



# SANFORD UNDERGROUND RESEARCH FACILITY

**SOUTH DAKOTA SCIENCE AND TECHNOLOGY AUTHORITY**

## **Underground Injection Control Standard**

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## **Revision History**

<b>Rev</b>	<b>Date</b>	<b>Section</b>	<b>Paragraph</b>	<b>Summary of Change</b>	<b>Authorized by</b>
01	4/30/2024	NA	NA	Initial Release	CCR 931
02	5/29/2024	NA	NA	Update Logo	CCR 946

## 1.0 Purpose

The purpose of this standard is to outline the applicable requirements of the Environmental Protection Agency's Underground Injection Control (UIC) Program, which will serve to ensure that activities conducted at the Sanford Underground Research Facility (SURF) comply with the UIC Program requirements.

South Dakota Science and Technology Authority (SDSTA) references the following to maintain compliance with federal regulations regarding the UIC Program:

- 40 CFR 144 – Underground Injection Control Program
- 40 CFR 144.24 – Class V wells.
- 40 CFR 144.25 – Requiring a permit.
- 40 CFR 144.26 - Inventory requirements.
- 40 CFR 144.84 – Do I need to get a permit?

## 2.0 Scope

This standard applies to all personnel at SURF.

## 3.0 Definitions

**Class V Injection Well** – EPA regulations define Class V injection wells as wells not included in other well classes. Class V wells are injection wells used to inject non-hazardous fluids underground.

**Contaminant** – any physical, chemical, biological, or radiological substance or matter in water. Contaminants within water destined for underground injection must be pre-approved by the EPA before the injection occurs.

## 4.0 Responsibilities

### 4.1. SDSTA Executive Director

- 4.1.1. Ensures personnel, financial, and administrative resources are made available to maintain compliance with this standard.

### 4.2. Environment, Safety, and Health (ESH) Department

- 4.2.1. Develops, implements, and updates this standard.
- 4.2.2. Submits inventory information to the permitting authority (EPA) and verifies that injection activities are authorized prior to injection.
- 4.2.3. Develops UIC Training, administered to SURF personnel via the electronic learning management system.
- 4.2.4. Submits inventory information to the EPA for any change to operations that may affect the composition of previously approved injectate.

### 4.3. Department Directors

- 4.3.1. Communicate this standard throughout their department.
- 4.3.2. Ensure that departmental staff comply with this Standard.

#### 4.4. SDSTA Personnel and Users

- 4.4.1. Adhere to the requirements of this standard.
- 4.4.2. Notify the ESH Department of plans that will result in the release of liquid waste streams into the underground sump system. This notification must be made at least 90 days prior to such release.
- 4.4.3. Notify the ESH Department if approved injection activities are no longer occurring.

## 5.0 Instructions

### 5.1. Background Information

- The underground sump system is considered a Class V injection well.
- Every waste stream destined for underground release, including all contaminants contained within the waste stream, must be pre-authorized by the EPA before any injection activities occur underground.

### 5.2. Regulatory Oversight

- The EPA Region 8 UIC Program Director provides regulatory oversight for class V injection wells in South Dakota.

### 5.3. Duration of Underground Injection Authorizations by Rule

- Multiple Class V injection well activities at SURF are currently ‘authorized by rule.’ See ESH-(8000-A)-212365 UIC Rule Authorizations for more information.
- If the EPA determines a permit is required, the injection well authorizations will expire upon the effective date a permit is issued or a permit is denied. Injection well authorization may be revoked upon failure to submit a requested permit application in a timely manner, upon failure to submit requested inventory information in a timely manner, or upon failure to comply with a request for other information in a timely manner.
- Injection well ‘authorization by rule’ will expire upon well closure.

### 5.4. Duty to Notify EPA of Changes to Operation

- Any change to operations that will impact the composition of injectate into the underground sump system must be authorized by the EPA before the changes are enacted.
- Waste streams that have not already been authorized by the EPA for underground injection shall not be released into the underground sump system until SDSTA receives EPA authorization.
- If a UIC Rule Authorization is no longer required, contact the ESH department. The ESH Department will correspond with the EPA to revise or remove the rule authorizations.

## 6.0 Documented Information/Related Documents

### 6.1. ESH-(8000-A)-212365 UIC Rule Authorizations