

other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. This rule is not a “major rule” as defined by 5 U.S.C. 804(2).

#### List of Subjects

##### 40 CFR Part 9

Environmental protection, Reporting and recordkeeping requirements.

##### 40 CFR Part 721

Environmental protection, Chemicals, Hazardous substances, Reporting and recordkeeping requirements.

Dated: November 10, 2010.

**Wendy C. Hamnett,**

*Director, Office of Pollution Prevention and Toxics.*

■ Therefore, 40 CFR parts 9 and 721 are amended as follows:

#### PART 9—[AMENDED]

■ 1. The authority citation for part 9 continues to read as follows:

**Authority:** 7 U.S.C. 135 *et seq.*, 136–136y; 15 U.S.C. 2001, 2003, 2005, 2006, 2601–2671; 21 U.S.C. 331j, 346a, 348; 31 U.S.C. 9701; 33 U.S.C. 1251 *et seq.*, 1311, 1313d, 1314, 1318, 1321, 1326, 1330, 1342, 1344, 1345(d) and (e), 1361; E.O. 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp. p. 973; 42 U.S.C. 241, 242b, 243, 246, 300f, 300g, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–1, 300j–2, 300j–3, 300j–4, 300j–9, 1857 *et seq.*, 6901–6992k, 7401–7671q, 7542, 9601–9657, 11023, 11048.

■ 2. The table in § 9.1 is amended by removing under the undesignated center heading “Significant New Uses of Chemical Substances” § 721.10201.

#### PART 721—[AMENDED]

■ 3. The authority citation for part 721 continues to read as follows:

**Authority:** 15 U.S.C. 2604, 2607, and 2625(c).

##### § 721.10201 [Removed]

■ 4. Remove § 721.10201.

[FR Doc. 2010–29147 Filed 11–17–10; 8:45 am]

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## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 194

[EPA–HQ–OAR–2009–0330; FRL–9227–4]

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

**AGENCY:** Environmental Protection Agency.

**ACTION:** Recertification decision.

**SUMMARY:** With this document, the Environmental Protection Agency (EPA) recertifies that the U.S. Department of Energy’s (DOE) Waste Isolation Pilot Plant (WIPP) continues to comply with the “Environmental Standards for the Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic (TRU) Radioactive Waste.” EPA initially certified that WIPP met applicable regulatory requirements on May 18, 1998, and the first shipment of waste was received at WIPP on March 26, 1999. The first Compliance Recertification Application (CRA) was submitted by DOE to EPA on March 26, 2004, and the Agency’s first recertification decision was issued on March 29, 2006.

**DATES:** Effective November 18, 2010.

**FOR FURTHER INFORMATION CONTACT:** Ray Lee or Jonathan Walsh, Radiation Protection Division, Mail Code 6608J, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, Washington, DC 20460; telephone number: 202–343–9463 or 202–343–9238; fax number: 202–343–2305; e-mail address: [lee.raymond@epa.gov](mailto:lee.raymond@epa.gov) or [walsh.jonathan@epa.gov](mailto:walsh.jonathan@epa.gov). Copies of the Compliance Application Review Documents (CARDs) supporting today’s action and all other recertification-related documentation can be found in the Agency’s electronic docket found at <http://www.regulations.gov> (FDMS Docket ID No. EPA–HQ–OAR–2009–0330) or on its WIPP Web site (<http://www.epa.gov/radiation/wipp>).

**SUPPLEMENTARY INFORMATION:** EPA initially certified that WIPP met applicable regulatory requirements on May 18, 1998 (63 FR 27354), and the first shipment of waste was received at WIPP on March 26, 1999. The first Compliance Recertification Application (CRA) was submitted by DOE to EPA on March 26, 2004, and the Agency’s first recertification decision was issued on March 29, 2006 (71 FR 18010–18021).

This action represents the Agency’s second periodic evaluation of WIPP’s

continued compliance with the disposal regulations and WIPP Compliance Criteria. The compliance criteria implement and interpret the disposal regulations specifically for WIPP. As directed by Congress in the WIPP Land Withdrawal Act (LWA), this “recertification” process will occur five years after the WIPP’s initial receipt of TRU waste (March 26, 1999), and every five years thereafter (*e.g.*, March 2004, March 2009) until the end of the decommissioning phase. For each recertification—including the one being announced with today’s action—DOE must submit documentation of the site’s continuing compliance with the disposal regulations to EPA for review. In accordance with the WIPP Compliance Criteria, documentation of continued compliance was made available in EPA’s dockets, and the public was provided at least a 30-day period in which to submit comments. In addition, all recertification decisions must be announced in the **Federal Register**. According to the WIPP LWA, Section 8(f), these periodic recertification determinations are not subject to rulemaking or judicial review.

This action is not a reconsideration of the decision to open WIPP. Rather, recertification is a process that evaluates changes at WIPP to determine if the facility continues to meet all the requirements of EPA’s disposal regulations. The recertification process ensures that WIPP’s continued compliance is demonstrated using the most accurate, up-to-date information available.

This recertification decision is based on a thorough review of information submitted by DOE, independent technical analyses, and public comments. The Agency has determined that DOE continues to meet all applicable requirements of the WIPP Compliance Criteria, and with this notice, recertifies the WIPP facility. This recertification decision does not otherwise amend or affect EPA’s radioactive waste disposal regulations or the WIPP Compliance Criteria.

#### Table of Contents

- I. General Information
- II. What is WIPP?
  - A. 1998 Certification Decision
  - B. 2006 Recertification Decision
- III. With which regulations must WIPP comply?
  - A. Radioactive Waste Disposal Regulations & Compliance Criteria
  - B. Compliance With Other Environmental Laws and Regulations
- IV. What has EPA’s role been at WIPP since the 1998 certification decision?
  - A. Continuing Compliance
  - B. Annual Change Reports

- C. Monitoring the Conditions of Compliance
- D. Inspections and Technical Exchanges
- V. What is EPA's 2010 recertification decision?
  - A. What information did the Agency examine to make its final decision?
  - B. Content of the Compliance Recertification Application (§§ 194.14 and 194.15)
  - C. Performance Assessment: Modeling and Containment Requirements (§§ 194.14, 194.15, 194.23, 194.31 through 194.34)
  - D. General Requirements
  - E. Assurance Requirements (§§ 194.41 Through 194.46)
  - F. Individual and Groundwater Protection Requirements (§§ 194.51 Through 194.55)
- VI. How has the public been involved in EPA's WIPP recertification activities?
  - A. Public Information
  - B. Stakeholder Meetings
  - C. Public Comments on Recertification
- VII. Where can I get more information about EPA's WIPP-related activities?
  - A. Supporting Documents for Recertification
  - B. WIPP Web Site & WIPP-NEWS E-mail Listserv
  - C. Dockets
- VIII. What happens next for WIPP? What is EPA's role in future WIPP activities?

## I. General Information

### A. How can I get copies of this document and other related information?

1. *Docket.* EPA has established a docket for this action under Docket ID No. EPA-HQ-OAR-2009-0330. Publicly available docket materials are available either electronically at <http://www.regulations.gov> or in hard copy at the Air and Radiation Docket in the EPA Docket Center, (EPA/DC) EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air and Radiation Docket is (202) 566-1742. As provided in EPA's regulations at 40 CFR part 2, and in accordance with normal EPA docket procedures, if copies of any docket materials are requested, a reasonable fee may be charged for photocopying.

2. *Electronic Access.* You may access this **Federal Register** document electronically through the EPA Internet under the "Federal Register" listings at <http://www.epa.gov/fedrgrstr/>.

## II. What is WIPP?

The Waste Isolation Pilot Plant (WIPP) is a disposal system for defense-related transuranic (TRU) radioactive waste. Developed by the Department of

Energy (DOE), WIPP is located near Carlsbad in southeastern New Mexico. At WIPP, radioactive waste is disposed of 2,150 feet underground in an ancient salt layer which will eventually creep and encapsulate the waste. WIPP has a total capacity of 6.2 million cubic feet of waste.

Congress authorized the development and construction of WIPP in 1980 "for the express purpose of providing a research and development facility to demonstrate the safe disposal of radioactive wastes resulting from the defense activities and programs of the United States."<sup>1</sup> The waste which may be emplaced in the WIPP is limited to TRU radioactive waste generated by defense activities associated with nuclear weapons; no high-level waste or spent nuclear fuel from commercial power plants may be disposed of at the WIPP. TRU waste is defined as materials containing alpha-emitting radioisotopes, with half lives greater than twenty years and atomic numbers above 92, in concentrations greater than 100 nanocuries per gram of waste.<sup>2</sup>

Most TRU waste proposed for disposal at the WIPP consists of items that have become contaminated as a result of activities associated with the production of nuclear weapons (or with the clean-up of weapons production facilities), e.g., rags, equipment, tools, protective gear, and organic or inorganic sludges. Some TRU waste is mixed with hazardous chemicals. Some of the waste proposed for disposal at the WIPP is currently located at Federal facilities across the United States, including locations in California, Idaho, Illinois, New Mexico, Nevada, Ohio, South Carolina, Tennessee, and Washington.

