policy and any guidance developed as other tasks identified in the Recommendation 94-2 IP are completed.

In order to provide consistent application of this policy and a systematic approach to the protection of health and the environment, the Office of Environmental Restoration program offices and operations offices shall implement the requirements contained in Attachment 1 when managing and disposing of LLW in an onsite disposal facility evaluated, designed, constructed, and operated pursuant to CERCLA. These requirements include submitting to Headquarters a letter certifying compliance with the policy and that the substantive requirements of DOE Order 5820.2A have been met through the application of the CERCLA process as specified in this policy. Attachment 2 provides guidance in the form of a sample roadmap on how requirements in DOE Order 5820.2A could be satisfied through the CERCLA process.

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<sup>4</sup> Under CERCLA, "onsite" is defined as the areal extent of contamination and all suitable areas in very close proximity to the contamination, and necessary for implementation of the response action [40 CFR 300.5]. However, CERCLA Section 104(d)(4) states, and as clarified in the preamble to the National Contingency Plan (NCP), that where two or more noncontiguous facilities are reasonably related on the basis of geography, are related on the basis of threat or potential threat to public health or the environment, are reasonably close to one another, and wastes at these sites are compatible for a selected treatment or disposal approach, these related facilities may be treated as one site for response purposes. Therefore, the definition of onsite for any specific Department installation may include noncontiguous facilities within an installation as agreed by the parties involved (e.g., the Department, EPA, the State, and stakeholders) and documented in interagency agreements and/or records of decision.

## IMPLEMENTATION REQUIREMENTS

1. Documentation

- a. Operations offices shall be capable of demonstrating through a CERCLA/DOE Order 5820.2A Roadmap that an onsite LLW disposal facility which is evaluated, designed, constructed, and operated under CERCLA satisfies the requirements of DOE Order 5820.2A, Radioactive Waste Management.
- b. The CERCLA/DOE Order 5820.2A Roadmap may be qualitative and concise. Attachment 2 to this policy provides a sample CERCLA/DOE Order 5820.2A Roadmap that may be followed.
- c. The CERCLA/DOE Order 5820.2A Roadmap shall identify how each performance objective/requirement of DOE Order 5820.2A was incorporated into the CERCLA process by:
  - (1) Providing a statement demonstrating how each performance objective or requirement has been satisfied;<sup>5</sup>
  - (2) Stating if the specific performance objective/requirement was identified as an ARAR/TBC in the CERCLA process, or whether an "equivalent" requirement from a promulgated Federal or State law or other driver was used; and
  - (3) Providing specific references to applicable sections of the CERCLA documentation which provide the details that support these statements.
- d. For completeness, a table should be included which identifies the specific 5820.2A requirements satisfied through the CERCLA process for the subject site and those satisfied under the DOE Order 5820.2A process.

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<sup>5</sup> It is expected that in some situations, identical analyses would not be performed under CERCLA due to differing assumptions or methodologies (e.g., related to land use, institutional controls, etc.). In these cases, the brief statement should identify the issue and provide an explanation how the assumption or methodology used under CERCLA demonstrated compliance with DOE Order 5820.2A substantive requirements. As an example, consider the inadvertent intruder performance objective. Under CERCLA the inadvertent intruder scenario may not be evaluated in the same manner as currently done under 5820.2A. In this situation, the "Roadmap" statement should identify the issue and differing land use assumptions and explain how the CERCLA process ensures compliance by requiring that when contamination is left on site, the remedy must be evaluated no less than every five years to ensure it is functioning as intended and remains effective in complying with ARARs and reducing risks.

## 2. Technical Review

- a. Operations offices shall ensure that selection and design of LLW management and disposal systems subject to this policy have received sufficient Departmental technical review by qualified experts and that ARARs and DOE Order 5820.2A substantive requirements will be attained, prior to submittal to Federal EPA and/or State regulatory authorities for independent technical review.
- b. Operations offices may utilize subject matter experts from other parts of the Department and its contractors, including personnel from the Peer Review Panel established by DOE Order 5820.2A. Formal review by the Peer Review Panel is not necessary.
- c. The CERCLA/DOE Order 5820.2A Roadmap should provide a brief one or two paragraph summary of the technical review process employed (e.g., identify reviewing organizations, regulators, stakeholders, and major comments which resulted in significant changes to the remedy selection and design). Cite specific references to CERCLA documentation which provide additional detail.

