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Department of Energy

Washington, DC 20585

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DNFSB SAFETY BOARD

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 "Revised Interim Policy on Regulatory Structure for Low-Level Radioactive Waste Management and Disposal" dated July 31, 1996. This document is a deliverable pursuant to the commitment in Task Initiative VI.B.2.b.2 identified in the Department of Energy's Implementation Plan, Revision 1, for the Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 94-2.

The original interim policy, which was issued to the Board on July 21, 1995, addressed the radiological performance assessment as a document that would include an interacting source term analysis. Since that time, the Department has separated the performance assessment from the interacting source term analysis. The composite analysis will be the document that provides the interacting source term analysis. The guidance on the composite analysis was issued to the DNFSB on April 30, 1996. To remain consistent with that guidance, the policy on the oversight and management of low-level waste has been revised.

The Department has completed the action identified under this deliverable commitment, and proposes closure of this commitment.

Sincerely,

Alvin L. Alm  
Assistant Secretary for  
Environmental Management

Enclosure



Revised Interim DOE Policy on Management, Direction and Oversight of  
Low-Level Radioactive Waste Management and Disposal

**1.0 Purpose and Background**

**1.1 Purpose**

This document sets forth the Department of Energy's (DOE) revised interim policy on management, direction, and oversight of its low-level radioactive waste (LLW) management and disposal activities, replacing the interim policy entitled, "Interim DOE Policy on Oversight of Low-Level Radioactive Waste Management and Disposal," issued on July 21, 1995. This document also sets forth a new policy for the inclusion of interacting source terms in the assessments of LLW disposal facility performance. Thus, the policy entitled, "Inclusion of Pre-1988 Source Term and Other Sources of Radioactive Contamination in Low-Level Waste Disposal Facility Performance Assessments", issued on May 31, 1995, is replaced.

**1.2 Background**

Field offices are responsible for managing and disposing of LLW in compliance with applicable requirements. Requirements for LLW management and disposal are contained in Order DOE 5820.2A. The "Policy for Management and Disposal of Environmental Restoration Low-Level Waste Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)," issued May 31, 1996, clarifies that the CERCLA process shall be used to demonstrate compliance with the requirements and intent of Order DOE 5820.2A for environmental restoration LLW disposed onsite. Additional requirements for protecting the worker, public, and the environment are contained in 10 CFR Part 835, Order DOE 5400.5 (and 10 CFR Part 834 when issued), and Order DOE 5400.1.

Several mechanisms are in place by which DOE manages, directs, and oversees LLW management and disposal activities, and monitors compliance with DOE requirements. These mechanisms include contractor self-assessments and reporting procedures and assessments by DOE (Office of Environment, Safety and Health) headquarters and site representatives. Enforcement mechanisms for compliance with LLW requirements largely involve contractual provisions. Requirements for occupational radiation protection of workers, codified in 10 CFR 835, are subject to additional enforcement mechanisms pursuant to the Atomic Energy and Price-Anderson Amendments Acts. Similar enforcement mechanisms will be applied to 10 CFR 834 when it is promulgated.

Although compliance with most DOE requirements can be assessed directly, some cannot. In particular, paragraphs III.3.a.2 through III.3.a.4 of Order DOE 5820.2A contain performance objectives for which compliance cannot be demonstrated in the normal sense.

These performance objectives pertain to protection against future release of radioactive material into the environment or possible exposures of future hypothetical individuals. To help provide a reasonable expectation that compliance with the performance objectives will be achieved, DOE requires (paragraph III.3.b.1) that field offices having disposal facilities prepare and maintain site-specific radiological performance assessments (PAs). However, the Order is silent about procedures for approval of PAs and their maintenance.