The WIPP LWA, passed initially by Congress in 1992 and amended in 1996, is the statute that provides EPA the authority to oversee and regulate the WIPP. (Prior to the passage of the WIPP LWA in 1992, DOE was self-regulating with respect to WIPP; that is, DOE was responsible for determining whether its own facility complied with applicable regulations for radioactive waste disposal.) The WIPP LWA delegated to EPA three main tasks, to be completed sequentially, for reaching an initial compliance certification decision. First, EPA was required to finalize general regulations which apply to all sites—except Yucca Mountain—for the

disposal of highly radioactive waste.<sup>3</sup> These disposal regulations, located at subparts B and C of 40 CFR part 191, were published in the **Federal Register** in 1985 and 1993.<sup>4</sup>

Second, EPA was to develop criteria, by rulemaking, to implement and interpret the general radioactive waste disposal regulations specifically for the WIPP. In 1996, the Agency issued the WIPP Compliance Criteria, which are found at 40 CFR part 194.<sup>5</sup>

Third, EPA was to review the information submitted by DOE and publish a certification decision.<sup>6</sup> The Agency issued its certification decision on May 18, 1998, as required by Section 8 of the WIPP LWA (63 FR 27354–27406).

### A. 1998 Certification Decision

The WIPP LWA, as amended, required EPA to evaluate whether the WIPP site complied with EPA's standards for the disposal of radioactive waste. On May 18, 1998 (63 FR 27354–27406), EPA determined that the WIPP met the standards for radioactive waste disposal. This decision allowed the emplacement of radioactive waste in the WIPP to begin, provided that all other applicable health and safety standards, and other legal requirements, had been met. The first shipment of TRU waste was received at WIPP on March 26, 1999.

Although EPA determined that DOE met all of the applicable requirements of the WIPP Compliance Criteria in its original certification decision (63 FR 27354–27406; May 18, 1998), EPA also found that it was necessary for DOE to take additional steps to ensure that the measures actually implemented at the WIPP (and thus the circumstances expected to exist there) were consistent with DOE's Compliance Certification Application (CCA) and with the basis for EPA's compliance certification. To address these situations, EPA amended the WIPP Compliance Criteria, 40 CFR part 194, and appended four explicit conditions to its certification of compliance for the WIPP.

Condition 1 of the certification applies to the panel closure system, which is intended, over the long-term, to block brine flow between waste panels in WIPP. In the CCA, DOE presented four options for the design of the panel closure system, but did not specify which one would be constructed at the WIPP facility. The Agency based

<sup>1</sup> Department of Energy National Security and Military Applications of Nuclear Energy Authorization Act of 1980, Public Law 96–164, section 213.

<sup>2</sup> WIPP Land Withdrawal Act, Public Law 102–579, section 2(18), as amended by the 1996 WIPP LWA Amendments, Public Law 104–201.

<sup>3</sup> WIPP LWA, section 8(b).

<sup>4</sup> 50 FR 38066–38089 (September 19, 1985) and 58 FR 66398–66416 (December 20, 1993).

<sup>5</sup> 61 FR 5224–5245 (February 9, 1996).

<sup>6</sup> WIPP LWA, section 8(d).

its certification decision on DOE's use of the most robust design (referred to in the CCA as "Option D"). Condition 1 of EPA's certification required DOE to implement the Option D panel closure system at WIPP, with Salado mass concrete replacing fresh water concrete.

Conditions 2 and 3 of the final certification decision apply to activities conducted at waste generator sites that produce TRU waste proposed for disposal at WIPP. The WIPP Compliance Criteria (§§ 194.22 and 194.24) require DOE to have, in place, a system of controls to measure and track important waste components, and to apply quality assurance (QA) programs to waste characterization activities. These two Conditions state that EPA must separately approve the QA programs for other generator sites (Condition 2) and the waste characterization system of controls for other waste streams (Condition 3). The approval process includes an opportunity for public comment, and an inspection or audit of the waste generator site by EPA. The Agency's approvals of waste characterization systems of controls and QA programs are conveyed by letter from EPA to DOE. EPA also made changes to the compliance criteria in July 2004 (69 FR 42571–42583). These new provisions provide equivalent or improved oversight and better prioritization of technical issues in EPA inspections to evaluate waste characterization activities at DOE WIPP waste generator sites. The new provisions also offer more direct public input into EPA's decisions about what waste can be disposed of at WIPP. The Agency continues to conduct independent inspections to evaluate a site's waste characterization capabilities, consistent with Conditions 2 and 3.

Condition 4 of the certification applies to passive institutional controls (PICs). The WIPP Compliance Criteria require DOE to use both records and physical markers to warn future societies about the location and contents of the disposal system, and thus to deter inadvertent intrusion into the WIPP (§ 194.43). In the CCA, EPA allowed DOE to delay submission of a final PICs design. Condition 4 of the certification requires DOE, prior to the submission of the final recertification application, to submit a revised schedule showing that markers and other measures will be implemented as soon as possible after closure of the WIPP. The Department also must provide additional documentation showing that it is feasible to construct markers and place records in archives as described in the CCA. After WIPP's closure, DOE will

not be precluded from implementing additional PICs beyond those described in the application. DOE recently requested a delay for all PICs activities until approximately ten years prior to the decommissioning of the WIPP facility (which is currently anticipated in 2033). EPA approved the delay (March 7, 2008; Air Docket A–98–49, Item II–B2–67), with the condition that it was based on current projections and activities and also revised the schedule that was proposed originally in November 2002 (Air Docket A–98–49, Item II–B3–41). This schedule not only gave DOE more time to seek out the most viable PICs options, but also ensured that testing and research is in fact being done and reported to EPA on a regular basis.

The complete record and basis for EPA's 1998 certification decision can be found in Air Docket A–93–02.

#### *B. 2006 Recertification Decision*

After the 1998 certification decision, EPA continued to conduct ongoing independent technical review and inspections of all WIPP activities related to compliance with the EPA's disposal regulations. The initial certification decision identified the starting (baseline) conditions for WIPP and established the waste and facility characteristics necessary to ensure proper disposal in accordance with the regulations. At that time, EPA and DOE understood that future information and knowledge gained from the actual operation of WIPP would result in changes to the best practices and procedures for the facility. In recognition of this, section 8(f) of the amended WIPP LWA requires EPA to evaluate all changes in conditions or activities at WIPP every five years to determine if WIPP continues to comply with EPA's disposal regulations for the facility.

The first recertification process, which occurred in 2004–2006, included a review of all of the changes made at the WIPP facility since the original 1998 EPA certification decision to the submittal of the initial CRA. The Agency received DOE's first CRA on March 26, 2004. On May 24, 2004, EPA announced the availability of the CRA–2004 and EPA's intent to evaluate compliance with the disposal regulations and compliance criteria in the **Federal Register** (69 FR 29646–29649). At that time, EPA also began accepting public comments on the application. Following over a year of requests for additional information from DOE, EPA issued its completeness determination for the CRA–2004 on September 29, 2005 (70 FR 61107–

61111). "Completeness determinations" are solely administrative steps and do not reflect any conclusion regarding WIPP's continued compliance with the disposal regulations.

All completeness determinations are made using a number of the Agency's WIPP-specific guidances; most notably, the "Compliance Application Guidance" (CAG; EPA Pub. 402–R–95–014) and "Guidance to the U.S. Department of Energy on Preparation for Recertification of the Waste Isolation Pilot Plant with 40 CFR parts 191 and 194" (Docket A–98–49, Item II–B3–14; December 12, 2000). Both guidance documents include guidelines regarding: (1) Content of certification/recertification applications; (2) documentation and format requirements; (3) time frame and evaluation process; and (4) change reporting and modification. The Agency developed these guidance documents to assist DOE with the preparation of any compliance application for the WIPP. They are also intended to assist in EPA's review of any application for completeness and to enhance the readability and accessibility of the application for EPA and public scrutiny.

Following the September 2005 completeness determination, EPA began its in-depth technical review on the CRA–2004 using the entire record available to the Agency, which is located in EPA's official Dockets (FMDS Docket ID No. EPA–HQ–OAR–2004–0025 found at <http://www.regulations.gov>, and also Air Docket A–98–49). Much of the CRA–2004 documentation was also placed on the Agency's WIPP Web site (<http://www.epa.gov/radiation/wipp/2004application.html> and <http://www.epa.gov/radiation/wipp/2006recertification.html>).

EPA's technical review evaluated compliance of the CRA–2004 with each section of the WIPP Compliance Criteria. The Agency focused its review on areas of change relative to the original certification decision as identified by DOE, in order to ensure that the effects of the changes have been addressed. EPA also made sure to address any substantial public comments received on the application (e.g., karst, waste inventory) in its Compliance Application Review Documents (CARDs) and Technical Support Documents (TSDs). On March 29, 2006, EPA officially recertified the WIPP facility for the first time, exactly six months following the September 2005 completeness determination.