## 3. Cumulative Risk and Composite Analysis

CERCLA requires analysis of risks from all pathways/all sources;<sup>6</sup> however, there is no prescriptive methodology for performing such an evaluation. The Comprehensive Response Action Risk Evaluation (CRARE) used at Fernald<sup>7</sup> is one example. To establish a systematic and consistent approach, and to ensure protection of human health and the environment from all interacting sources including the LLW facility source term, the *Guidance for a Composite Analysis of the Impact of Interacting Source Terms on the Radiological Protection of the Public from LLW Disposal Facilities*, developed pursuant to DNFSB Recommendation 94-2 Task VII.B.2, can be utilized by onsite LLW disposal facilities evaluated, designed, constructed, and operated pursuant to CERCLA. The composite analysis guidance was issued April 30, 1996. The completed composite analyses will be an effective management tool for understanding the site-wide implications of multiple source-terms.

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<sup>6</sup> See 40 CFR 300.430(d) and 40 CFR 300.430(e)(2)(i)(A).

<sup>7</sup> This approach was an integration of the National Environmental Policy Act Environmental Impact Statement and CERCLA Remedial Investigation/Feasibility Study and is contained in the Department of Energy, Fernald Area Office, Draft Final Feasibility Study Report for Operable Unit 5, Fernald Environmental Management Project, Fernald, Ohio, Remedial Investigation and Feasibility Study, Volume 3, Appendix H, Comprehensive Response Action Risk Evaluation for Operable Unit 5, March 1995.

#### 4. Review/Submittal of Documentation

- a. Operations offices shall retain the CERCLA/DOE Order 5820.2A Roadmap in an active file, and shall utilize it as necessary to demonstrate compliance with DOE Order 5820.2A.
- b. Field elements identified as being responsible for ensuring compliance with this policy shall submit to the Deputy Assistant Secretary for Environmental Restoration a letter certifying compliance with the elements of this policy and that the substantive requirements of DOE Order 5820.2A have been met through the application of the CERCLA process as specified in this policy. The CERCLA/DOE Order 5820.2A Roadmap shall be submitted for information to the responsible program office within the Office of Environmental Restoration and to the Office of Waste Management.



**SELECTED PORTIONS FROM A SAMPLE CERCLA/DOE ORDER 5820.2A ROADMAP****INTRODUCTION**

This Roadmap provides specific examples of how the Fernald Environmental Management Project (FEMP) has substantively met the objectives/requirements of DOE Order 5820.2A. Each example specifically identifies how each performance objective or requirement was/will be satisfied at the FEMP via the CERCLA process.

DOE Order 5820.2A is applicable to the FEMP because selected remedies for three of the five operable units (OUs) include onsite disposal. The FEMP onsite disposal facility (OSDF) will contain LLW from the remedial activities to be conducted under CERCLA. This Roadmap demonstrates that the FEMP CERCLA remedial activities of evaluation, design, construction, and waste placement in the onsite disposal facility has/will substantively satisfy the applicable requirements and intent of DOE Order 5820.2A, Chapter III, Management of LLW.

The CERCLA process satisfies the requirements and intent of DOE Order 5820.2A through compliance with ARARs, TBCs, and the information and planning that is derived during the implementation and completion of the CERCLA process, such as the completion of the CERCLA mandated remedial investigations, feasibility studies, remedial designs, and remedial planning documents. This Roadmap will refer to the requirements that mandate these remedial investigations, feasibility studies, remedial designs, remedial planning documents, and the guidance used for implementation, as CERCLA Drivers. The ARARs, TBCs, and CERCLA Drivers serve as the basis for complying with the requirements of DOE Order 5820.2A and the Roadmap document demonstrates that compliance has been attained. This roadmap is specific to the FEMP alone. The FEMP CERCLA process and associated ARARs, and TBCs that have been utilized will differ slightly from the ARARs and TBCs that will be employed at other CERCLA sites within the DOE complex. Page A2-8 includes a table that summarizes the requirements of DOE Order 5820.2A that have been satisfied through the FEMP CERCLA process.

**IDENTIFICATION OF COMPLIANCE WITH THE SUBSTANTIVE REQUIREMENTS OF  
DOE ORDER 5820.2A****DOE ORDER 5820.2A CHAPTER III (3)(a) PERFORMANCE OBJECTIVES****Purpose**

This section of DOE Order 5820.2A identifies the performance based objectives that a LLW disposal facility must achieve. The objectives are: (1) protection of public health and safety; (2) releases to the environment from the LLW disposal facility shall be ALARA, and must not result in an effective dose equivalent (EDE) that exceeds 25 mrem/year to any member of the public; (3) prevent the possibility of a 100 mrem/year continuous exposure or 500 mrem acute exposure of an inadvertent intruder after institutional controls have

terminated (100 years); and (4) protect ground-water resources consistent with Federal, State, and local requirements.

