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**Title 40 CFR Part 191  
Subparts B and C  
Compliance Recertification Application 2019  
for the  
Waste Isolation Pilot Plant  
Active Institutional Controls  
(40 CFR § 194.41)**



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

Carlsbad Field Office  
Carlsbad, New Mexico

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**Compliance Recertification Application 2019**  
**Active Institutional Controls**  
**(40 CFR § 194.41)**

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### **Acronyms and Abbreviations**

AIC	Active Institutional Control
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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## 41.0 Active Institutional Controls (40 CFR § 194.41)

### 41.1 Requirements

§ 194.41 Active Institutional Controls

(a) Any compliance application shall include detailed descriptions of proposed active institutional controls, the controls' location, and the period of time the controls are proposed to remain active. Assumptions pertaining to active institutional controls and their effectiveness in terms of preventing or reducing radionuclide releases shall be supported by such descriptions.

(b) Performance assessments shall not consider any contributions from active institutional controls for more than 100 years after disposal.

### 41.2 Background

Assurance requirements are 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 disposal system for many thousands of years (Compliance Application Review Document [CARD] 41, [U.S. EPA 1998](#), Section 41.A.1). Active institutional controls (AICs) are defined in 40 CFR § 191.12 ([U.S. EPA 1993](#)) as controlling access to a disposal site by any means other than passive institutional controls, performing maintenance operations or remedial actions at a site, or monitoring parameters related to disposal system performance. 40 CFR § 194.41 requires AICs to be maintained for as long a period of time as practicable after disposal; however, contributions from AICs for reducing the rate of human intrusion in the performance assessment may not be considered for more than 100 years after disposal.

In the Compliance Certification Application (CCA) ([U.S. DOE 1996](#)), Chapter 7.0 and Appendix AIC, the U.S. Department of Energy (DOE) described its plan for the AICs, including constructing a fence and roadway around the surface footprint of the repository, posting warning signs, and performing routine patrols and surveillance. The DOE stated that the AICs will be maintained for 100 years after closure of the Waste Isolation Pilot Plant (WIPP) facility and would effectively prevent human intrusion during that time.

In the 2004 Compliance Recertification Application (CRA-2004) ([U.S. DOE 2004](#)), the DOE reported only minor changes since 1998 including; 1) A new timeline for implementation of AICs, 2) the DOE's approach to maintaining and replacing AICs, and 3) Minimum standards to apply during construction and maintenance of AICs. In the CRA-2009 and CRA-2014, the DOE did not propose any changes to the AICs program for the WIPP.

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 CRA-2014 ([U.S. DOE 2014](#)).

### 41.3 Changes or New Information Since the CRA-2014

In the CRA-2019, the DOE does not propose any changes to the AICs program for the WIPP. Information pertaining to the program as provided in the CCA ([U.S. DOE 1996](#)), CRA-2004, ([U.S. DOE 2004](#)), CRA-2009 ([U.S. DOE 2009](#)) and CRA-2014 ([U.S. DOE 2014](#)) remains unchanged. The DOE believes it has demonstrated continued compliance with the provisions of 40 CFR § 194.41.

### 41.4 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). 2004. Title 40 CFR Part 191 Compliance Recertification Application for the Waste Isolation Pilot Plant (March). 10 vols. Carlsbad, NM: Carlsbad Field Office. DOE/WIPP 2004-3231.

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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). Carlsbad Field Office, Carlsbad, NM. DOE/WIPP 2014-3505.\*

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). 1998. CARD No. 41: Active Institutional Controls. Compliance Application Review Documents for the Criteria for the Certification and Recertification of the Waste Isolation Pilot Plant's Compliance with the 40 CFR Part 191 Disposal Regulations: Final Certification Decision (May) (pp. 41-1 through 41-6). Washington, DC: Office of Radiation and Indoor Air.