### III. With which regulations must WIPP comply?

#### A. Radioactive Waste Disposal Regulations & Compliance Criteria

WIPP must comply with EPA's radioactive waste disposal regulations, located at subparts B and C of 40 CFR part 191. These regulations limit the amount of radioactive material which may escape from a disposal facility, and protect individuals and ground water resources from dangerous levels of radioactive contamination. In addition, the Compliance Recertification Application (CRA) and other information submitted by DOE must meet the requirements of the WIPP Compliance Criteria at 40 CFR part 194. The WIPP Compliance Criteria implement and interpret the general disposal regulations specifically for WIPP, and clarify the basis on which EPA's certification decision is made.

#### B. Compliance With Other Environmental Laws and Regulations

The WIPP must also comply with a number of other environmental and safety regulations in addition to EPA's disposal regulations<sup>7</sup>—including, for example, the Solid Waste Disposal Act and EPA's environmental standards for the management and storage of radioactive waste. Various regulatory agencies are responsible for overseeing the enforcement of these Federal laws. For example, enforcement of some parts of the hazardous waste management regulations has been delegated to the State of New Mexico. The State is authorized by EPA to carry out the State's Resource Conservation and Recovery Act (RCRA) programs in lieu of the equivalent Federal programs. New Mexico's Environment Department (NMED) reviews DOE's permit applications for treatment, storage, and disposal facilities for hazardous waste, under Subtitle C of RCRA. The State's authority for such actions as issuing a hazardous waste operating permit for the WIPP is in no way affected by EPA's recertification decision. It is the responsibility of the Secretary of Energy to report the WIPP's compliance with all applicable Federal laws pertaining to public health and the environment to EPA and the State of New Mexico.<sup>8</sup> Compliance with environmental or public health regulations other than EPA's disposal regulations and WIPP Compliance Criteria is not addressed by today's action.

<sup>7</sup> Compliance with these regulations is addressed in the site's Biennial Environmental Compliance Report (BECR).

<sup>8</sup> WIPP LWA, sections 7(b)(3) and 9.

### IV. What has EPA's role been at WIPP since the 1998 certification decision and 2006 recertification decision?

#### A. Continuing Compliance

Since EPA's 1998 certification decision (and through the initial 2006 recertification decision), the Agency has been monitoring and evaluating changes to the activities and conditions at WIPP. EPA monitors and ensures continuing compliance with EPA regulations through a variety of activities, including: Review and evaluation of DOE's annual change reports, monitoring of the conditions of compliance, inspections of the WIPP site, and inspections of waste characterization operations.

At any time, DOE must report any planned or unplanned changes in activities pertaining to the disposal system that differ significantly from the most recent compliance application (§ 194.4(b)(3)). The Department must also report any releases of radioactive material from the disposal system (§ 194.4(b)(3)(iii), (v)). Finally, EPA may request additional information from DOE at any time (§ 194.4(b)(2)). This information allows EPA to monitor the performance of the disposal system and evaluate whether the certification must be modified, suspended, or revoked to prevent or quickly reverse any potential danger to public health and the environment.

#### B. Annual Change Reports

Under § 194.4(b) DOE was required to submit a report of any changes to the conditions and activities at WIPP within six months of the 1998 certification decision and annually thereafter. DOE met this requirement by submitting the first change report in November 1998 and annually thereafter.

Since 1998, DOE's annual change reports have reflected the progress of quality assurance and waste characterization inspections, minor changes to DOE documents, information on monitoring activities, and any additional EPA approvals for changes in activities and conditions. All correspondence and approvals regarding the annual change reports can be found in Air Docket A-98-49, Categories II-B2 and II-B3.

#### C. Monitoring the Conditions of Compliance

As discussed previously, Condition 1 of the WIPP certification requires DOE to implement the Option D panel closure system at WIPP, with Salado mass concrete used in place of fresh water concrete. Since the 1998 certification decision, DOE has

indicated that it would like to change the design of the Option D panel closure system selected by EPA (Air Docket A-98-49, Item II-B3-19). EPA chose to defer review of a new panel closure design until after issuing the first recertification decision (Air Docket A-98-49, Item II-B3-42). In November 2002, DOE requested permission to install only the explosion isolation portion of the Option D panel closure design until EPA and NMED can render their respective final decisions on DOE's request to approve a new design for the WIPP panel closure system. In December 2002, EPA approved DOE's request to install only the explosion wall and to extend the panel closure schedule until a new design is approved (Air Docket A-98-49, Item II-B3-44). In a January 11, 2007 letter (DOE 2007b), DOE requested panel closures be delayed until a new design could be approved. EPA approved this request in a February 22, 2007 letter (EPA 2007a), and expects DOE to re-submit a new panel closure design after the CRA-2009 recertification decision. Since 1998, the Agency has conducted numerous audits and inspections at waste generator sites in order to implement Conditions 2 and 3 of the compliance certification. Notices announcing EPA inspections or audits to evaluate implementation of QA and waste characterization (WC) requirements at waste generator facilities were published in the **Federal Register** and also periodically announced on the Agency's WIPP Web site (<http://www.epa.gov/radiation/wipp>) and WIPP-NEWS e-mail listserv. The public has had the opportunity to submit written comments on waste characterization activities and QA program plans submitted by DOE in the past, and based on the revised WIPP Compliance Criteria, are now able to submit comments on EPA's proposed waste characterization approvals (See 69 FR 42571-42583). As noted above, EPA's decisions on whether to approve waste generator QA program plans and waste characterization systems of controls—and thus, to allow shipment of specific waste streams for disposal at WIPP—are conveyed by a letter from EPA to DOE. The procedures for EPA's approval are incorporated in the amended WIPP Compliance Criteria in § 194.8.

Since 1998, EPA has audited and approved the QA programs at Carlsbad Field Office (CBFO), Washington TRU Solutions (WTS), Sandia National Laboratory (SNL), and at 11 other DOE organizations. Following the initial approval of a QA program, EPA conducts follow-up audits to ensure

continued compliance with EPA's QA requirements. EPA's main focus for QA programs has been the demonstration of operational independence, qualification, and authority of the QA program at each location.

EPA has approved waste characterization (WC) activities at multiple waste generator sites since 1998, including Idaho National Laboratory, Hanford, Rocky Flats Environmental Technology Site, Savannah River Site, Nevada Test Site, Argonne National Laboratory-East, and General Electric Vallecitos Nuclear Center. In the interim since the 2004 CRA, remote-handled waste streams were approved for shipment and emplaced at WIPP for the first time. EPA inspects waste generator sites to ensure that waste is being characterized and tracked according to EPA requirements. EPA's WC inspections focus on the personnel, procedures and equipment involved in WC. A record of EPA's WC and QA correspondences and approvals can be found in Air Docket A-98-49, Categories II-A1 and II-A4.

EPA will evaluate DOE's compliance with Condition 4 of the certification when DOE submits a revised schedule and additional documentation regarding the implementation of PICs. This documentation must be provided to EPA no later than the final recertification application. Once received, the information will be placed in EPA's public dockets, and the Agency will evaluate the adequacy of the documentation. During the operational period when waste is being emplaced in WIPP (and before the site has been sealed and decommissioned), EPA will verify that specific actions identified by DOE in the CCA, CRA, and supplementary information (and in any additional documentation submitted in accordance with Condition 4) are being taken to test and implement passive institutional controls.

#### *D. Inspections*

The WIPP Compliance Criteria provide EPA the authority to conduct inspections of activities at the WIPP and at all off-site facilities which provide information included in certification applications (§ 194.21). Since 1998, the Agency has conducted periodic inspections to verify the adequacy of information relevant to certification applications. EPA has conducted annual inspections at the WIPP site to review and ensure that the monitoring program meets the requirements of § 194.42. EPA has also inspected the emplacement and tracking of waste in the repository. The Agency's inspection reports can be

found in Air Docket A-98-49, Categories II-A1 and II-A4.

#### **V. What is EPA's 2010 recertification decision?**

EPA recertifies that DOE's WIPP continues to comply with the requirements of subparts B and C of 40 CFR part 191. The following information describes EPA's determination of compliance with each of the WIPP Compliance Criteria specified by 40 CFR part 194.

The recertification process will not be used to approve any new significant changes proposed by DOE; any such proposals will be addressed separately by EPA. Recertification will ensure that WIPP is operated using the most accurate and up-to-date information available and provides documentation requiring DOE to operate to these standards.