**Statement of Compliance for 3(a)(1)**

Compliance with this requirement was attained through applying the two CERCLA threshold criteria as identified in the NCP, which are protecting human health and the environment and identifying and complying with ARARs. Substantive compliance with this requirement was further accomplished through the design of the Onsite Disposal Facility (OSDF) and the establishment of waste acceptance criteria (WAC), which will result in the dose to the public being lower than the established exposure limits and by providing protection to ground-water resources.

**Identification of ARARs, TBCs, and/or CERCLA Drivers for 3(a)(1)**

ARAR: 40 CFR 300.430 (e)(9)(iii)(A), CERCLA Threshold Criteria

**Statement of Compliance for 3(a)(2)**

Compliance with this requirement was attained through the evaluation of all sources of risk to the public which was completed in the CERCLA Feasibility Study (FS) risk assessments and the Comprehensive Response Action Risk Evaluation (CRARE) performed for the FEMP. The designed containment system (multi-layer cap and liner) of the OSDF eliminates all exposure pathways except groundwater. Protecting the public through the groundwater pathway was addressed by meeting applicable Safe Drinking Water Act (SDWA) maximum containment level (MCL) groundwater standards. The established waste acceptance criteria (WAC) for the OSDF ensure that the MCLs are not exceeded in the groundwater for 1,000 years. By meeting the proposed SDWA uranium MCL of 20 parts per billion (ppb), the exposure dose from groundwater will be below the 25 mrem per year EDE requirement for 1,000 years into the future.

**Identification of ARARs, TBCs, and/or CERCLA Drivers for 3(a)(2)**

ARARs: OAC 3745-27-08 (C), Landfill Construction  
40 CFR 61.92-93, National Emissions Standards for Hazardous Air Pollutants (NESHAPS) for emissions of radionuclides other than radon from the Department facilities  
40 CFR 61.192, NESHAPS for emissions of radon from Department facilities

TBCs: DOE Order 5400.5 Chapter II (1)(a), (b), (3)(a)(5), Chapter IV (4)(c), Radiation Protection of the Public and the Environment  
DOE Order 5820.2A Chapter III (3)(a)(2), Protection of the General Population from Releases of Radioactivity

CERCLA Drivers: 40 CFR 300.430, Remedial Investigation/Feasibility Study (RI/FS) and selection of remedy  
40 CFR 300.435, Remedial Design (RD)/Remedial Action (RA), operation and maintenance  
US EPA, 1988, Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA  
US EPA, 1988, Superfund Exposure Assessment Manual  
US EPA, 1989, Risk Assessment Guidance for Superfund: Human Health Evaluation Manual, Part A, Interim Final  
US EPA, Guidance on Preparing Superfund Decision Documents: The Proposed Plan (PP), The Record of Decision (ROD), Explanation of Significant Differences, The ROD Amendment

### Statement of Compliance for 3(a)(3)

Compliance with this requirement was satisfied through the implementation of permanent institutional controls, and the long-term permanence design of the OSDF. The Operable Unit 2 (OU2) and Operable Unit 5 (OU5) RODs specify that the final land use for the OSDF be restricted with perpetual federal ownership and maintenance of institutional controls (such as warning signs and fencing). The NCP and the OU2 and OU5 RODs also specify the design of a containment system with long-term permanence. The OSDF has a designed nine-foot multi-layer cap system which includes a three-foot rock barrier layer, and a five-foot multi-layer liner system. To ensure proper performance of the institutional controls and the containment system, their overall performance will be reviewed every five years as required by the NCP. The implementation of perpetual institutional controls and the designed containment system precludes the inadvertent intrusion exposure scenario.

### Identification of ARARs, TBCs, and/or CERCLA Drivers for 3(a)(3)

ARARs: OAC 3745-27-08 (C), Landfill Construction  
OAC 3745-27-11 (H), Landfill Final Closure  
OAC 3745-27-14 (A), Landfill Post-Closure Care

TBCs: DOE Order 5400.5 Chapter II (1)(a)(b), Radiation Protection of the Public and the Environment

CERCLA Drivers: 40 CFR 300.430, RI/FS and selection of remedy  
US EPA, 1988, Guidance for Conducting RI/FS Under CERCLA  
US EPA, 1988, Superfund Exposure Assessment Manual  
US EPA, 1989, Risk Assessment Guidance for Superfund: Human Health Evaluation Manual, Part A, Interim Final  
US EPA, Guidance on Preparing Superfund Decision Documents: The PP, the ROD, Explanation of Significant Differences, and the ROD Amendment

