
**Title 40 CFR Part 191
Subparts B and C
Compliance Recertification Application 2019
for the
Waste Isolation Pilot Plant
Consideration of Underground
Sources of Drinking Water
(40 CFR 194.53)**



**United States Department of Energy
Waste Isolation Pilot Plant**

Carlsbad Field Office
Carlsbad, New Mexico

Compliance Recertification Application 2019
Consideration of Underground
Sources of Drinking Water
(40 CFR 194.53)

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Acronyms and Abbreviations

CCA	Compliance Certification Application
CFR	Code of Federal Regulations
CRA	Compliance Recertification Application
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
USDW	underground source of drinking water
WIPP	Waste Isolation Pilot Plant

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53.0 Consideration of Underground Sources of Drinking Water (40 CFR 194.53)

53.1 Requirements

§194.53 Consideration of Underground Sources of Drinking Water

In compliance assessments that analyze compliance with part 191, subpart C of this chapter, all underground sources of drinking water in the accessible environment that are expected to be affected by the disposal system over the regulatory time frame shall be considered. In determining whether underground sources of drinking water are expected to be affected by the disposal system, underground interconnections among bodies of surface water, groundwater, and underground sources of drinking water shall be considered.

53.2 Background

Title 40 CFR 194.53 ([U.S. EPA 1996](#)) requires the U.S. Department of Energy (DOE) to consider, in compliance assessments, underground sources of drinking water (USDWs) near the Waste Isolation Pilot Plant (WIPP) and their interconnections. A USDW is defined in 40 CFR 191.22 ([U.S. EPA 1993](#)) as:

“Underground source of drinking water means an aquifer or its portion which: (1) Supplies a public water system, or (2) contains a sufficient quantity of ground water to do so and (i) currently supplies drinking water for human consumption or (ii) contains fewer than 10,000 milligrams per liter of total dissolved solids.”

The groundwater protection requirements at 40 CFR 191.24(a)(1) ([U.S. EPA 1993](#)) limit releases to the maximum contamination level established in the National Primary Drinking Water Regulations at 40 CFR 141 ([U.S. EPA 2003](#)) as they existed on January 19, 1994.

Information and data from previous compliance certification and recertification applications that form the basis of past DOE compliance positions and past U. S. Environmental Protection Agency (EPA) decision documents are found in the 2014 Compliance Recertification Application (CRA-2014) ([U.S. DOE 2014](#)).

53.3 Changes or New Information Since the CRA-2014

In support of the CRA-2019, the DOE reviewed and updated information provided in the Compliance Certification Application (CCA) ([U.S. DOE 1996](#)) and the previous CRA’s Individual and Groundwater Protection requirements. The updated material is provided as Appendix IGP-2019. Changes or new information pertaining to the update are as follows:

Updated information regarding average household water consumption in communities near the WIPP was obtained from the latest census to assess the continued appropriateness of criteria for making USDW determinations. The updated information is included in Appendix IGP-2019,

Section IGP-2.1.1. A review of these new data indicated that no change in the criteria for making USDW determinations is warranted.

No additional USDW investigations were performed as part of the CRA-2019 (see Appendix IGP-2019). Based on the review in Appendix IGP-2019, no modification to the USDW determinations as reported in the CCA, Appendix USDW ([U.S. DOE 1996](#)), is warranted. The DOE continues to conclude that within the vicinity of the WIPP, USDWs are present in the Culebra, and potential USDWs are present in the Dewey Lake and the Santa Rosa. In addition, the DOE approach ensures that underground interconnections among bodies of surface water, groundwater, and USDWs are considered. Based on these considerations, the DOE believes that continued compliance with the provisions of 40 CFR 194.53 is demonstrated.

53.4 References

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

U.S. Department of Energy (DOE). 1996. Title 40 CFR Part 191 Compliance Certification Application for the Waste Isolation Pilot Plant (October). 21 vols. Carlsbad, NM: Carlsbad Area Office. DOE/CAO-1996-2184.

U.S. Department of Energy (DOE). 2014. Title 40 CFR Part 191 Subparts B and C. Compliance Recertification Application for the Waste Isolation Pilot Plant (March). 10 vols. Carlsbad, NM: Carlsbad Field Office. DOE/WIPP 2014-3503.*

U.S. Environmental Protection Agency (EPA). 1993. 40 CFR Part 191: Environmental Radiation Protection Standards for the Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes: Final Rule. *Federal Register*, vol. 58 (December 20, 1993): 66398–416.

U.S. Environmental Protection Agency (EPA). 1996. 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*, 5223-5245.

U.S. Environmental Protection Agency (EPA). 2003. 40 CFR Part 141: National Primary Drinking Water Regulations: Final Rule. *Federal Register*.