##### *A. What information did the Agency examine to make its final decision?*

40 CFR part 194 sets out those elements which the Agency requires to be in any complete compliance application. In general, compliance applications must include information relevant to demonstrating compliance with each of the individual sections of 40 CFR part 194 to determine if the WIPP will comply with the Agency's radioactive waste disposal regulations at 40 CFR part 191, subparts B and C. The Agency published the "Compliance Application Guidance for the Waste Isolation Pilot Plant: A Companion Guide to 40 CFR Part 194" (CAG) which provided detailed guidance on the submission of a complete compliance application (EPA Pub. No. 402-R-95-014, Air Docket A-93-02, Item II-B2-29).<sup>10</sup>

To make its decision, EPA evaluated basic information about the WIPP site and disposal system design, as well as information which addressed all the provisions of the compliance criteria. As required by § 194.15(a), DOE's CRA-2009 updated the previous compliance application (CRA-2004) with sufficient information for the Agency to determine whether or not WIPP continues to be in compliance with the disposal regulations.

As mentioned previously, the first step in recertification is termed the "completeness determination." "Completeness" is a key administrative

step that EPA uses to determine that any recertification application addresses all the required regulatory elements and provides sufficient information for EPA to conduct a full, technical review. Following receipt of DOE's second CRA on March 24, 2009, EPA began to identify areas of the application where additional information was needed. A June 16, 2009 **Federal Register** notice announced availability of the CRA-2009 and opened the official public comment period. Over the course of the following 12 months, the Agency submitted five official letters (May 21, 2009; July 16, 2009; October 19, 2009; January 25, 2010; and February 22, 2010) to DOE requesting additional information regarding the CRA. The Department responded with a series of ten letters (August 24, 2009; September 30, 2009; November 25, 2009; January 12, 2010; February 22, 2010; March 31, 2010; April 12, 2010; April 19, 2010; May 26, 2010; and June 24, 2010) submitting all of the requested supplemental information to EPA. On June 29, 2010, EPA announced that DOE's recertification application was complete (75 FR 41421-41424).

EPA also relied on materials prepared by the Agency or submitted by DOE in response to EPA requests for specific additional information necessary to address technical sufficiency concerns. For example, EPA directed DOE to conduct a revised performance assessment—referred to as the performance assessment baseline calculation (PABC)—to address technical issues. Though recertification is not an official rulemaking, the Agency also considered public comments related to recertification, concerning both completeness and technical issues.

In summary, EPA's recertification decision is based on the entire record available to the Agency, which is located in its official dockets (FDMS Docket ID No. EPA-HQ-OAR-2009-0330, and Air Docket A-98-49). The record consists of the complete CRA, supplementary information submitted by DOE in response to EPA requests for additional information, technical reports generated by EPA, EPA audit and inspection reports, and public comments submitted on EPA's proposed recertification decision during the public comment period. All pertinent CRA-2009 correspondence was placed in our dockets (FDMS Docket No. OAR-2009-0330) and on our WIPP Web site (<http://www.epa.gov/radiation/wipp/2009application.html>).

EPA's technical review evaluated compliance of the CRA with each section of the WIPP Compliance Criteria. The Agency focused its review

<sup>10</sup> Section 194.11 provides that EPA's certification evaluation would not begin until EPA notified DOE of its receipt of a "complete" compliance application. This ensures that the full six-month period for EPA's review, as provided by the WIPP LWA, shall be devoted to substantive, meaningful review of the application (61 FR 5226).

on areas of change relative to the initial recertification decision as identified by DOE, in order to ensure that the effects of the changes have been addressed. As with its original recertification decision, EPA's evaluation of DOE's demonstration of continuing compliance with the disposal regulations is based on the principle of reasonable expectation. 40 CFR 191.13(b) states, "proof of the future performance of a disposal system is not to be had in the ordinary sense of the word in situations that deal with much shorter time frames. Instead, what is required is a reasonable expectation, on the basis of the record before the implementing agency, that compliance with § 191.13(a) will be achieved." As discussed in 40 CFR part 191, and applied to the 1998 certification decision and 2006 recertification decision, reasonable expectation is used because of the long time period involved and the nature of the events and processes at radioactive waste disposal facilities. There are inevitable and substantial uncertainties in projecting disposal system performance over long time periods. EPA applies reasonable expectation to the evaluation of both quantitative (*i.e.*, performance assessment) and qualitative (*i.e.*, assurance requirements) aspects of any compliance application.

The Agency produced a suite of documents during its technical review. EPA's Compliance Application Review Documents (CARDS) correspond in number to the sections of 40 CFR part 194 that they respectively address. Each CARD enumerates all changes made by DOE impacting a particular section of the rule, and EPA's process and conclusions. CARDS are found at Docket A-98-49, Category V-B. Technical Support Documents (TSDs) were prepared to address specific topics in greater detail, and are found in Docket A-98-49, Category II-B1. Together, the CARDS and TSDs thoroughly document EPA's review of DOE's compliance recertification application and the technical rationale for the Agency's decisions.

#### *B. Content of the Compliance Recertification Application (§§ 194.14 and 194.15)*

According to § 194.14, any compliance application must include, at a minimum, basic information about the WIPP site and disposal system design. This section focuses on the geology, hydrology, hydrogeology, and geochemistry of the WIPP disposal system. A compliance application must also include information on WIPP materials of construction, standards

applied to design and construction, background radiation in air, soil, and water, as well as past and current climatological and meteorological conditions. Section 194.15 states that recertification applications shall update this information to provide sufficient information for EPA to determine whether or not WIPP continues to be in compliance with the disposal regulations.

In Section 15 of the 2009 CRA, DOE identified changes to the disposal system between the 2004 CRA and 2009 CRA, including changes that were approved by EPA and changes to technical information relevant to §§ 194.14 and 194.15. Noteworthy changes discussed in the 2009 CRA include enhanced monitoring leading to an updated understanding of Culebra transmissivity and new transmissivity field calculations. Although EPA considers these updates important to the current understanding of the disposal system, EPA determined that the changes, both individually and collectively, do not have a significant impact on the performance of the disposal system. Today's notice summarizes the most important of these changes.

**Culebra Dolomite:** The Culebra Dolomite is considered the primary pathway for long-term radionuclide transport in ground water. As part of the required monitoring program, DOE monitors water levels in the Culebra. At the time of the 2004 CRA, observed fluctuations and a general increase in the water levels of Culebra monitoring wells was poorly understood and attributed to human influences, such as potash mining and petroleum production. These water levels establish the hydraulic gradient across the site, which in turn influences radionuclide travel times for the purposes of performance assessment. DOE uses the Culebra hydrologic data in combination with geologic information and modeling software to develop transmissivity fields for performance assessment (PA) modeling. The approach DOE used in the 2004 CRA was considered adequate by EPA, but lacked strong prediction power for transmissivity at specific points. [See EPA 2004 Performance Assessment Baseline Calculation (PABC) Technical Support Document (TSD) (Air Docket A-98-49, Item II-B1-16).]

Since the 2004 CRA, DOE conducted a Culebra well optimization program to determine where new water monitoring wells were needed most and which old wells could be plugged and abandoned. Additionally, DOE added well instrumentation that produces virtually

continuous data, offering a more complete record of the changes in water pressure than manual monthly measurements previously provided. The new monitoring data allowed DOE to develop transmissivity fields that are geologically based, consistent with observed groundwater heads, consistent with groundwater responses in Culebra pump tests, and consistent with water chemistry. Furthermore, Culebra water-level changes previously considered unpredictable and anthropogenic in origin can now be demonstrated to be responses to rainfall in Nash Draw, while others can be conclusively linked to well drilling activities. This understanding facilitated the development of the revised Culebra Hydrology Conceptual Model, which was peer reviewed in 2008. A detailed discussion of these changes is found in 2009 CRA CARD 15. In conclusion, EPA finds that DOE has adequately characterized and assessed the site characteristics for the purposes of the PA and has demonstrated continued compliance with §§ 194.14 and 194.15.

In addition to technical changes identified by DOE and EPA, the Agency received comments regarding the geology surrounding the WIPP site. As during the 2004 CRA, some stakeholders commented that karst features are prevalent in the vicinity of WIPP. Karst is a type of topography in which there are numerous sinkholes and large voids, such as caves. Karst is caused when rainwater reacts with carbon dioxide from the air, forms carbonic acid, and seeps through the soil into the subsurface to dissolve soluble rocks such as limestone and evaporites. If substantial karst features were present at WIPP, they could increase the speed at which releases of radionuclides travel away from the repository through the subsurface to the accessible environment.

In the 1998 certification decision, EPA reviewed existing information and concluded that, although it is possible that dissolution has occurred in the vicinity of the WIPP site sometime in the past (*e.g.*, Nash Draw was formed ~500,000 years ago), dissolution is not an ongoing, pervasive process at the WIPP site. Therefore, karst feature development would not impact the containment capabilities of the WIPP for at least the 10,000-year regulatory period (Air Docket A-93-02, Item III-B-2, CCA CARD 14).

Following the 1998 certification decision, several groups challenged EPA's decision in the United States Court of Appeals for the District of Columbia Circuit (No. 98-1322), including EPA's conclusions regarding

karst at the WIPP site. On June 28, 1999, the U.S. Court of Appeals upheld all aspects of EPA's 1998 certification decision, including EPA's conclusion that karst is not a feature that will impact the containment capabilities of the WIPP.

