
**Title 40 CFR Part 191
Subparts B and C
Compliance Recertification Application 2014
for the
Waste Isolation Pilot Plant**

**Removal of Waste
(40 CFR § 194.46)**



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

**Carlsbad Field Office
Carlsbad, New Mexico**

Compliance Recertification Application 2014
Removal of Waste
(40 CFR § 194.46)

Table of Contents

46.0 Removal of Waste (40 CFR § 194.46) 46-1

 46.1 Requirements..... 46-1

 46.2 Background 46-1

 46.3 1998 Certification Decision..... 46-1

 46.4 Changes in the CRA-2004..... 46-1

 46.5 EPA’s Evaluation of Compliance for the 2004 Recertification 46-2

 46.6 Changes or New Information Between the CRA-2004 and the CRA-2009
 (Previously: Changes or New Information Since the 2004 Recertification) 46-2

 46.7 EPA’s Evaluation of Compliance for the 2009 Recertification 46-2

 46.8 Changes or New Information Since the CRA-2009 46-3

 46.9 References 46-3

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Acronyms and Abbreviations

CARD	Compliance Application Review Document
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
WIPP	Waste Isolation Pilot Plant

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1 **46.0 Removal of Waste (40 CFR § 194.46)**

2 **46.1 Requirements**

§ 194.46 Removal of Waste

Any compliance application shall include documentation which demonstrates that removal of waste from the disposal system is feasible for a reasonable period of time after disposal. Such documentation shall include an analysis of the technological feasibility of mining the sealed disposal system, given technology levels at the time a compliance application is prepared.

3

4 **46.2 Background**

5 The U.S. Environmental Protection Agency's (EPA's) 40 CFR § 194.46, "Removal of Waste"
6 (U.S. EPA 1996a), is one of the six assurance requirements in the Compliance Criteria. The
7 EPA states in the preamble to the 1993 promulgation of the disposal standards of 40 CFR Part
8 191 (U.S. EPA 1993) that the assurance requirements were included in the disposal standards to
9 compensate in a qualitative manner for the inherent uncertainties in projecting the behavior of
10 natural and engineered components of the Waste Isolation Pilot Plant (WIPP) for many
11 thousands of years.

12 **46.3 1998 Certification Decision**

13 To meet the criteria of section 194.46, the EPA states in its Compliance Application Guidance
14 that compliance with the section 194.46 criteria is demonstrated by an analysis that includes (1)
15 completeness of procedures for removal of waste after disposal, (2) descriptions of current
16 technology that could be used in implementing these procedures, and (3) an estimate of when it
17 will no longer be technologically feasible to remove the waste (U.S. EPA 1996b).

18 The U.S. Department of Energy's (DOE's) demonstration of compliance with section 194.46
19 was included in the Compliance Certification Application (CCA) (U.S. DOE 1996), Chapter 7.0
20 and Appendix WRAC. The DOE presented a five-phased approach to accomplish the removal of
21 waste. This approach was supported by a discussion of techniques that could be used to remove
22 the waste, given repository conditions at the time of removal. The EPA reviewed the material to
23 assess the completeness of the strategy and the justification of the proposed technology for
24 removing the waste. The EPA states in its 1998 Certification Decision (U.S. EPA 1998a) for
25 section 194.46 that the DOE has demonstrated it is possible to remove waste from the repository
26 for a reasonable period of time after disposal; therefore, the EPA found the DOE in compliance
27 with section 194.46. A complete description of the EPA's decision can be found in U.S. EPA
28 1998a, Section VIII.D.6, and Compliance Application Review Document (CARD) 46 (U.S. EPA
29 1998b).

30 **46.4 Changes in the CRA-2004**

31 The DOE did not report any changes in the 2004 Compliance Recertification Application (CRA-
32 2004) (U.S. DOE 2004) to the information on which the EPA based its 1998 Certification
33 Decision (U.S. EPA 1998a). The DOE maintained its original position on waste removal after

1 closure, which was presented in the CCA, Chapter 7.0, Section 7.6. Only editorial changes were
2 made to the original text in the CCA, Chapter 7.0, Section 7.6, pp. 7-90 and 7-91. The CRA-
3 2004 included the CCA, Appendix WRAC by reference; no changes were made to Appendix
4 WRAC.

5 **46.5 EPA's Evaluation of Compliance for the 2004 Recertification**

6 Based on the EPA's review of the activities and conditions in and around the WIPP site, the EPA
7 did not identify any significant changes in the planning and execution of the DOE's strategy for
8 removal of waste since the 1998 Certification Decision (U.S. EPA 1998a). The CRA-2004
9 provides documentation that the removal of waste from the disposal system is feasible for a
10 reasonable period of time after disposal (see the CRA-2004, Chapter 7.0, Section 7.6.2).

11 The EPA did not receive any public comments on the DOE's continued compliance with the
12 section 194.46 requirements for removal of waste presented in the CRA-2004.

13 Based on a review and evaluation of the CRA-2004 and the CCA, Appendix WRAC, the EPA
14 determined that the DOE continued to comply with the requirements of section 194.46 (U.S.
15 EPA 2006, Section V.E).

16 **46.6 Changes or New Information Between the CRA-2004 and the CRA-2009** 17 **(Previously: Changes or New Information Since the 2004 Recertification)**

18 The DOE did not change its position on waste removal presented in the CCA, Chapter 7.0,
19 Section 7.6. There were no design changes or changes to the disposal system in waste
20 emplacement within the disposal area between the CRA-2004 and the CRA-2009 (U.S. DOE
21 2009). There were no changes in the planning or execution of the DOE's strategy for removal of
22 waste since the EPA's 1998 Certification Decision (U.S. EPA 1998a). Thus, there was no new
23 information to be provided as part of the CRA-2009, and the information presented in the CRA-
24 2004, Chapter 7.0, Section 7.6, pp. 7-90 and 7-91, and the CCA, Appendix WRAC, continued to
25 demonstrate compliance with the provisions of section 194.46 at that time (see the CRA-2009,
26 Section 46).

27 **46.7 EPA's Evaluation of Compliance for the 2009 Recertification**

28 Based on the EPA's review of the activities and conditions in and around the WIPP site, the EPA
29 did not identify any significant changes in the planning and execution of the DOE's strategy for
30 removal of waste since the 1998 Certification Decision (U.S. EPA 2010a).

31 The EPA did not receive any public comments on the DOE's continued compliance with the
32 section 194.46 requirements for removal of waste presented in the CRA-2009.

33 Based on a review and evaluation of the CRA-2009 and the CCA, Appendix WRAC, the EPA
34 determined that the DOE continued to comply with the requirements of section 194.46 (U.S.
35 EPA 2010b, Section V.E.).

1 **46.8 Changes or New Information Since the CRA-2009**

2 The DOE has not changed its position on waste removal presented in the CCA, Chapter 7.0,
3 Section 7.6. There have been no design changes or changes to the disposal system in waste
4 emplacement within the disposal area since the CRA-2009. There have been no changes in the
5 planning or execution of the DOE's strategy for removal of waste since the EPA's 1998
6 Certification Decision (U.S. EPA 1998a). Thus, there is no new information to be provided as
7 part of the CRA-2014, and the information presented in the CRA-2004, Chapter 7.0, Section 7.6,
8 pp. 7-90 and 7-91, and the CCA, Appendix WRAC, continues to demonstrate compliance with
9 the provisions of section 194.46.

10 **46.9 References**

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

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17 Disposal Regulations: Recertification Decision; Final Notice." *Federal Register*, vol. 75
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