### Statement of Compliance for 3(a)(4)

Compliance with this requirement was met through the development of the WAC and design of the OSDF. These actions resulted in the protection of the groundwater resources in accordance with all applicable groundwater standards. The groundwater modeling for the OSDF WAC development demonstrated that the aquifer would be protected to the proposed uranium MCL for 1,000 years into the future. The DOE Fernald Area Office (DOE-FN), DOE Headquarters (DOE-HQ), the United States Environmental Protection Agency (USEPA), and Ohio Environmental Protection Agency (OEPA) have approved the modeling in the OU2, and OU5 FSs.

### Identification of ARARs, TBCs, and/or CERCLA Drivers for 3(a)(4)

CERCLA Drivers: 40 CFR 300.430, RI/FS and selection of remedy  
40 CFR 300.435, RD/RA, operation and maintenance  
US EPA, 1988, Guidance for Conducting RI/FS Under CERCLA  
US EPA, 1988, Superfund Exposure Assessment Manual  
US EPA, 1989, Risk Assessment Guidance for Superfund: Human Health Evaluation Manual, Part A, Interim Final  
US EPA, Guidance on Preparing Superfund Decision Documents: The PP, the ROD, Explanation of Significant Differences, and the ROD Amendment

### References for Requirement 3(a)

OU2 Risk Assessment (OU2 FS, Appendix C Risk Evaluation), OU5 Risk Assessment (OU5 FS, Appendix F Fate and Transport Modeling, Appendix G Short Term Risk Assessment, and Appendix H CRARE), and OU3 Risk Assessment (OU3 FS, Appendix H Short Term Risk Assessment, Appendix I CRARE), OU2 ROD, OU5 ROD, and OU3 ROD, Onsite Disposal Facility (OSDF) Design Criteria Package (OSDF Design Specifications Package, OSDF Design Calculations Package, OSDF Design Drawings Package), OSDF Support Plans (Appendix A Impacted Materials Placement Plan)

### DOE ORDER 5820.2a CHAPTER III (3)(h) LONG-TERM STORAGE

#### Purpose

This section requires that the long-term storage of LLW be conducted in a manner in which the performance objectives of Chapter III (3)(a) are maintained.

**Statement of Compliance for 3(h)(1), (2), (3), and (4)**

The long-term storage requirements specified in DOE Order 5820.2A are not applicable to the remedial activities associated with the disposal of waste in the OSDF because there are no plans that include the long-term storage of waste prior to final disposal in the onsite disposal facility.

**DOE ORDER 5820.2a CHAPTER III (3)(k) ENVIRONMENTAL MONITORING**

**Purpose**

This section requires that the LLW disposal facility be monitored by an environmental monitoring program that can measure (through the monitoring of the applicable environmental media) operational effluent releases, migration of radionuclides, disposal facility subsidence, and changes in the disposal facility and site parameters that may effect the long-term performance of the disposal facility.

**Statement of Compliance with 3(k)(1)**

Compliance with this requirement will be satisfied by utilization of the Integrated Environmental Monitoring Plan (IEMP) developed for the FEMP and the OSDF Support Plans. These plans will include monitoring of OSDF associated ground water, surface water, air, leachate, leak detection system, and subsidence.

**Identification of ARARs, TBCs, and/or CERCLA Drivers for 3(k)(1)**

ARARs: OAC 3745-27-10, Ground-water Monitoring Program  
OAC 3745-27-19(E)(26), Sanitary Landfill Operation; maintain integrity of landfill components  
OAC 3745-27-19(J)(1),(4) - Sanitary Landfill Operations; surface water control structures

TBCs: DOE Order 5820.2(A) Chapter III(3)(k), Environmental Monitoring

CERCLA Drivers: 40 CFR 300.435, RD/RA, operation and maintenance

**Statement of Compliance with 3(k)(2)**

See discussion above stating compliance with 3(k)(1).

**Identification of ARARs, TBCs, and/or CERCLA Drivers for 3(k)(2)**

ARARs: OAC 3745-27-10, Ground-water Monitoring Program  
OAC 3745-27-08(C)(1), (2),(3),(4),(5),(6),(7),(9), Leachate collection and storage; structures must be monitored  
OAC 3745-27-19(E)(26), Sanitary Landfill Operation; maintain integrity of landfill components  
OAC 3745-27-19(J)(1),(4) - Sanitary Landfill Operations; surface water control structures

TBCs: DOE Order 5820.2(A) Chapter III(3)(k), Environmental Monitoring

CERCLA Drivers: 40 CFR 300.435, RD/RA, operation and maintenance

**Statement of Compliance with 3(k)(3)**

See discussion above stating compliance with 3(k)(1).