During the 2004 CRA, some stakeholders continued to assert that the geologic characterization of the subsurface surrounding the WIPP repository does not adequately identify the presence of karst. As a result of these concerns, EPA conducted a thorough review of the geologic and hydrologic information related to karst. EPA made a site visit to re-examine the evidence of karst around the WIPP site, prepared a technical support document (TSD) that discusses EPA's in-depth review of the karst issue for recertification (Air Docket A-98-49, Item II-B1-15), and requested that DOE/SNL conduct a separate analysis of the potential for karst and address issues raised by stakeholders. These efforts reaffirmed the previous conclusion that pervasive karst processes have been active outside the WIPP site, but not at WIPP.

Again during the 2009 CRA, some stakeholders argued that major karst features are present at WIPP, based on a report by Dr. Richard Phillips (2009<sup>9</sup>) which purported to correlate fluctuations of the water levels of monitoring wells with rainfall events in order to prove that rainwater reached the Culebra Dolomite through karst. EPA analyzed the Phillips report and directed SNL to respond to challenges to the conceptual model. The Phillips report failed to support hydrologic arguments for the presence of karst, or to acknowledge analyses by SNL which integrate pressure changes due to rainfall into a robust, peer-reviewed conceptual model. The Agency finds that the data continue to support the conclusion made during the CCA that karst will not impact the WIPP site over the regulatory timeframe. The 2008 peer review of the revised Culebra Hydrology Conceptual Model came to a similar conclusion. Additional information on this topic is found in EPA's 2009 CRA Compliance Application Review Document (CARD) 15.

*C. Performance Assessment: Modeling and Containment Requirements (§§ 194.14, 194.15, 194.23, 194.31 Through 194.34)*

The disposal regulations at 40 CFR part 191 include requirements for

containment of radionuclides. The containment requirements at 40 CFR 191.13 specify that releases of radionuclides to the accessible environment must be unlikely to exceed specific limits for 10,000 years after disposal. At WIPP, the specific release limits are based on the amount of waste in the repository at the time of closure (§ 194.31). Assessment of the likelihood that WIPP will meet these release limits is conducted through the use of a process known as performance assessment, or PA.

The WIPP PA process culminates in a series of computer simulations that attempts to describe the physical attributes of the disposal system (site characteristics, waste forms and quantities, engineered features) in a manner that captures the behaviors and interactions among its various components. The computer simulations require the use of conceptual models that represent physical attributes of the repository based on features, events, and processes that may impact the disposal system. The conceptual models are then expressed as mathematical relationships, which are solved with iterative numerical models, which are then translated into computer codes. (§ 194.23) The results of the simulations are intended to show estimated releases of radioactive materials from the disposal system to the accessible environment over the 10,000-year regulatory time frame.

The PA process must consider both natural and man-made processes and events which have an effect on the disposal system (§§ 194.32 and 194.33). The PA must consider all reasonably probable release mechanisms from the disposal system and must be structured and conducted in a way that demonstrates an adequate understanding of the physical conditions in the disposal system. The PA must evaluate potential releases from both human-initiated activities (e.g., via drilling intrusions) and natural processes (e.g., dissolution) that may occur independently of human activities. DOE must justify the omission of events and processes that could occur but are not included in the final PA calculations.

The results of the PA are used to demonstrate compliance with the containment requirements in 40 CFR 191.13. The containment requirements are expressed in terms of "normalized releases." The results of the PA are assembled into complementary cumulative distribution functions (CCDFs) which indicate the probability of exceeding various levels of normalized releases. (§ 194.34)

To demonstrate continued compliance with the disposal regulations, DOE submitted a new PA as part of the 2009 CRA. EPA monitored and reviewed changes to the PA since the PABC-04, summarized below.

DOE performed two conceptual model peer reviews between the submission of the 2004 CRA and the 2009 CRA: The WIPP Revised Disturbed Rock Zone and Cuttings and Cavings Submodels Peer Review, and the Culebra Hydrogeology Conceptual Model Peer Review. These revisions did not result in significant changes to the 2009 CRA PA. DOE again updated its analysis of features, events and processes (FEPs) that could impact WIPP. As in the 2004 CRA, this update of FEPs did not result in any changes to the scenarios used in the CRA PA. Since the 2004 PABC, DOE updated a number of parameters, including duration of a direct brine release, cellulose, plastics, and rubber (CPR) degradation rates, BRAGFLO (computer code) flow chemistry implementation, capillary pressure and related permeability, and the drilling rate and borehole plugging patterns. DOE also corrected minor parameter errors. For more information, refer to 2009 CRA CARDS 23 and 24.

EPA examined the recent inventory updates and changes, mainly the Annual Transuranic Waste Inventory Report (ATWIR) 2007 and the ATWIR 2008, and determined that a new performance assessment needed to be conducted in order to include updated inventory information, such as an increase in chemical components (see 2009 CRA CARD 24, Table 24-2, produced from PAIR 2008 Table 5-7). In its first completeness letter (dated May 21, 2009, items 1-G-3 and 1-23-1 [EPA 2009a]), EPA directed DOE to perform updated PA calculations using the updated inventory. In response to EPA's direction, DOE produced the 2009 Performance Assessment Baseline Calculations (PABC-09). The Agency's review of the PABC-09 found that DOE made all the changes required by EPA, and that the PABC demonstrates compliance with the containment requirements specified in 40 CFR part 191. The results of the PABC-09 are discussed below. Additional detail on the Agency's review of the PABC-09 may be found in CARDS 23, 24, 31-34, and specifically in the PABC-09 TSD (Docket A-98-49, Category II-B1).

The 2009 CRA PA and PABC-09 included calculations of the same scenarios as the original CCA PA: (1) The undisturbed scenario, where the repository is not impacted by human activities, and three drilling scenarios, (2) the E1 Scenario, where one or more boreholes penetrate a Castile brine

<sup>9</sup> "PROOF OF RAPID RAINWATER RECHARGE AT THE WIPP SITE"; Richard Hayes Phillips, PhD; March 25, 2009.



reservoir and also intersect a repository waste panel, (3) the E2 Scenario, where one or more boreholes intersect a repository waste panel but not a brine reservoir, and (4) the E1E2 Scenario, where there are multiple penetrations of waste panels by boreholes of the E1 or E2 type, at many possible combinations of intrusions times, locations, and E1 or E2 drilling events.

The 2009 Culebra modeling predicted shorter travel time for a particle to travel through the Culebra to the WIPP site boundary than did the 2004 PABC. Three main changes contributed to these changes in flow time: The Bureau of Land Management (BLM) redefined the definition of minable potash in 2009, in particular within the WIPP site near the waste disposal panels; matrix distribution coefficients ( $K_{ds}$ ) decreased several orders of magnitude for most radionuclides when the increase in the organic ligand inventory was included; and well SNL-14 confirmed the existence of the high-transmissivity zone in the southeastern portion of the WIPP site. This zone allows water to flow faster toward the Land Withdrawal Boundary than in PABC-04 calculations. The travel time is closer to that predicted in the original compliance certification, and releases remain within the limits established by 40 CFR part 191. EPA considers the PABC to be a conservative and current representation of the knowledge of the WIPP and how it will interact with the surrounding environment. EPA finds that DOE is in continued compliance with the requirements of 40 CFR 194.23 and 194.31 through 194.34. DOE calculated the release limits properly (§ 194.31), adequately defined the scope of the PA (§ 194.32), included drilling scenarios as in the original CCA (§ 194.33), and calculated and presented the results of the 2009 CRA PA and PABC-09 properly (§ 194.34). Details on the PABC-09 may be found in EPA's PABC-09 TSD (Docket A-98-49, Category II-B1).

EPA received public comments related to the 2009 CRA performance assessment. Commenters questioned whether the PA encompassed the results of specific experiments related to plutonium nanocolloids that enhanced groundwater transport capabilities. The Agency asked DOE to respond, and in a letter dated September 1, 2010, DOE indicated that although the formation of these colloids has been demonstrated to be unlikely in the chemical conditions expected at WIPP, the PA conservatively takes into consideration the formation and transport of intrinsic colloids. For more information, refer to 2009 CRA CARD 24.

#### *D. General Requirements*

##### **1. Approval Process for Waste Shipment From Waste Generator Sites for Disposal at WIPP (§ 194.8)**

EPA codified the requirements of § 194.8 at the time of the 1998 certification decision. Under these requirements, EPA evaluates site specific waste characterization and QA plans to determine that DOE can adequately characterize and track waste for disposal at WIPP. Since 1998, EPA has conducted numerous inspections and approvals pursuant to § 194.8.

EPA previously issued an approval of DOE's general framework for characterizing remote-handled (RH) waste in March 2004. This approval required DOE to provide site-specific RH waste characterization plans and characterization procedures for EPA approval prior to implementing them for characterizing and disposing of RH waste at WIPP. Specific RH waste streams were approved and emplaced at WIPP for the first time during this recertification period.

