40 CFR Part 191
Subparts B and C
Compliance Recertification Application 2026
for the
Waste Isolation Pilot Plant

Consideration of the Presence of Resources
(40 CFR 194.45)

United States Department of Energy
Waste Isolation Pilot Plant

Carlsbad Field Office
Carlsbad, New Mexico

Compliance Recertification Application 2026
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ACRONYMS AND ABBREVIATIONS

CFR	Code of Federal Regulations
CRA	Compliance Recertification Application
DBMAR	Delaware Basin Monitoring Annual Report
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
PA	performance assessment
WIPP	Waste Isolation Pilot Plant

45.0 CONSIDERATION OF THE PRESENCE OF RESOURCES (40 CFR 194.45)

45.1 Requirements

§ 194.45 Consideration of the Presence of Resources

Any compliance application shall include information that demonstrates that the favorable characteristics of the disposal system compensate for the presence of resources in the vicinity of the disposal system and the likelihood of the disposal system being disturbed as a result of the presence of those resources. If performance assessments predict that the disposal system meets the containment requirements of §191.13 of this chapter, then the Agency will assume that the requirements of this section and §191.14(e) of this chapter have been fulfilled.

45.2 Background

Title 40 CFR 194.45 (U.S. EPA 1996a) implements the assurance requirement that the favorable characteristics of the disposal system compensate for any increased probability of disruption by humans resulting from exploring and developing existing resources. In promulgating this requirement, the U.S. Environmental Protection Agency (EPA) determined that performance assessment (PA) provides a rigorous analytical methodology to determine whether the Waste Isolation Pilot Plant (WIPP) site has compensating features that outweigh the presence of resources (U.S. EPA 1996b). In accordance with the compliance criteria, the U.S. Department of Energy (DOE) must demonstrate that PA has incorporated the potential effects of human activities near the WIPP prior to waste disposal, as well as the potential effects of drilling and excavation mining over the regulatory time frame.

The DOE has consistently demonstrated in previous compliance applications that WIPP complies with containment requirements, taking into account the effects of resources present at the site. Information and data from previous compliance certification and recertification applications, which form the basis of past DOE compliance positions, are found in the 2019 Compliance Recertification Application (CRA-2019) (U.S. DOE 2019).

45.3 Changes or New Information Since the CRA-2019

The DOE monitors resource-related activities within the WIPP vicinity and annually reports relevant data in the Delaware Basin Monitoring Annual Report (DBMAR) (U.S. DOE 2025). This updated information helps to ensure that current practices are accurately represented in the WIPP PA. For the CRA-2026 PA, the rate of drilling for petroleum resources is increased to 153.4 boreholes per square kilometer over 10,000 years, an increase from the CRA-2019 value of 99.0 boreholes per square kilometer per 10,000 years. Additionally, the representation of borehole plug types and probabilities has been updated and is based on the plugging methods used in the nine-township area surrounding the WIPP site. Associated PA parameter values are presented in King (King 2025) and are derived from the 2024 DBMAR (U.S. DOE 2025). Finally, the WIPP PA parameter GLOBAL:PBRINE, which is the probability of encountering pressurized

brine while drilling, has been modified due to a correction in the PA code PRELHS (SNL 2022). See Section 33 of CRA-2026 for more information on drilling-related parameter updates.

Conventional mining for potash is continuing within the vicinity of the WIPP. The effects of mining are accounted for in the WIPP PA as prescribed by Section 194.32(b). The implementation of the mining scenario in the WIPP PA is described in Appendix PA-2026, and Sections PA-2.3.2, PA-3.9, PA-4.9, and PA-8.2.

A solution mining project operated by Intrepid Potash Corporation continues to operate just outside the boundary of the Delaware Basin. This operation does not affect the current representation of mining in the WIPP PA; therefore no changes to the WIPP models were necessary. The description, screening argument, and screening decision for this activity are presented in Appendix SCR-2026, Section SCR-5.2.2.3.

The CRA-2026 PA results presented in Section 34, "Results of Performance Assessments," show that predicted releases are below the limits established by 40 CFR 191.13 while accounting for the potential exploitation of resources present at the WIPP site. Therefore, it is demonstrated that the favorable characteristics and isolating capability of the WIPP outweigh the risks associated with the presence of resources at the site. The information in this section is a summary of the associated CRA-2026 information and, as such, the requirements of 40 CFR 194.45 are met.

45.4 References

(*Indicates a reference that has not been previously submitted.)

King, S. 2025. Memo to Records. (Subject: Drilling Rate and Plugging Pattern Probabilities for the CRA-2026 PA Calculations). February 2025. Carlsbad, NM: Sandia National Laboratories.*

Sandia National Laboratories (SNL). 2022. Software Problem Report for PRELHS Version 2.45. Carlsbad, NM: Sandia National Laboratories. ERMS 577795.*

U.S. Department of Energy (DOE). 2019. Title 40 CFR Part 191 Compliance Certification Application for the Waste Isolation Pilot Plant. Carlsbad, NM: Carlsbad Field Office. DOE/WIPP-19-3609.

U.S DOE. 2025. Delaware Basin Monitoring Annual Report, Revision 0. February 2025. Carlsbad, NM: U.S. Department of Energy, Carlsbad Field Office. DOE/WIPP-24-2308.*

U.S. Environmental Protection Agency (EPA). 1996a. 40 CFR Part 194: Criteria for the Certification and Recertification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations; Final Rule. *Federal Register*, vol. 61 (February 9, 1996): 5223–5245.

U.S. EPA. 1996b. Response to Comments Document for 40 CFR Part 194: Criteria for the Certification and Recertification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR

Part 191 Disposal Regulations (January 31). Washington, DC: Office of Air and Radiation. EPA 402-R-96-001.