In Recommendation 94-2, the Defense Nuclear Facilities Safety Board (DNFSB) recommended that the scope of the PAs should include past, present, and future inventories of LLW at a site (DOE 5820.2A LLW performance objectives apply only to LLW disposed after September 26, 1988). Based on this recommendation, the Department is taking near-term actions to prepare composite analyses that address the projected cumulative impacts of all radioactive material in the ground, including LLW disposed before September 26, 1988, that may interact with projected releases from an existing or planned LLW disposal facility. However, composite analyses do not address sources of radioactive material in the ground that would not interact with existing or planned LLW disposal facilities. A more comprehensive approach is needed, and is being developed under the umbrella of 10 CFR 834, "Radiation Protection of the Public and Environment," which the Department expects to promulgate in 1996 and which will significantly augment DOE's existing approach for environmental management and long-term protection of the public and the environment.

The following policy prescribes a management, direction, and oversight approach that, compatible with the existing Departmental organizational structure: (1) distinguishes functions and responsibilities among field and headquarters organizations, (2) formalizes processes for management, direction, and oversight of LLW disposal activities, emphasizing processes for review and approval of LLW disposal facility PAs, and maintenance of LLW disposal facility PAs and composite analyses, and (3) addresses enforcement mechanisms. The complete review and approval process for composite analyses has not been determined at this time. It will be developed by October 31, 1996, in accordance with Task VII.B.3 of Revision 1 of the Implementation Plan for DNFSB Recommendation 94-2.

The described revised policy remains as interim. The Department is assessing alternatives for a longer-term policy for management, direction, and oversight of LLW disposal activities, in coordination with other Departmental initiatives<sup>1</sup>. A long-term policy for oversight of LLW disposal activities will be included in the revision to Order DOE 5820.2A that is scheduled for release in 1997.

<sup>1</sup> Other Departmental initiatives include the issuance of 10 CFR 834, the development of revisions to DOE 5820.2A, the development of interim policies and assumptions for preparation of LLW performance assessments, pilot projects to improve oversight of environment, safety, and health activities, and the Department's response to the final report on improving safety regulation at DOE Nuclear Facilities issued by the Advisory Committee on External Regulation of Department of Energy Nuclear Safety.

## **2.0 Scope**

This policy applies to LLW generated, managed, and disposed of at DOE facilities managed under the authority of the Atomic Energy Act (AEA) in accordance with Order DOE 5820.2A, Radioactive Waste Management, and LLW when it is mixed with hazardous materials or constituents regulated under the Resource Conservation and Recovery Act (RCRA) or the Toxic Substances Control Act (TSCA) (the hazardous components of mixed waste are subject to RCRA or TSCA requirements).

Certain provisions of this policy also apply to wastes from DOE environmental restoration and decommissioning activities which are managed under the authority of the AEA and disposed in accordance with Order DOE 5820.2A and the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), consistent with the "Policy for Management and Disposal of Environmental Restoration Low-Level Waste Under the Comprehensive Environmental Response, Compensation, and Liability Act," issued May 31, 1996. Policy provisions which apply to these wastes are clearly indicated in the sections that follow.

The applicability of the policy to wastes from environmental restoration and decommissioning activities which are managed according to the requirements of RCRA will be clarified in a separate policy and guidance statement to be issued in December, 1996 (See Task VI.B.3.b.2, Implementation Plan for Recommendation 94-2, Revision 1, April 1996).

## **3.0 References and Definitions**

### **3.1 References**

U.S. Department of Energy, General Environmental Protection Program, Order DOE 5400.1, 9 November 1988.

U.S. Department of Energy, Radiation Protection of the Public and the Environment, Order DOE 5400.5, 8 February 1990.

U.S. Department of Energy, Environment, Safety, and Health Program for DOE Operations, Order DOE 5480.1B, 23 September 1980.

U.S. Department of Energy, Radioactive Waste Management, Order DOE 5820.2A, 26 September 1988.

U.S. Department of Energy, Procedural Rules for DOE Nuclear Activities, 10 CFR Part 820.

U.S. Department of Energy, Radiation Protection of the Public and the Environment, 10 CFR 834

(to be promulgated).

U.S. Department of Energy, Occupational Radiation Protection, 10 CFR Part 835.

