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U.S. Department of Energy  
Washington, D.C.

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ORDER

DOE 5400.3



2-22-89

SUBJECT: HAZARDOUS AND RADIOACTIVE MIXED WASTE PROGRAM

1. PURPOSE. To establish Department of Energy (DOE) hazardous and radioactive mixed waste policies and requirements and to implement the requirements of the Resource Conservation and Recovery Act (RCRA) within the framework of the environmental programs established under DOE 5400.1.
2. EXCEPTIONS. The provisions of this Order apply to hazardous waste regulated under RCRA and to all radioactive mixed waste as defined in this Order. Byproduct material as defined in the Atomic Energy Act (AEA) is excluded under this Order provided that it is not mixed with hazardous waste.
3. REFERENCES.
  - a. DOE 5400.1, GENERAL ENVIRONMENTAL PROTECTION PROGRAM, of 11-9-88, which establishes the environmental protection program for DOE operations.
  - b. DOE 5400.2A, ENVIRONMENTAL COMPLIANCE ISSUE COORDINATION, of 1-31-89, which sets forth policy, direction, and procedures for coordinating environmental issues that are of significance to DOE.
  - c. DOE Orders in the 5400 series dealing with radiation protection of the public and the environment.
  - d. DOE 5440.1C, NATIONAL ENVIRONMENTAL POLICY ACT, of 4-9-85, which establishes procedures for implementing a DOE National Environmental Policy Act (NEPA) program.
  - e. DOE 5480.1B, ENVIRONMENT, SAFETY, AND HEALTH PROGRAM FOR DOE OPERATIONS, of 9-23-86, which outlines environmental protection, safety, and health protection policies and responsibilities.
  - f. DOE 5482.1B, ENVIRONMENT, SAFETY, AND HEALTH APPRAISAL PROGRAM, of 9-23-86, which establishes the DOE environmental protection, safety, and health appraisal program.
  - g. DOE 5632.1A, PROTECTION PROGRAM OPERATIONS, of 2-9-88, which prescribes DOE requirements for physical protection of classified matter.

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- h. DOE 5700.6B, QUALITY ASSURANCE, of 9-23-86, which establishes DOE's quality assurance program.
- i. DOE 5820.2A, RADIOACTIVE WASTE MANAGEMENT, of 9-26-88, which establishes policies and guidelines by which the Department manages its radioactive waste, waste byproducts, and radioactively contaminated surplus facilities.
- j. Title 42 U.S.C. 2011 et seq., The Atomic Energy Act of 1954, as amended, which authorizes the conduct of atomic energy activities.
- k. Title 42 U.S.C. 6901 et seq., The Resource Conservation and Recovery Act of 1976, as amended, which authorizes the Environmental Protection Agency (EPA) and the States to regulate hazardous and solid wastes.
- l. Title 42 U.S.C. 9615 et seq., The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended, which requires the identification and cleanup of inactive hazardous waste sites by responsible parties; and, imposes certain response and reporting requirements for releases of hazardous substances.
- m. Title 42 U.S.C. 4321 et seq., The National Environmental Policy Act of 1969, as amended, which establishes broad national environmental policy.
- n. Title 10 CFR Part 962, Byproduct Material, Final Rule, which interprets the Atomic Energy Act definition of the term "byproduct material," set forth in section 11e(1) of that Act as it applies to DOE owned or produced radioactive waste substances which are also "hazardous waste" within the meaning of RCRA.
- o. Title 40 CFR Parts 260-268, 270-272, and 280, implementing regulations of the Resource Conservation and Recovery Act of 1976, as amended.

#### 4. DEFINITIONS.

- a. Hazardous Waste is that waste defined as hazardous in 40 CFR Part 261. The radionuclides of source material, special nuclear material, and byproduct material as defined by the AEA of 1954, as amended, are specifically excluded from the term hazardous waste. The hazardous components of waste mixed with the radionuclides of source, special nuclear, or byproduct material are not excluded from the term hazardous waste.
- b. Inconsistency between RCRA and the AEA occurs if the requirements of both laws are incompatible. RCRA applies to hazardous or radioactive mixed waste to the extent it is not inconsistent with the requirements of the AEA.

- c. Radioactive Waste is solid, liquid, or gaseous material that contains radionuclides regulated under the Atomic Energy Act of 1954, as amended, and of negligible economic value considering costs of recovery.
  - d. Radioactive Mixed Waste is waste containing both radioactive and hazardous components regulated by the AEA and RCRA, respectively. The term "radioactive component" refers only to the actual radionuclides dispersed or suspended in the waste substance.
  - e. State Hazardous Waste is waste defined as hazardous by a State. Pursuant to RCRA Section 6001, DOE is subject to and must comply with State requirements respective to solid and hazardous waste management.
  - f. Additional Definitions are defined in the implementing regulations of RCRA and are applicable to DOE.
5. BACKGROUND. The Department issued a final interpretative rule (Title 10 CFR Part 962) regarding radioactive waste and byproduct material for the purpose of clarifying DOE's obligations under the Resource Conservation and Recovery Act, as amended, and the Atomic Energy Act on 5-1-87. Title 10 CFR Part 962.3, "Byproduct Material", issued pursuant to the Atomic Energy Act of 1954, as amended, contains the following definitions:
- a. Byproduct Material means (1) any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material, and (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any material processed primarily for its source material content.
  - b. Any Radioactive Material, as used in subsection (a) of the Atomic Energy Act of 1954 (42 U.S.C. 2011 et seq.), refers only to the actual radionuclides dispersed or suspended in the waste substance. The nonradioactive hazardous component of the waste substance will be subject to regulation under the Resource Conservation and Recovery Act.