For more information on activities related to § 194.8, please refer to 2009 CRA CARD 8.

##### **2. Inspections (§ 194.21)**

Section 194.21 provides EPA with the right to inspect all activities at WIPP and all activities located off-site which provide information in any compliance application. EPA did not exercise its authority under this section prior to the 1998 certification decision.

Since 1998, EPA has inspected WIPP site activities, waste generator sites, monitoring programs, and other activities. For all inspections, DOE provided EPA with access to facilities and records, and supported our inspection activities. Information on EPA's 194.21 inspection activities can be found in 2009 CRA CARD 21.

##### **3. Quality Assurance (§ 194.22)**

Section 194.22 establishes quality assurance (QA) requirements for WIPP. QA is a process for enhancing the reliability of technical data and analyses underlying compliance applications. Section 194.22 requires DOE to demonstrate that a Nuclear Quality Assurance (NQA) program has been established and executed/implemented for items and activities that are important to the long-term isolation of transuranic waste.

EPA determined that the 2009 CRA provides adequate information to demonstrate the establishment of each of the applicable elements of the NQA standards. EPA has also verified the continued proper implementation of the

NQA Program through periodic audits conducted in accordance with § 194.22(e).

EPA's determination of compliance with § 194.22 can be found in 2009 CRA CARD 22.

##### **4. Waste Characterization (§ 194.24)**

Section 194.24, waste characterization, generally requires DOE to identify, quantify, and track the chemical, radiological and physical components of the waste destined for disposal at WIPP. Since the 2004 CRA, DOE has collected data from generator sites and compiled the waste inventory on an annual basis. DOE's 2008 Annual Transuranic Waste Inventory Report (ATWIR 2008) reflected the disposal intentions of the waste generator sites as of December 31, 2007. DOE classified the wastes as emplaced, stored or projected (to-be-generated). DOE used data from the WIPP Waste Information System (WWIS) to identify the characteristics of the waste that has been emplaced at WIPP. The projected wastes were categorized similarly to existing waste (e.g., heterogeneous debris, filter material, soil).

DOE's 2009 CRA recertification inventory was initially the same inventory used for the PABC-04. During its evaluation of the completeness of the CRA, however, EPA identified changes in the waste inventory that were potentially impactful to PA. As previously mentioned, EPA directed DOE to perform the 2009 PABC using the updated inventory in the Annual Transuranic Waste Inventory Report-2008. DOE generally kept the same categories of waste for the 2009 PABC. The major changes were changes to waste volumes and radioactive content since the 2004 CRA. Of particular concern to the Agency was an increase in the volume of organic ligands in the ATWIR-2008 inventory, which bind radionuclides, enhancing their solubility and transport. The radioactivity of the waste was estimated to decrease since the 2004 CRA, principally because of the removal of Hanford tank waste from the performance assessment inventory (EPA 2010f). Subsequent to the submission of the 2009 CRA, DOE altered the preferred alternatives in its Hanford tank waste environmental impact statement, indicating that these tank wastes would be managed as High-Level Waste (HLW) [74 FR 67189 (2009-12-18)]. This change decreased the volume of both contact-handled and remote-handled waste in the inventory.

EPA reviewed the CRA and supplemental information provided by DOE to determine whether they



provided a sufficiently complete description of the chemical, radiological and physical composition of the emplaced, stored and projected wastes proposed for disposal in WIPP. The Agency also reviewed DOE's description of the approximate quantities of waste components (for both existing and projected wastes). EPA considered whether DOE's waste descriptions were of sufficient detail to enable EPA to conclude that DOE did not overlook any component that is present in TRU waste and has significant potential to influence releases of radionuclides. The 2009 CRA did not identify any significant changes to DOE's waste characterization program in terms of measurement techniques, or quantification and tracking of waste components.

Since the 1998 certification decision, EPA has conducted numerous inspections and approvals of generator site waste characterization programs to ensure compliance with §§ 194.22, 194.24, and 194.8. For a summary of EPA's waste characterization approvals, please refer to 2009 CRA CARD 8.

As in previous certifications, stakeholders again commented that high-level waste, commercial waste, and spent nuclear fuel must not be allowed at WIPP. Commenters also objected to the inclusion in the potential inventory of wastes which currently lack a TRU or defense determination. EPA reiterates that it will not allow wastes prohibited by the Land Withdrawal Act to be shipped to WIPP. All wastes must meet the WIPP waste acceptance criteria and all requirements of EPA's waste characterization program, and EPA must officially notify DOE before the Department is allowed to ship waste to WIPP. Inclusion in the performance assessment *does not* imply EPA's approval of such waste for disposal at WIPP.

Commenters also objected to wastes being shipped to WIPP that have not been explicitly included in a compliant performance assessment. Inventory, for the purposes of PA, represents a set of bounding conditions. Any waste which represents a deviation from the expected waste parameters will not be approved until it can be demonstrated not to negatively impact PA results (e.g. supercompacted waste).

Finally, commenters objected to the fact that the Comprehensive Inventory Database (CID) is not a public document, and that the legal process through which defense and TRU determinations are made is not adequately transparent. The Department provided stakeholders with additional inventory information. The Agency will

continue to work with DOE to meet stakeholders' requests for information, and to engage the public early in inventory decisions.

For more information on EPA's determination of compliance with § 194.24, please refer to CRA CARD 24.

#### 5. Future State Assumptions (§ 194.25)

Section 194.25 stipulates that performance assessments and compliance assessments "shall assume that characteristics of the future remain what they are at the time the compliance application is prepared, provided that such characteristics are not related to hydrogeologic, geologic or climatic conditions." Section 194.25 also requires DOE to provide documentation of the effects of potential changes of hydrogeologic, geological, and climatic conditions on the disposal system over the regulatory time frame. Section 194.25 focuses the PA and compliance assessments on the more predictable significant features of disposal system performance, instead of allowing unbounded speculation on all developments over the 10,000-year regulatory time frame.

EPA concludes that DOE adequately addressed the impacts of potential hydrogeologic, geologic and climate changes to the disposal system. The 2009 CRA includes all relevant elements of the performance assessment and compliance assessments and is consistent with the requirements of § 194.25. For more information regarding EPA's evaluation of compliance with this section, *see* 2009 CRA CARDS 25 and 32, and the corresponding TSD for FEPs (Docket A-98-49, Category II-B1).

#### 6. Expert Judgment (§ 194.26)

The requirements of § 194.26 apply to expert judgment elicitation, which is a process for obtaining data directly from experts in response to a technical problem. Expert judgment may be used to support a compliance application, provided that it does not substitute for information that could reasonably be obtained through data collection or experimentation. EPA prohibits expert judgment from being used in place of experimental data, unless DOE can justify why the necessary experiments cannot be conducted. As in 2004, the 2009 CRA did not identify any expert judgment activities that were conducted since the 1998 certification decision. Therefore, EPA determines that DOE remains in compliance with the requirements of § 194.26. (For more information regarding EPA's evaluation of compliance with § 194.26, *see* CRA CARD 26.)

#### 7. Peer Review (§ 194.27)

Section 194.27 of the WIPP Compliance Criteria requires DOE to conduct peer review evaluations related to conceptual models, waste characterization analyses, and a comparative study of engineered barriers. A peer review involves an independent group of experts who are convened to determine whether technical work was performed appropriately and in keeping with the intended purpose. The required peer reviews for WIPP must be performed in accordance with the Nuclear Regulatory Commission's NUREG-1297, "Peer Review for High-Level Nuclear Waste Repositories," which establishes guidelines for the conduct of a peer review exercise. DOE performed two conceptual model peer reviews between the submission of the 2004 CRA and the 2009 CRA: The WIPP Revised Disturbed Rock Zone and Cuttings and Cavings Submodels Peer Review, and the Culebra Hydrogeology Conceptual Model Peer Review. Additional peer reviews of waste characterization analyses included the Los Alamos National Laboratory (LANL) Sealed Sources Peer Review, and the LANL Remote-Handled TRU Waste Visual Examination Data Verification Peer Review. EPA's review, both at the time of the peer reviews and during recertification, verified that the process DOE used to perform these peer reviews was compatible with NUREG-1297 requirements. Therefore, EPA determines that DOE remains in compliance with the requirements of § 194.27. For more information regarding EPA's evaluation of compliance with § 194.27, *see* 2009 CRA CARD 27.

#### E. Assurance Requirements (§§ 194.41–194.46)

The assurance requirements were included in the disposal regulations to compensate in a qualitative manner for the inherent uncertainties in projecting the behavior of natural and engineered components of the repository for many thousands of years (50 FR 38072). The assurance requirements included in the WIPP Compliance Criteria are active institutional controls (§ 194.41), monitoring (§ 194.42), passive institutional controls (§ 194.43), engineered barriers (§ 194.44), presence of resources (§ 194.45), and removal of waste (§ 194.46).