U.S. Department of Energy, Implementation Plan, Defense Nuclear Facilities Safety Board Recommendation 94-2, Revision 1, April 1996.

U.S. Department of Energy, Inclusion of Pre-1988 Source Term and Other Sources of Radioactive Contamination in Low-Level Waste Disposal Facility Performance Assessments, May 31, 1995.

U.S. Department of Energy, Interim DOE Policy on Oversight of Low-Level Radioactive Waste Management and Disposal, July 21, 1995.

U.S. Department of Energy, Policy for Management and Disposal of Environmental Restoration Low-Level Waste Under the Comprehensive Environmental Response, Compensation, and Liability Act, May 31, 1996.

U.S. Department of Energy, Guidance for a Composite Analysis of the Impact of Interacting Source Terms on the Radiological Protection of the Public for Department of Energy (DOE) Low-Level Waste Disposal Facilities, April 30, 1996.

### 3.2 Definitions

Definitions provided in Order DOE 5820.2A are supplemented with the following additional definitions:

**Composite analysis.** An analysis that accounts for all sources of radioactive material that may exist in the ground at a DOE site that may contribute to the dose projected to a hypothetical member of the public from an active or planned LLW disposal facility. The analysis is a planning tool intended to reach interim decisions, pending implementation of a comprehensive approach through 10 CFR Part 834, that current LLW disposal activities will not result in the need for future corrective or remedial actions to ensure protection of the public and the environment.

**Disposal authorization statement.** A document that sets forth the conditions of design, construction, and operation of a LLW disposal facility to provide a reasonable expectation of compliance with the performance objectives of Order DOE 5820.2A, Chapter III, and considering the results of a composite analysis or other required assessments. It functions similarly to a facility license issued by the Nuclear Regulatory Commission or an Agreement State, although its scope is not as broad.

**Performance assessment maintenance program.** A program for updating performance assessments based on the acquisition of new information on waste streams or inventories and system

component performance. It includes a process for reducing uncertainties in projections about the long-term performance of a disposal facility based on iterations between experimental (e.g., field data acquisition and test facilities to verify waste, engineered barrier, or cover performance, or to confirm critical assumptions made in the performance assessment) and model improvement efforts.

#### **4.0 Concepts**

##### **4.1 LLW Disposal Facilities, PAs, PA Maintenance, Composite Analysis, and Composite Analysis Maintenance**

LLW disposal represents a very long-term commitment of natural resources (e.g., land), and measures to reverse this commitment are normally difficult and expensive. Because of this, and because public health and safety and the environment must be protected over the future as well as during the present, the Department employs a multi-faceted approach for worker, public, and environmental protection. Chapter III of Order DOE 5820.2A sets forth four performance objectives that establish the overall goals for LLW disposal, and also prescribes several requirements intended to provide greater assurance of compliance with the performance objectives.

These include requirements on disposal facility siting and control<sup>2</sup>, design, operation, waste characteristics, monitoring<sup>3</sup>, closure, and preparation and maintenance of performance assessments.

Preparation and maintenance of disposal facility PAs represent critical activities. The PA is a significant mechanism by which the long-term efficacy of a LLW disposal facility is evaluated, and is used (among other inputs) for setting waste acceptance criteria and disposal facility design and operational requirements. But because the results of the PA contain technical uncertainties, a PA maintenance program is needed to provide greater confidence in the results of the analysis and in long term plans for protection of public health and safety and the environment. Acquisition and consideration of field data represents a necessary component of the PA maintenance program.

<sup>2</sup> The Department (or its successors), will control and maintain LLW disposal facilities until the disposal facilities can be released. DOE requirements for release of property are provided in DOE 5400.5 (and eventually 10 CFR 834). Because DOE 5400.5 requires that potential doses to the public from release of property must be reduced to levels as low as reasonably achievable below DOE's annual dose limit of 100 mrem from all radiation sources, many LLW disposal facilities may never be suitable for unconditional release.

