## ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 194

[FRL-6014-9]

RIN 2060-AG85

Criteria for the Certification and Recertification of the Waste Isolation Pilot Plant's Compliance With the Disposal Regulations: Certification Decision

**AGENCY:** Environmental Protection

Agency.

**ACTION:** Final rule.

**SUMMARY:** The Environmental Protection Agency ("EPA") is certifying that the Department of Energy's ("DOE") Waste Isolation Pilot Plant ("WIPP") will comply with the radioactive waste disposal regulations set forth at Subparts B and C of 40 CFR Part 191 (Environmental Standards for the Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Waste). The EPA is required to evaluate whether the WIPP will comply with EPA's standards for the disposal of radioactive waste by the WIPP Land Withdrawal Act ("LWA") of 1992, as amended. EPA's certification of compliance allows the emplacement of radioactive waste in the WIPP to begin, provided that all other applicable health and safety standards, and other legal requirements, have been met. The certification constitutes final approval under the WIPP LWA for shipment of transuranic waste from specific waste streams from Los Alamos National Laboratory for disposal at the WIPP. However, the certification is subject to four specific conditions, most notably that EPA must approve sitespecific waste characterization measures and quality assurance programs before other waste generator sites may ship waste for disposal at the WIPP. The Agency is amending the WIPP compliance criteria (40 CFR Part 194) by adding Appendix A that describes EPA's certification, incorporating the approval processes for waste generator sites to ship waste for disposal at the WIPP, and adding a definition for "Administrator's authorized representative." Finally, EPA is finalizing its decision, also pursuant to the WIPP LWA, that DOE does not need to acquire existing oil and gas leases near the WIPP to comply with the disposal regulations.

**EFFECTIVE DATE:** This decision is effective June 17, 1998. A petition for review of this final action must be filed no later than July 17, 1998, pursuant to

section 18 of the WIPP Land Withdrawal Act of 1992 (Pub. L. 102– 579), as amended by the WIPP LWA Amendments (Pub. L. 104–201).

FOR FURTHER INFORMATION CONTACT: Betsy Forinash, Scott Monroe, or Sharon White; telephone number (202) 564-9310; address: Radiation Protection Division, Center for the Waste Isolation Pilot Plant, Mail Code 6602-J, U.S. Environmental Protection Agency, 401 M Street S.W., Washington, DC 20460. For copies of the Compliance Application Review Documents supporting today's action, contact Scott Monroe. The Agency is also publishing a document, accompanying today's action, which responds in detail to significant public comments that were received on the proposed certification decision. This document, entitled 'Response to Comments,' may be obtained by contacting Sharon White at the above phone number and address. Copies of these documents are also available for review in the Agency's Air Docket A-93-02.

## SUPPLEMENTARY INFORMATION:

## **Table of Contents**

- I. What is the WIPP?
- II. What is the purpose of today's action?
- III. With which regulations must the WIPP comply?
- IV. What is the decision on whether the WIPP complies with EPA's regulations?
  - A. Certification Decision
  - B. Conditions
  - C. Land Withdrawal Act Section 4(b)(5)(B) Leases
  - D. EPA's Future Role at the WIPP (recertification, enforcement of conditions)
- V. What information did EPA examine to make its decision?
- VI. In making its final decision, how did EPA incorporate public comments on the proposed rule?
  - A. Introduction and the Role of Comments in the Rulemaking Process
  - B. Significant Changes Made to the Final Rule in Response to Comments
- VII. How did EPA respond to general comments on its proposed certification decision?
- VIII. How did EPA respond to major technical issues raised in comments?
  - A. Content of Compliance Certification Application (§ 194.14)
  - 1. Site Characterization and Disposal System Design
  - (a) Šhaft Seals
  - (b) Panel Closure System
  - 2. Results of Assessments, Input Parameters to Performance Assessments, Assurance Requirements, and Waste Acceptance Criteria
  - 3. Background Radiation, Topographic Maps, Past and Current Meteorological Conditions
  - 4. Other Information Needed for Demonstration of Compliance
  - 5. Conclusion

- B. Performance Assessment: Modeling and Containment Requirements (§§ 194.14, 194.23, 194.31 through 194.34)
- 1. Introduction
- 2. Human Intrusion Scenarios
- (a) Introduction
- (b) Spallings
- (c) Air Drilling
- (d) Fluid Injection
- (e) Potash Mining (f) Carbon Dioxide Injection
- (g) Other Drilling Issues
- 3. Geological Scenarios and Disposal System Characteristics
- (a) Introduction
- (b) WIPP Geology Overview
- (c) Rustler Recharge
- (d) Dissolution
- (e) Presence of Brine in the Salado
- (f) Gas Generation Model
- (g) Two-Dimensional Modeling of Brine and Gas Flow
- (h) Earthquakes
- (i) Conclusion
- 4. Parameter Values
- (a) Introduction
- (b) Distribution Coefficient ( $K_d$ )
- (c) Actinide Solubility
- (d) Brine Pockets
- (e) Permeability of Borehole Plugs
- 5. Other Performance Assessment Issues
- (a) Sensitivity Analysis
- (b) Performance Assessment Verification Test
- 6. Conclusions
- C. General Requirements
- 1. Quality Assurance (§ 194.22)
- 2. Waste Characterization (§ 194.24)
- 3. Future State Assumptions (§ 194.25)
- 4. Expert Judgment (§ 194.26)
- 5. Peer Review (§ 194.27)
- D. Assurance Requirements
- 1. Active Institutional Controls (§ 194.41)
- 2. Monitoring (§ 194.42)
- 3. Passive Institutional Controls (§ 194.43)
- 4. Engineered Barriers (§ 194.44)
- 5. Consideration of the Presence of Resources (§ 194.45)
- 6. Removal of Waste (§ 194.46)
- E. Individual and Ground-water Protection Requirements (§§ 194.51–55)
- IX. Does DOE need to buy existing oil and gas leases near the WIPP?
- X. Why and how does EPA regulate the WIPP?
- A. The WIPP Land Withdrawal Act
- B. Limits of EPA's Regulatory Authority at the WIPP
- C. Compliance with Other Environmental Laws and Regulations
- XI. How has the public been involved in EPA's WIPP activities?
- A. Public Involvement Prior to Proposed
- B. Proposed Certification Decision
- C. Public Hearings on Proposed Rule
- D. Additional Public Input on the Proposed Rule
- E. Final Certification Decision, Response to Comments Document
- F. Dockets
- XII. How will the public be involved in EPA's future WIPP activities?
- XIII. Where can I get more information about EPA's WIPP activities?
  - A. Technical Support Documents