

UIC Primacy Application Process



Class VI Permit Application: Required Elements



- Site characterization (geologic) information
 - Maps/cross sections, structure, lithology, faults/fractures, geochemistry, hydrology/hydrogeology, USDWs, seismic history
- AoR delineation (details submitted via the Input Advisor) and proposed (and final) corrective action
- GS Project Plans
 - AoR and Corrective Action, Testing and Monitoring, Well Plugging, Post-injection Site Care (PISC) and Site Closure, Emergency and Remedial Response
- Proposed (and final) well construction/specifications
- Proposed (and final) operating plan and pre-injection testing plan
- Financial responsibility demonstration (i.e., cost estimates and instruments)
- Injection depth waiver application and aquifer exemption expansion (if necessary)

40 CFR 146.82(a) and (c)

Class VI Permitting: Stages



Permit application received

Authorization to inject

1. Pre-Construction

- Site Characterization
- AoR Modeling
- Financial Responsibility
- Injection Well Construction Plans
- Proposed Operating Data and Pre-Injection Testing
- Proposed Project Plans
- Injection Depth Waivers
- Permit Writing

2. Pre-Injection

- Finalize Site Characterization
- Finalize AoR and Corrective Action Status
- Injection Well Construction
- Finalize Project Plans
- Finalize Financial Responsibility
- Verify Appropriateness of Injection Depth Waivers
- Authorize Operation

3. Injection

- Operating Data
- Testing and Monitoring
- AoR Reevaluation
- Project Plan Updates
- Financial Responsibility Updates
- Emergency and Remedial Response
- Enforcement and Compliance
- Permit Modification

4. Post-Injection

- Injection Well Plugging
- Post-Injection Site Monitoring
- Emergency and Remedial Response
- Project Plan and Financial Responsibility Updates
- Non-endangerment demonstrations
- Site Closure

Permit to construct

Class VI Permitting Process



Class VI Permit
Application Submission



- Technical review of permit application information

Site Characterization Data

Proposed Operational Information

Proposed Well Construction

AoR Delineation and Corrective Action Plan

Testing and Monitoring Plan

Financial Responsibility Demonstration

PISC and Site Closure Plan

Injection Well Plugging Plan

Emergency and Remedial Response Plan

First Steps in a GS Project



- If you plan on pursuing a GS project, talk to EPA or the delegated program manager **before** either submitting an application or drilling a well!

EPA UIC and Class VI Tools and Resources



- EPA Underground Injection Control Website:
<https://www.epa.gov/uic>
- EPA CO2 Geologic Sequestration Website:
<https://www.epa.gov/uic/class-vi-wells-used-geologic-sequestration-co2>
- Class VI Guidance documents:
<https://www.epa.gov/uic/class-vi-guidance-documents>
- The GS Data Tool and the Input Advisor:
<https://epa.velo.pnnl.gov/>

EPA Class VI Program Contacts



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45Q Tax Credit for Carbon Oxide Sequestration



- Provides tax credits to eligible CCUS projects, including carbon oxide disposed of in secure geological storage
- Congress amended 45Q with the 2018 Bipartisan Budget Act (BBA)
- Department of Treasury and IRS “anticipate issuing regulations and other guidance to implement the provisions of 45Q” (IRS Notice 2019-32)

Then	Now
<ul style="list-style-type: none">• Captured <i>carbon dioxide</i> eligible for credit• \$20 per ton stored• \$10 per ton utilized for EOR• Capped at 75 million tons in total	<ul style="list-style-type: none">• Captured <i>carbon oxides</i> eligible for credit• Up to \$50 per ton stored• Up to \$35 per ton utilized (EOR or other)• Credit can be claimed for up to 12 years• Projects must start construction before Jan. 1, 2024



Thanks!

Questions and Discussion