As in the 2004 CRA, the 2009 CRA did not reflect any significant changes to demonstrating compliance with the assurance requirements. DOE appropriately updated the information

for the assurance requirements in Sections 41 through 46 of the 2009 CRA, and accurately reflected EPA decisions made since the 2006 certification decision, such as reducing the safety factor for the magnesium oxide engineered barrier from 1.67 to 1.2 (§ 194.44). EPA's specific evaluation of compliance with the assurance requirements can be found in CRA CARDS 41–46.

#### *F. Individual and Groundwater Protection Requirements (§§ 194.51 Through 194.55)*

Sections 194.51 through 194.55 of the compliance criteria implement the individual protection requirements of 40 CFR 191.15 and the groundwater protection requirements of subpart C of 40 CFR part 191 at WIPP. Assessment of the likelihood that the WIPP will meet the individual dose limits and radionuclide concentration limits for groundwater is conducted through a process known as compliance assessment. Compliance assessment uses methods similar to those of the PA (for the containment requirements) but is required to address only undisturbed performance of the disposal system. That is, compliance assessment does not include human intrusion scenarios (*i.e.*, drilling or mining for resources). Compliance assessment can be considered a “subset” of performance assessment, since it considers only natural (undisturbed) conditions and past or near-future human activities (such as existing boreholes), but does not include the long-term future human activities that are addressed in the PA.

Sections 194.51 through 194.55 describe specific requirements for compliance with 40 CFR part 191 requirements at WIPP. Section 194.51 states that the protected individual must be positioned at the location where they are expected to receive the highest dose from any radioactive release. All potential exposure pathways are to be considered and compliance assessments (CAs) must assume that individuals consume two liters of water per day according to 40 CFR 194.52. 40 CFR 194.53 requires that all underground sources of drinking water be considered and that connections to surface water be factored into any CA. In 40 CFR 194.54 potential processes and events are to be considered and selected in any CA and that existing boreholes or other drilling activities be considered. 40 CFR 194.55 also requires that the impact of uncertainty on any CA analysis and that committed effective dose to individuals be calculated. Radionuclide concentrations in underground sources of drinking water (USDWs) and dose

equivalent received from USDWs must also be calculated.

In the 2009 CRA, DOE reevaluated each of the individual and groundwater requirements. DOE again updated parameters related to the individual and groundwater requirements for the undisturbed scenario: For example, water use changed from 282 gallons per person per day in the CCA to 305 in the 2004 CRA, and 273 in the 2009 CRA. By updating this information for the compliance assessment and reviewing data from water wells that have been drilled since the 2004 CRA, DOE confirmed its original water source assumptions (2009 CRA Appendix IDP). DOE did not conduct new detailed bounding dose calculations for the 2009 CRA because the releases predicted by the 2009 CRA performance assessment for the undisturbed scenario were an order of magnitude lower than those used in the original CCA (Appendix IGP). EPA reviewed DOE's 2009 CRA approach to compliance with 40 CFR 194.51 to 40 CFR 194.55. EPA verified that DOE's approach to addressing the individual and groundwater requirements was the same as the original CCA (CRA CARDS 51/52, 53, 54, 55 for details), that the 2009 CRA PA results are lower than the original CCA and that the recalculation of doses was not necessary (2009 CRA Appendix IGP). Because DOE was required to correct, update, and rerun the 2009 CRA PA, called the PABC–09, EPA reevaluated the impact of these new results on compliance with 40 CFR 194.51 to 40 CFR 194.55, and found DOE showed continued compliance with this requirement, documented in the 2009 PABC summary report (Clayton *et al.* 2009, page 21).<sup>10</sup> Thus, the CCA bounding calculations do not need to be redone. EPA finds DOE in continued compliance with 40 CFR 194.51–194.55 requirements.

## **VI. How has the public been involved in EPA's WIPP recertification activities?**

### *A. Public Information*

Since the 1998 certification decision, EPA has kept the public informed of our continuing compliance activities at WIPP and our preparations for recertification. EPA's main focus has been on distributing information via the EPA Web site, and e-mail messages via its WIPP-NEWS listserv.

Throughout the recertification process, the Agency posted any pertinent new information and/or updates on its WIPP Web site ([http://](http://www.epa.gov/radiation/wipp)

[www.epa.gov/radiation/wipp](http://www.epa.gov/radiation/wipp)). Many of our recertification documents (including DOE-submitted recertification materials, correspondence, **Federal Register** notices, outreach materials, hearings transcripts, as well as technical support documents) are available for review or download (in Adobe .pdf format), in addition to a link to our 2009 recertification docket on the regulations.gov Web site (<http://www.regulations.gov>).

Since February 2009, EPA has sent out numerous announcements regarding the recertification schedule, availability of any WIPP-related documents on the EPA WIPP Web site and its dockets, as well as details for the Agency's June 2009 and May 2010 stakeholder meetings in New Mexico.

### *B. Stakeholder Meetings*

As discussed in the WIPP LWA, the recertification process is not a rulemaking; therefore public hearings were not required. However, EPA held a series of public meetings in New Mexico in June 2009 and May 2010 to provide information about the recertification process. In an effort to make these meetings as informative as possible to all attending parties, EPA listened to stakeholder input and concerns and tailored the meetings around the public as much as possible.

The first meetings were held on June 30, 2009, in Albuquerque, New Mexico, with both an afternoon and evening session. The main purpose of these meetings was to discuss EPA's recertification process and timeline, as well as DOE's application and important changes at WIPP since the initial recertification process began in 2004. The meetings featured brief presentations on the aforementioned topics, as well as a roundtable, facilitated discussion. In response to stakeholder suggestions, DOE staff members were also on hand to provide information and answer any stakeholder questions. Participants were encouraged to provide comments to EPA for our consideration during review of DOE's WIPP application.

The second public sessions were held on May 10, 2010, in Albuquerque, New Mexico, again with an afternoon and evening session. The main purpose of this meeting was to update the public on EPA's recertification/completeness schedule and provide more in-depth, technical information related to stakeholder questions and comments raised at the first series of meetings.

All of the issues raised at these meetings have been addressed by EPA in the Compliance Application Review

<sup>10</sup>“Summary Report of the CRA–2009 Performance Assessment Baseline Calculation”; Sandia National Laboratories; February 11, 2010.

Documents (CARDS) under the relevant section.

### *C. Public Comments on Recertification*

EPA posted the recertification application on its Web site immediately following receipt. EPA formally announced receipt of the recertification application in the **Federal Register** on June 16, 2009. The notice also officially opened the public comment period on the recertification application.

For recertification, EPA sought public comments and input related to the changes in DOE's application that may have a potential impact on WIPP's ability to remain in compliance with EPA's disposal regulations.

The comment period on the recertification application closed 396 days after it opened, on August 16, 2010. This closing date was 30 days after EPA's announcement in the **Federal Register** that the recertification application was complete.

EPA received 13 sets of written public comments during the public comment period. EPA considered significant comments from the written submissions and the stakeholder meetings in its evaluation of continuing compliance. EPA addresses these comments in CARDS that are relevant to each topic. Additionally, a listing of all comments received and responses to each is included in Appendix 15–C of CARD 15.

In addition to comments on specific sections of 40 CFR part 194, EPA received comments on general issues. Some people commented on transportation concerns related to WIPP shipments (which are governed by U.S. Department of Transportation regulations, not EPA) being brought into the State of New Mexico, as well as the “expansion” of WIPP and associated nuclear energy activities.

As previously mentioned, EPA provided guidance to DOE on numerous occasions regarding its expectations for the first recertification application. In response to public comments received during the first recertification, EPA and DOE also discussed ways in which both parties could improve the overall recertification process.

One such example is the structure of the CRA–2009. Rather than being organized in a chapter format that was established with the initial CCA and the CRA–2004, DOE structured the CRA–2009 to mimic the structure of 40 CFR part 194, which is organized into topical sections of the rule. This format follows the format used by the Agency's CARDS and helped to facilitate EPA and stakeholder reviews of the application by allowing a more direct evaluation of

any changed information with respect to previous applications.

After receipt of the CRA–2009 by EPA and subsequent submissions of additional information sent by DOE, the Agency promptly issued its completeness determination. Once the recertification application was deemed complete, EPA conducted its technical evaluation and is issuing the recertification decision within the six-month timeframe specified by the WIPP LWA.

EPA believes that with continued experience, future recertifications should become less lengthy. The Agency intends to continue to work with DOE and interested stakeholders to discuss and work on improving future recertification applications and processes.