<sup>3</sup> Paragraph III.3.k of DOE 5820.2A requires, among other things, design of disposal facility monitoring programs to detect changing trends in facility performance to allow for application of corrective actions before exceeding performance objectives. The monitoring program must be designed to measure operational effluent releases, migration of radionuclides, disposal unit subsidence, and changes in disposal facility and disposal site parameters affecting long-term site performance. Paragraph III.3.b indicates that monitoring should be used to validate or modify the models used in performance assessments.

Hence, PA development and refinement represents a continuous process during the life of a disposal facility. Initial PAs must be approved by the Office of Environmental Management before construction and operation of LLW disposal facilities. Initial approval must be based on the PA review and a conclusion that there is sufficient reason to believe, with the information available, that there is a reasonable expectation<sup>4</sup> that the facility will comply with the LLW performance objectives. Over the lifetime of the disposal facility, the PA must be maintained and upgraded as additional information about the waste, disposal facility site, and performance assessment model is obtained. At closure of the disposal facility, a final PA which analyzes all waste that has been placed in the disposal facility must be prepared and approved.

Pursuant to the commitments in the Implementation Plan for Recommendation 94-2, for all LLW disposal facilities, including onsite disposal facilities developed using CERCLA processes, DOE will prepare a composite analysis that accounts for other sources of radioactivity that may be left at a DOE site that potentially interact with the disposed LLW. The composite analysis<sup>5</sup> will serve as a long term management planning tool. The location of evaluation for the composite analysis is at a projected future site boundary, as opposed to the point of compliance for Order DOE 5820.2A performance assessments, which is generally at a point very near the disposal facility. The "Guidance for a Composite Analysis of the Impact of Interacting Source Terms on the Radiological Protection of the Public for Department of Energy (DOE) Low-Level Waste Disposal Facilities," issued April 30, 1996, provides guidance and direction for the preparation and maintenance of composite analyses for DOE LLW disposal facilities managed using the Order DOE 5820.2A process, as well as those managed using CERCLA processes.

Consistent with the April 1996 guidance, the composite analysis must be maintained and upgraded as additional information about waste disposed in the LLW facility, the site, and evaluation methodology used for the composite analysis is obtained. Also, as decisions are made on other Departmental activities that could impact the results of the composite analysis, such as decisions on nearby environmental restoration projects or on construction of a new facility, the impacts of these decisions must be incorporated into the composite analysis.

#### 4.2 Principles of DOE Management and Direction

The Department's management and direction structure for LLW management is based on three principles:

<sup>4</sup> The requirement of reasonable expectation is met if analyses which are based on plausible exposure scenarios that are not likely to underestimate doses demonstrate compliance with the performance objectives. Scenarios and parameters are discussed in more detail in guidance for developing performance assessments.

<sup>5</sup> Existing or routine documentation may be used to meet the expectations of the composite analysis. Approval of the Record of Decision by DOE HQ will constitute approval of the composite analysis. If a Record of Decision is approved without the substantive features of the composite analysis, separate HQ approval of the composite analysis will be required.

- Review through Management and Direction.
- Contractual and regulatory compliance mechanisms.
- Separation and delegation of authorities.

**Review through Management and Direction.** Review in the performance of the management and direction function is heightened by a formal review mechanism for LLW disposal facility PAs that is separate from the field office responsible for the disposal facility. The mechanism includes consultation with a DOE Program Office different from the one responsible for implementing DOE LLW management programs. Lack of progress in preparation and initial acceptance of disposal facility PAs are identified as bases for exercise of shut-down authority, as is lack of adequate programs to maintain PAs once they have been reviewed and accepted<sup>6</sup>. Similarly, within the management and direction function, the composite analysis will also undergo a review that is separate from the field office responsible for the site being analyzed. The review and approval process for composite analyses will be developed in accordance with Task I.B.3 of Revision 1 of the 94-2 Implementation Plan.

**Contractual and Regulatory Compliance Mechanisms.** There are two primary enforcement mechanisms applicable to activities undertaken at DOE sites when those activities result in, or cause, non-compliance with DOE Orders and regulations. These mechanisms are contractual and regulatory.