DOE interprets these definitions to mean that whenever any hazardous waste identified or listed in Title 40 CFR Part 261 is inadvertently mixed with any source material, special nuclear material, or byproduct material, the hazardous waste component is subject to regulation under Subtitle C of RCRA. The May 1, 1987 Federal Register notice did not affect materials that are defined as byproduct material under Section 11e(2) of the Atomic Energy Act.

6. POLICY. It is the policy of DOE to:

- a. Manage all Departmental hazardous and radioactive mixed wastes according to the requirements of Subtitle C of the Resource Conservation and Recovery Act, and the Atomic Energy Act, respectively. RCRA applies to the extent it is not inconsistent with the AEA. The radioactive component of radioactive mixed waste is subject to the requirements of DOE 5820.2A.
- b. Protect the environment and the safety and health of the public, DOE, and DOE contractor employees by managing operations to the greatest extent practicable in a manner that provides for the safe handling, transportation, treatment, storage, or disposal of hazardous and radioactive mixed wastes generated by those operations.
- c. Implement a hazardous and radioactive mixed waste program complying with applicable laws and regulations.
- d. Implement waste minimization measures as specified in RCRA for hazardous and radioactive mixed wastes.

7. RESPONSIBILITIES AND AUTHORITIES.

- a. The Assistant Secretary for Environment, Safety and Health (EH-1) shall:
  - (1) Develop and issue policies, guides, requirements, and procedures for implementing the requirements of the Resource Conservation and Recovery Act at DOE facilities and integrating them with the requirements of CERCLA and NEPA.
  - (2) Assist program and field offices in determining the need for research and development efforts to solve generic DOE hazardous waste and radioactive mixed waste problems.
  - (3) Advise all Program Senior Officials (PSOs) and Heads of Field Organizations (HFOs), as defined in DOE 5400.1, of any amendments to RCRA applicable to DOE.
  - (4) In consultation with PSOs, HFOs and General Counsel (GC-1), coordinate and resolve any determination of inconsistencies between AEA and RCRA requirements and environmental compliance issues as required in DOE 5400.2A.
  - (5) Advise GC-1, in a timely manner, of significant legal issues regarding hazardous or radioactive mixed waste which require resolution.

b. The General Counsel shall:

- (1) Provide legal advice to EH-1, PSOs and HFOs, as appropriate, in support of DOE's hazardous waste and radioactive mixed waste management program.
- (2) Advise EH-1, in a timely manner, of significant RCRA hazardous and radioactive mixed waste management legal issues which require resolution and/or consideration.
- (3) Advise EH-1 on the resolution of inconsistency issues.

c. Program Senior Officials shall:

- (1) Manage RCRA hazardous and radioactive mixed waste programs and actions for which they have assigned responsibilities, requesting such funds in their budgets as they deem necessary to implement these programs and actions.
- (2) Oversee Field Organization activities under their authority for compliance with the requirements of RCRA, applicable EPA and State requirements, applicable DOE policies, and the requirements of this Order.
- (3) Advise EH-1, in a timely manner, of significant programmatic issues regarding hazardous waste and radioactive mixed waste management which require resolution.
- (4) Advise GC-1 in a timely manner of significant legal issues regarding hazardous waste and radioactive mixed waste which require resolution.
- (5) Identify when an inconsistency may exist between the requirements of the Atomic Energy Act and the Resource Conservation and Recovery Act, as amended. When a potential inconsistency is identified, follow issue coordination requirements of DOE 5400.2A.

d. Heads of Field Organizations shall:

- (1) Develop and implement a program to assure that hazardous and radioactive mixed wastes at facilities for which they are responsible are managed in accordance with AEA and RCRA requirements and the requirements of this Order.
- (2) Complete all RCRA reporting requirements.
- (3) Oversee RCRA programs and actions for which they have assigned responsibilities, requesting such funds in their budgets as they deem necessary to implement these programs and actions.

- (4) Identify when an inconsistency may exist between the requirements of the Atomic Energy Act and the Resource Conservation and Recovery Act. When a potential inconsistency is identified, follow issue coordination requirements of DOE 5400.2A.
- (5) Implement a waste minimization program for hazardous and radioactive mixed wastes.
- e. Director, Naval Nuclear Propulsion Program. Executive Order 12344, statutorily prescribed by PL 98-525 (42 USC 7158 note), establishes the responsibilities and authority of the Director, Naval Nuclear Propulsion Program (who is also the Deputy Assistant Secretary for Naval Reactors within the Department) over all facilities and activities which comprise the Program, a joint Navy-DOE organization. The policy principle promoted by these executive and legislative actions is cited in the Executive Order as "...preserving the basic structure, policies, and practices developed for this Program in the past..." Accordingly, based on the Executive Order and this policy principle, the Naval Nuclear Propulsion Program is exempt from the provisions of this Order. The Director shall maintain an environmental protection program to assure compliance with applicable environmental statutes and regulations. The Director and EH-1 shall cooperatively develop information exchange and other mutually beneficial programs as appropriate, consistent with PL 98-525.

BY ORDER OF THE SECRETARY OF ENERGY:



LAWRENCE F. DAVENPORT  
Assistant Secretary  
Management and Administration

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