## **VII. Where can I get more information about EPA's WIPP-related activities?**

### *A. Supporting Documents for Recertification*

The Compliance Application Review Documents, or CARDS, contain the detailed technical rationale for EPA's recertification decision. The CARDS discuss DOE's compliance with each of the individual requirements of the WIPP Compliance Criteria. The document discusses background information related to each section of the compliance criteria, restates the specific requirement, reviews the 1998 certification decision and 2006 recertification decision, summarizes changes in the 2009 CRA, and describes EPA's compliance review and decision—most notably, any changes that have occurred since the 2006 recertification decision. The CARDS also list additional EPA technical support documents and any other references used by EPA in rendering its decision on compliance. All technical support documents and references are available in the Agency's dockets, via <http://www.regulations.gov> (FDMS Docket ID No. EPA–HQ–OAR–2009–0330) or Air Docket A–98–49, with the exception of generally available references and those documents already maintained by DOE or its contractors in locations accessible to the public. For more detailed information on EPA's recertification decision, there are a number of technical support documents available, which can also be found in the aforementioned docket locations and our WIPP Web site.

### *B. WIPP Web Site & WIPP-NEWS E-Mail Listserv*

For more general information and updates on EPA's WIPP activities,

please visit our WIPP Internet homepage at <http://www.epa.gov/radiation/wipp>. A number of documents (including DOE-submitted recertification materials, letters, **Federal Register** notices, outreach materials, hearings transcripts, as well as technical support documents) are available for review or download in Adobe .pdf format. The Agency's WIPP–NEWS e-mail listserv, which automatically sends messages to subscribers with up-to-date WIPP announcements and information, is also available online. Any individuals wishing to subscribe to the listserv can join by visiting [https://lists.epa.gov/read/all\\_forums/subscribe?name=wipp-news](https://lists.epa.gov/read/all_forums/subscribe?name=wipp-news) or by following the instructions listed on our WIPP Web site.

### *C. Dockets*

In accordance with 40 CFR 194.67, EPA maintains public dockets via <http://www.regulations.gov> (FDMS Docket ID No. EPA–HQ–OAR–2009–0330) and hard copies in Air Docket A–98–49 that contain all the information used to support the Agency's decision on recertification. The Agency established and maintains the formal rulemaking docket in Washington, DC, as well as informational dockets in three locations in the State of New Mexico (Carlsbad, Albuquerque, and Santa Fe). The docket consists of all relevant, significant information received to date from outside parties and all significant information considered by EPA in reaching a recertification decision regarding whether the WIPP facility continues to comply with the disposal regulations.

As part of the eRulemaking Initiative under the President's Management Agenda, the Federal Docket Management System (FDMS) was established in November 2005. FDMS was created to better serve the public by providing a single point of access to all Federal rulemaking activities.

The final recertification decision and supporting documentation can be found on EPA's WIPP Web site (<http://www.epa.gov/radiation/wipp>) or the regulations.gov Web site (<http://www.regulations.gov>) by searching for Docket ID No. EPA–HQ–OAR–2009–0330. For more information related to EPA's public dockets (including locations and hours of operation), please refer to Section 1.A.1 of this document.

## **VIII. What happens next for WIPP? What is EPA's role in future WIPP activities?**

EPA's regulatory role at WIPP does not end with this recertification decision. The Agency's future WIPP activities will include additional

recertifications every five years (the next being scheduled to begin in March 2014), review of DOE reports on conditions and activities at WIPP, assessment of waste characterization and QA programs at waste generator sites, announced and unannounced inspections of WIPP and other facilities, and, if necessary, modification, revocation, or suspension of the certification.

Although not required by the Administrative Procedures Act (APA), the WIPP LWA, or the WIPP Compliance Criteria, EPA intends to continue docketing all inspection or audit reports and annual reports and other significant documents on conditions and activities at WIPP.

EPA plans to conduct future recertification processes using a similar process to that completed by EPA for this recertification, as described in today's action. For example, EPA will publish a **Federal Register** notice announcing its receipt of the next compliance application and our intent to conduct such an evaluation. The application for recertification will be placed in the docket, and at least a 30-day period will be provided for submission of public comments. Following the completeness determination, EPA's decision on whether to recertify the WIPP facility will again be announced in a **Federal Register** notice (§ 194.64).

Dated: November 9, 2010.

**Michael P. Flynn,**

*Director, Office of Radiation and Indoor Air.*

[FR Doc. 2010-28806 Filed 11-17-10; 8:45 am]

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## DEPARTMENT OF HOMELAND SECURITY

### Coast Guard

#### 46 CFR Part 45

[Docket No. USCG-1998-4623]

RIN 1625-AA17

### Limited Service Domestic Voyage Load Lines for River Barges on Lake Michigan

**AGENCY:** Coast Guard, DHS.

**ACTION:** Final rule.

**SUMMARY:** The Coast Guard is establishing a special load line regime for certain unmanned dry-cargo river barges to be exempted from the normal Great Lakes load line assignment while operating on Lake Michigan. Depending on the route, eligible barges may obtain

a limited domestic service load line assignment or be conditionally exempted from any load line assignment at all. This special load line regime allows river barges operating under safe conditions to directly transport non-hazardous cargoes originating at inland river ports as far as Milwaukee and Muskegon, resulting in significant cost savings.

**DATES:** This final rule is effective December 20, 2010.

**ADDRESSES:** Comments and material received from the public, as well as documents mentioned in this preamble as being available in the docket, are part of docket USCG-1998-4623 and are available for inspection or copying at the Docket Management Facility (M-30), U.S. Department of Transportation, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. You may also find this docket on the Internet by going to <http://www.regulations.gov>, inserting USCG-1998-4623 in the "Keyword" box, and then clicking "Search."

**FOR FURTHER INFORMATION CONTACT:** If you have questions on this rule, call or e-mail Mr. Thomas Jordan, Office of Design and Engineering Standards, Naval Architecture Division (CG-5212), Coast Guard; telephone 202-372-1370, e-mail [Thomas.D.Jordan@uscg.mil](mailto:Thomas.D.Jordan@uscg.mil). If you have questions on viewing or submitting material to the docket, call Ms. Renee V. Wright, Program Manager, Docket Operations, telephone 202-366-9826.

#### SUPPLEMENTARY INFORMATION:

##### Table of Contents for Preamble

- I. Abbreviations
- II. Regulatory History
- III. Basis and Purpose
- IV. Background
  - A. Initial Request From the Port of Milwaukee
  - B. Risk Assessment of the Milwaukee Route
  - C. Interim Rule and Conditional Exemption
  - D. Subsequent Operational Experience
  - E. Coast Guard Oversight and Concerns
- V. Discussion of Comments and Changes
  - A. Discussion of Interim Rule (IR) Changes
  - B. Discussion of Interim Rule (IR) Comments
- VI. Regulatory Analyses
  - A. Regulatory Planning and Review
  - B. Small Entities
  - C. Assistance for Small Entities
  - D. Collection of Information
  - E. Federalism
  - F. Unfunded Mandates Reform Act
  - G. Taking of Private Property
  - H. Civil Justice Reform
  - I. Protection of Children
  - J. Indian Tribal Governments

- K. Energy Effects
- L. Technical Standards
- M. Environment

#### I. Abbreviations

ABS American Bureau of Shipping  
 COI Collection of Information  
 DHS Department of Homeland Security  
 HazMat Hazardous Material  
 HP Horsepower  
 IR Interim Rule  
 ITB Integrated tug/barge  
 MarAd (United States) Maritime Administration  
 MSO Marine Safety Office  
 MSU Marine Safety Unit  
 NEPA National Environmental Policy Act of 1969  
 NPRM Notice of proposed rulemaking  
 NTTAA National Technology Transfer and Advancement Act  
 OMB Office of Management and Budget  
 OCMI Officer in Charge, Marine Inspection  
 SCA Small Craft Advisory  
 Stons Short tons  
 VHF Very High Frequency

#### II. Regulatory History

On May 29, 1992, the Coast Guard published a notice in the **Federal Register** (57 FR 22663) establishing a limited service domestic load line route on western Lake Michigan between Chicago, IL (Calumet Harbor), and Milwaukee, WI, and authorizing the American Bureau of Shipping (ABS) to issue load line certificates accordingly. The notice also requested public comment. On September 21, 1992, we published a follow-up notice (57 FR 43479) discussing the public comments that we received, and making minor revisions to the requirements.

On March 31, 1995, we published a notice in the **Federal Register** (60 FR 16693) establishing a second route along the east side of Lake Michigan between Chicago, IL, and St. Joseph, MI. In the notice, we specified that the lead barge in the tow must have a raked bow, but allowed the initial load line survey of barges that were less than 10 years old to be conducted afloat.

On September 28, 1995, we published a notice in the **Federal Register** (60 FR 50234) removing the raked bow requirement.

On August 26, 1996, we published a notice in the **Federal Register** (61 FR 43804) extending the St. Joseph route farther up the east side of Lake Michigan to Muskegon, MI.

On November 2, 1998, we published a notice of proposed rulemaking (NPRM) in the **Federal Register** titled "Limited Service Domestic Voyage Load Lines for River Barges on Lake Michigan" (63 FR 58679). This NPRM proposed to incorporate the above-described Lake Michigan load line