Through contract reform, the Department will use contract enforcement as a means for ensuring compliance with nuclear safety requirements. New and renegotiated contracts will include applicable DOE Acquisition Regulation Clauses relating to nuclear safety requirements including award fee determination factors related to the status of compliance issues. Good compliance performance can increase award fee considerations, while poor performance can cause the opposite. Under this policy, compliance with low-level waste requirements will be considered a primary element of environmental performance.

In addition, pursuant to paragraph 20 of Order DOE 5480.1B, the Assistant Secretary for Environment, Safety and Health has the authority to recommend curtailment or suspension of operations when a determination is made that a clear and present danger exists.

The regulatory mechanism is the statutory mandate embodied in the Price-Anderson Amendments Act of 1988 and codified in 10 CFR Part 820 (Procedural Rules for DOE Nuclear Activities). This rule sets forth the procedures governing the conduct of persons involved in DOE nuclear activities with respect to compliance with DOE's nuclear safety requirements, including the imposition of civil and criminal penalties for non-compliance.

<sup>6</sup> The Department is evaluating ways to further augment regulatory independence.



All DOE sites are subject to 10 CFR 830.120 (Quality Assurance), 10 CFR Part 835 (Occupational Radiation Protection) and, when promulgated, 10 CFR Part 834 (Radiation Protection of the Public and Environment). Violations of these rules will be subject to enforcement (i.e., Notices of Violation and when appropriate, civil penalties) as described in 10 CFR Part 820.

**Separation and Delegation of Authorities.** Authority is separated among headquarters and field offices. Headquarters elements generally reserve authority over those matters that would involve: (1) decisions that may result in significant current or future release of radioactive materials to the environment, or exposures to members of the public, (2) decisions that could result in precedents or policies that could affect more than one Department site, (3) decisions that could result in significant commitments of present or future resources, including economic and natural resources, and (4) decisions that involve sensitive public policies or institutional concerns. Other authorities are generally delegated to field offices.

Regarding LLW disposal, field offices are responsible for managing and directing compliance with applicable requirements in Order DOE 5820.2A and other directives and regulations. Field offices are also responsible for preparation and maintenance of PAs, preparation and maintenance of composite analyses, and for development of waste acceptance criteria derived from performance assessments and other considerations.

Headquarters Office of Waste Management program offices, in consultation with the Office of Environment, Safety, and Health, assess the adequacy of the PAs and PA maintenance programs, the composite analyses and composite analyses maintenance programs, as well as expected compliance with performance objectives (and other requirements as needed).

Headquarters Office of Environment, Safety and Health conducts independent oversight reviews and assessments.

DOE expects that a coordinated approach will be needed across the DOE Complex to ensure consistency in the quality of the PA maintenance programs, and use of resources in a cost-effective manner.

## **5.0 Interim Policy**

### **5.1 Interim Policy**

The following paragraphs amplify and clarify DOE's requirements for preparation, review, acceptance, maintenance, and approval of PAs, preparation and maintenance of composite analyses<sup>7</sup>, specify headquarters and field office shut-down authorities for inadequate progress in

<sup>7</sup> As previously discussed, the review and approval process for composite analyses will be developed in accordance with Task VII.B.3 of the revised 94-2 Implementation Plan.

preparing and maintaining PAs and composite analyses, and address contracting provisions:

- a) Field offices managing LLW disposal facilities using the Order DOE 5820.2A process shall ensure preparation and maintenance of site-specific radiological performance assessments (PAs) for the disposal of waste. The PAs are to be prepared and maintained to provide a reasonable expectation of compliance with the performance objectives stated in paragraph III.3.a of Order DOE 5820.2A<sup>8</sup>. Field offices shall also ensure preparation and maintenance of composite analyses that include the LLW disposal facilities.
- b) Field offices managing LLW disposal facilities using the CERCLA process shall ensure preparation of a composite analysis as part of, or separate from, the CERCLA process, that includes the LLW disposal facilities.