**Identification of ARARs, TBCs, and/or CERCLA Drivers for 3(k)(3)**

ARARs: OAC 3745-27-10, Ground-water Monitoring Program  
OAC 3745-27-19(K)(1),(2),(3) - Sanitary landfill Operations; leachate detection

TBCs: DOE Order 5820.2(A) Chapter III(3)(k), Environmental Monitoring

CERCLA Drivers: 40 CFR 300.435, RD/RA, operation and maintenance

**Statement of Compliance with 3(k)(4)**

See discussion above stating compliance with 3(k)(1).

**Identification of ARARs, TBCs, and/or CERCLA Drivers for 3(k)(4)**

ARARs: OAC 3745-27-10, Ground-water Monitoring Program

TBCs: DOE Order 5820.2(A) Chapter III(3)(k), Environmental Monitoring

CERCLA Drivers: 40 CFR 300.435, RD/RA, operation and maintenance

**References for Requirement 3(k)**

IEMP, Onsite Disposal Facility Support Plans (Appendix C Surface-Water Management and Erosion Control, and Appendix F Air Monitoring Plan)

### FEMP CERCLA REVIEW PROCESS

The CERCLA process at the FEMP involves many resources, organizations, and agencies, which provides for a thorough review and approval process. Several subject matter expert resources are utilized during the internal review process at the FEMP by the Department contractor Fernald Environmental Restoration Management Corporation (FERMCO). Additionally, resources from the major FERMCO teaming partners are utilized during the internal review. These teaming partners are: Fluor Daniel, Jacobs, Brown and Root, and Nuclear Fuel Services.

The Fernald Area Office reviews and approves all CERCLA documents. The public stakeholders also have review and comment capabilities throughout the process. Direct involvement in information exchange meetings and technical review of CERCLA documents by US EPA and Ohio EPA in the FEMP CERCLA process is required, pursuant to the terms of the 1986 Federal Facility Compliance Agreement, and a 1990 Consent Agreement between the Department and US EPA, and a Consent Decree between the Department and Ohio EPA. The US EPA including the US EPA Radiation and Risk Assessment specialists, the US EPA environmental contractor Planning Research Corporation, the Ohio EPA, and the Ohio EPA environmental contractor GeoTrans have review and approval authority on all CERCLA documents.

**REQUIREMENTS IN DOE ORDER 5820.2A, RADIOACTIVE WASTE MANAGEMENT, CHAPTER III, SECTION 3, MANAGEMENT OF LLW, SATISFIED THROUGH THE CERCLA PROCESS**

The following table identifies requirements "a" through "m" of DOE Order 5820.2A, Chapter III, Section 3 that have been satisfied at the FEMP via the CERCLA process. These requirements have been satisfied through the compliance with ARARs, TBCs, and other drivers of the CERCLA process. Since these requirements were incorporated as part of the CERCLA process, they do not need to be applied separately.

For completeness, the table also identifies those requirements that are not incorporated or satisfied through the CERCLA process. In the case of the FEMP, none were identified for this category. If any had been identified, they would need to be applied separately and complied with under the DOE Order 5820.2A process.

DOE Order 5820.2A, Radioactive Waste Management, Chapter III, LLW Waste Management, Section 3, Requirements	Requirements satisfied via the FEMP CERCLA process	Requirements not satisfied via the FEMP CERCLA process
a. Performance Objectives	a.1, a.2, a.3, a.4	
b. Performance Assessment	b.1, b.2, b.3	
c. Waste Generation	c.1, c.2, c.3, c.4	
d. Waste Characterization	d.1, d.2, d.3	
e. Waste Acceptance Criteria	e.1, e.2, e.3, e.4, e.5	
f. Waste Treatment	f.1, f.2, f.3, f.4	
g. Shipment	Not Applicable	
h. Long-Term Storage	Not Applicable	
i. Disposal	i.1, i.2, i.3, i.4, i.5, i.6, i.7, i.8	
j. Disposal Site Closure/Post Closure	j.1, j.2, j.3, j.4, j.5, j.6	
k. Environmental Monitoring	k.1, k.2, k.3, k.4	
l. Quality Assurance	all	
m. Records and Reports	m.1, m.2	