For LLW disposal using the Order DOE 5820.2A process:

- c) At the request of the Deputy Assistant Secretary (DAS) for Waste Management, LLW disposal facility PAs shall be reviewed by a peer review panel (PRP). The PRP shall review PAs for consistency and technical quality around the DOE complex in the development and application of performance assessment models that include site-specific geohydrology and waste composition.
- d) The PRP shall be selected by the DAS for Waste Management and shall be composed of DOE, contractor, and other specialists in performance assessments,<sup>9</sup> with participation by representatives from field offices.
- e) For new LLW disposal facilities, PAs and composite analyses shall be reviewed by the responsible field office and submitted to the DAS for Waste Management before construction begins. Documentation from PRP reviews<sup>10</sup> shall accompany the PA, as will other information as needed to assess disposal facility performance (including the waste acceptance criteria). Waste Management staff will evaluate the results of the PA and PRP reviews, consult with the Offices of Environmental Restoration and Environment, Safety, and Health<sup>11</sup>, and make a recommendation

<sup>8</sup> Except that reasonable expectation of compliance with paragraph III.3.a.1 of DOE 5820.2A may be demonstrated by reference to other documentation such as Safety Analysis Reports.

<sup>9</sup> Current practice is to invite representatives from the Department's Environmental Restoration program to participate in the PRP, and to invite representatives from the Nuclear Regulatory Commission and Environmental Protection Agency to participate as advisors. Representatives of the Office of Environment, Safety and Health participate on a limited basis, i.e., in the initial review of PAs and in critical unresolved environment, safety and health issues.

<sup>10</sup> Such as written minutes of meetings, information developed during the reviews, written recommendations about the technical quality of the PAs, and supporting documentation.

<sup>11</sup> Consultation with the Office of Environment, Safety, and Health will normally be limited to the initial few PAs and composite analyses under this policy, or to critical unresolved environmental, safety, or health issues.

to the Assistant Secretary for Environmental Management on expected compliance with the performance objectives of Order DOE 5820.2A, Chapter III, and on the acceptability of the composite analysis with respect to the April 1996 composite analysis guidance. If warranted, the Assistant Secretary for Environmental Management authorizes construction of the disposal facility.

If construction is authorized, the DAS for Waste Management will prepare a disposal authorization statement that sets forth those conditions for design, construction, and operation of the disposal facility that are appropriate to provide a reasonable expectation of: (1) compliance with the LLW performance objectives, and (2) that current LLW disposal activities will not result in the need for future corrective or remedial actions to ensure protection of the public and the environment. (Also see paragraph (g).)

f) For existing LLW disposal facilities that continue to accept waste for disposal, PAs and composite analyses shall be reviewed by the responsible field office and submitted to the DAS for Waste Management for acceptance according to a schedule provided by the DAS for Waste Management (see Table VII.1, Implementation Plan for Recommendation 94-2, Revision 1, April 1996). Documentation from PRP reviews shall accompany the PA as will other information as needed to assess disposal facility performance (including the waste acceptance criteria). Waste Management staff will evaluate the results of the PA and PRP reviews<sup>8</sup>, consult with the Offices of Environmental Restoration and Environment, Safety, and Health<sup>11</sup>, and make a recommendation to the DAS for Waste Management on expected compliance with the performance objectives of Order DOE 5820.2A, Chapter III, and on the acceptability of the composite analysis with respect to the April 1996 composite analysis guidance.

g) Upon acceptance of the PA and composite analysis, the DAS for Waste Management shall prepare a disposal authorization statement that sets forth those conditions for operation of the disposal facility (including any changes to design and construction of future disposal units or modifications to existing disposal units) that may be appropriate to ensure compliance with the LLW performance objectives and the acceptability of the composite analysis with respect to the April 1996 composite analysis guidance. The disposal authorization statement shall be prepared in consultation with the Offices of Environmental Restoration and Environment, Safety, and Health<sup>11</sup>. If the PA or composite analysis is not accepted, the responsible field office shall, as appropriate, have the PA, composite analysis, or support analysis revised and/or take steps (e.g., curtail disposal operations, change waste acceptance criteria) to ensure that the public and environment are protected, that the performance objectives of Order 5820.2A are met, and that current LLW disposal activities will not result in the need for future corrective or remedial actions to ensure protection of the public and the environment.

h) Field offices having a PA accepted by the DAS for Waste Management shall conduct a PA maintenance program during the operational period of the disposal facility. In addition, PAs shall be reviewed and revised when changes in waste forms or packaging, radionuclide inventories, facility design, closure concepts, or the understanding of the site or other features may change the

conclusions of the existing PA (e.g., concentration limits or waste acceptance criteria derived from the results). On an annual basis, or as otherwise required, field offices will make a determination of the continued adequacy of the PA based on waste receipts, the results of monitoring or test programs, and other relevant factors. The determination must be documented and made available for inspection during oversight reviews and assessments. A revision of the PA must be prepared and submitted to the DAS for Waste Management at least every five (5) years if revisions based on changes as discussed above do not result in more frequent submittals. Similarly, consistent with the April 1996 guidance, composite analyses shall be reviewed and revised if warranted by changes in the LLW disposal facility or by changes in plans for the remediation of, or in the understanding of, other radioactive sources on the site.

- i) Before final closure of the disposal facility, or as otherwise directed, a final version of the PA shall be prepared, reviewed by the responsible field office, and submitted to the DAS for Waste Management for approval. Submittal of the final PA shall be accompanied by the final closure plan for the disposal facility prepared in accordance with paragraph 3.j of Chapter III of Order DOE 5820.2A.
- j) Field offices may institute changes to the specifications in the disposal authorization statements provided that the changes: (1) do not alter the conclusions of the PA with respect to meeting the performance objectives of Order DOE 5820.2A, nor the conclusions of the composite analysis as determined in accordance with the process set forth in the April 1996 composite analysis guidance, nor compromise compliance with Departmental directives, policies, or regulations, (2) do not lead to a significant (e.g., 10%)<sup>12</sup> increase in projected dose from the disposal facility, or (3) are not otherwise proscribed without authorization. Otherwise, field offices should request approval for the changes in accordance with paragraph (l). In any event, changes to the specifications in disposal authorization statements must be documented and made available for inspection during oversight reviews and assessments.
- k) Field offices shall provide (biennially, or as otherwise directed, from the date of initial PA acceptance) a summary of waste disposal operations with respect to the conclusions and recommendations of the PA. The summaries will include (1) an assessment of the waste receipts (radionuclides, forms) in comparison to those projected for the period in question (or in comparison to authorized limits), (2) a summary of the results of tests or research programs identified in the PA or elsewhere, (3) an assessment of the continued adequacy of the PA, (4) recommendations for changes to design and operation or future research or test work, and (5) a summary of changes, if any, to the conditions of operation of the disposal authorization statement. Monitoring results shall be included or referenced if integrated into the Annual Site Environmental Reports consistent with Orders DOE 5400.1 and DOE 5400.5 (and 10 CFR 834, when promulgated).

<sup>12</sup> The 10% criterion is based on judgment, selected on analogy to proposed 10 CFR 834.404, which requires a report documenting any event that results in doses to members of the public that exceed 10 mrem (10% of the primary dose limit of 100 mrem).

l) Changes to the specifications in disposal authorization statements may be instituted by the DAS for Waste Management or may be requested by field offices. Changes instituted by the DAS for Waste Management would normally be provided initially to field offices in draft form to allow for comment, clarification, and discussion before imposition of implementation plans. Decisions on requests for changes would normally be made using principles and criteria that were used to initially authorize disposal operations.

m) The Assistant Secretary for Environmental Management or field offices may suspend some or all operations at a LLW disposal facility in the event that the PA or composite analysis for that disposal facility has not been prepared and accepted within schedule, or the PA has not been adequately maintained. The Assistant Secretaries for Environment, Safety and Health and for Environmental Management or the field office have similar authorities if there is a clear and present danger to the workers, public or environment.

n) Field offices shall take steps as part of the Department's contract reform initiative to integrate LLW management requirements into new and renegotiated contracts so that contractors are penalized or rewarded through awards or fees commensurate with the performance of their low-level waste management responsibilities.

For LLW disposal facilities using the CERCLA process:

o) The CERCLA process shall be used to demonstrate compliance with the requirements and intent of DOE Order 5820.2A, as set forth in the May 31, 1996 policy.

p) Existing LLW disposal facilities<sup>13</sup> that continue to accept waste for disposal are to prepare a composite analysis according to the schedule provided by the DAS for Environmental Restoration (see Table VII.1, Implementation Plan for Recommendation 94-2, Revision 1, April 1996). Composite analyses for new LLW disposal facilities composite analyses will be performed and documented in parallel with, or as part of, the CERCLA process leading to a ROD. Composite analyses shall be reviewed by the responsible field office and submitted to the appropriate Office Director in the Office of Environmental Restoration for acceptance. Environmental Restoration staff will evaluate the results of the composite analysis and make a recommendation to the appropriate Office Director on its acceptability with respect to the April 1996 composite analysis guidance.

## 5.2 Responsibilities

The responsibilities of headquarters offices include:

<sup>13</sup> The composite analysis for the Environmental Restoration Disposal Facility (ERDF) at Hanford will be included in an analysis of the entire 200 Areas. Approval of the ERDF Record of Decision by DOE headquarters and applicable external regulators constituted its current authorization to operate.

- a) Issue policies, requirements, standards, and guidance that affect the Complex as a whole or on a site-specific basis as required to ensure protection of health and safety and the environment. (EM-1, EH-1, EM-30 and EM-40 in consultation with EH)
- b) Review and accept LLW disposal facility PAs, composite analyses, and, as needed, other documentation important for protection of health and safety and the environment. (EM-1 through EM-30 and EM-40 in consultation with EH-4)
- c) Develop and approve the disposal authorization statements, and significant changes therein. (EM-30 in consultation with EM-40 and EH-4)
- d) Approve Records of Decisions constituting disposal authorizations for LLW disposal facilities managed using the CERCLA process. (EM-40 Office Directors)
- e) Conduct independent oversight reviews and assessments. (EH-2)
- f) Enforce compliance with nuclear safety requirements consistent with the Atomic Energy and Price-Anderson Amendments Acts and 10 CFR Part 820. (EH-3)
- g) Exercise shut-down authority if warranted by failure to prepare an acceptable PA or composite analyses, or to conduct an adequate PA maintenance program (EM-1), or as provided under existing authority to protect health and safety and the environment. (EM-1 and EH-1)

The responsibilities of field offices include:

- a) Within the context of disposal authorization statements, review and approve waste acceptance criteria for LLW management and disposal facilities, monitoring programs, PA and composite analysis maintenance programs, NEPA environmental assessments, and Safety Analysis Reports, and other documentation consistent with field office authority.
- b) Conduct readiness reviews and verify through self-audits or other mechanisms that LLW management requirements are being met.
- c) Ensure preparation of LLW disposal facility performance assessments, composite analyses, and other required documentation.
- d) Exercise shut-down authority if warranted by failure to prepare an acceptable PA or composite analysis, or to conduct an adequate PA or composite analysis maintenance program, or as provided under existing authority to protect health and safety and the environment.
- e) Enforce requirements consistent with contract law and contract reform; incorporate into new contracts and renegotiated existing contracts, provisions that will reward or penalize contractors monetarily based on the performance of their LLW management duties.
- f) Ensure that LLW management activities are conducted in compliance with DOE radiation protection requirements.

**g) Coordinate with DOE enforcement personnel (Office of Environment, Safety and Health) regarding compliance with nuclear safety requirements consistent with the Atomic Energy and Price-Anderson Amendments Acts and 10 CFR Part 820.**