Arizona Primacy of Underground Injection Control (UIC)

June 18, 2018

Photos Courtesy of Morton Salt
The Underground Injection Control Program

- Construction
- Operation
- Permitting
- Closure

EPA regulates injection wells used to place fluids underground for Storage or Disposal.

The Safe Drinking Water Act (SDWA) allows States to assume primacy of UIC if certain requirements are met.

Arizona must satisfy EPA requirements to obtain UIC primacy.
### Overview of UIC Well Classes

<table>
<thead>
<tr>
<th>UIC Well Class</th>
<th>Description</th>
<th>APP permit required?</th>
<th>Current UIC Permits in Arizona</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>used to inject hazardous and non-hazardous wastes into deep, isolated rock formations.</td>
<td>Y</td>
<td>none</td>
</tr>
<tr>
<td>II</td>
<td>used exclusively to inject fluids associated with oil and natural gas production.</td>
<td>Y</td>
<td>none</td>
</tr>
<tr>
<td>III</td>
<td>used to inject fluids to dissolve and extract minerals.</td>
<td>Y</td>
<td>2 (one more in process)</td>
</tr>
<tr>
<td>IV</td>
<td>shallow wells used to inject hazardous or radioactive wastes into or above a geologic formation that contains a USDW.</td>
<td>Y</td>
<td>none</td>
</tr>
<tr>
<td>V</td>
<td>used to inject non-hazardous fluids underground. (drywells, septic systems)</td>
<td>Y/N</td>
<td>10,000s &quot;permit by rule&quot;</td>
</tr>
<tr>
<td>VI</td>
<td>used for injection of carbon dioxide (CO2) into underground subsurface rock formations for long-term storage, or geologic sequestration.</td>
<td>Y</td>
<td>none</td>
</tr>
</tbody>
</table>
Class I: Industrial & Municipal Waste Disposal Wells

What are they?
- Wells for deep injection/disposal of brines and other wastes
- Hazardous waste injection prohibited in AZ

What happens with AZ UIC Primacy?
- ADEQ will issue individual UIC permits instead of EPA
- Exempt from APP

None have been permitted in AZ to date
- Primacy allows Arizona to prepare for long term water supply brine disposal needs

Source: EPA
Class II: Oil and Gas Related Injection Wells

What are they?
- Wells for injection/disposal of oil and gas field produced brines

What happens with AZ UIC Primacy?
- ADEQ will issue individual UIC permits instead of EPA
- Exempt from APP
- Not Exempt from OGCC requirements

None have been permitted in AZ to date
- Sets a simpler permit path if an oil and gas field is ever developed in jurisdictional AZ

Source: EPA
Class III: Injection Wells for Solution Mining

**What are they?**
- Wells for in-situ mining of salt, copper, uranium and other ores

**What happens with AZ UIC Primacy?**
- ADEQ will issue individual UIC permits instead of EPA
- Exempt from APP

**How many do we have?**
- Several permits have been issued for salt and copper mining
- Transition of UIC permits from EPA to ADEQ necessary.

Source: EPA
Class IV: Shallow Hazardous & Radioactive Injection Wells

What are they?
• Wells for shallow injection/disposal of hazardous and radioactive wastes
• New wells are banned nationwide

What happens with AZ UIC Primacy?
• They will still be banned in AZ
• Exempt from APP

None have been permitted in AZ to date
• This ban must be continued to obtain UIC primacy

Underground Injection Control Class IV wells are banned!

Source: EPA
Class VI: Geologic Sequestration of CO2

What are they?

- Wells for injection/disposal of CO2 “sequestration”

What happens with AZ UIC Primacy?

- ADEQ will issue individual permits instead of EPA
- Exempt from APP

None have been permitted in AZ to date

- Sets a simpler permit path for the future if carbon sequestration becomes important

Source: EPA
UIC Class V Wells

Classes I, II, III, IV, VI

Everything Else = Class V Injection Wells
UIC Class V Wells – What Happens with AZ Primacy?

“Permit by Rule”
- ADEQ administers as EPA did previously. Nothing new.

No exemption needed from APP
- Best fit for situation

Can still issue individual UIC permit
- None needed currently.

Source: EPA
“Permit by Rule” general principles

#1
• Submit information to ADEQ in the future, if we don’t already have it.

#2
• Operate wells so as to not endanger aquifers.

#3
• Close well properly

Source: EPA
Get individual permit from ADEQ not EPA.
No APP needed.

Regulated as before
Permit by rule and/or
APP

Exist App

Life goes on as normal
Status of UIC Primacy by State

Source: EPA
Why pursue UIC Primacy now?

- EPA is encouraging states to seek primacy
- Removes duplicative regulation
- Reduce cost and cycle time for permits
- Provides environmentally responsible growth
- Gives Arizona control over what is being injected
- Improve the quality of the program
ADEQ Shall Adopt the UIC Program

Pursuant to A.R.S 49-203(A)(5)

The director shall: Adopt, by rule, the permit program for underground injection control described in the safe drinking water act.
Authority to implement relevant portions of 40 CFR 144 through 146:

- Permitting Requirements
- Prohibition of Class IV wells
- Inventory and Plan for regulating Class V wells
- Compliance and Enforcement Authorities
- Sharing information with EPA

Public Notice and Hearing
Technical Standards
Monitoring and reporting
Arizona Senate Bill 1494 (2018)

Provides the statutory framework necessary to create and implement regulation required for Arizona to obtain primacy from EPA.

• Provides Funding
• Creates Permitting Authority
• Adds Penalties for Violations
• Allows Private Right to Action
• Eliminates Duplicative Regulation

Exempts certain types of UIC Well Classes from Aquifer Protection Permit program once primacy is obtained.

• UIC Class I,II,III,IV,VI exempt from APP
• UIC Class V wells not exempt from APP
Projected Timeline

Initial Stakeholder Meetings
- June & July 2018

Send High Level Program and Rule Components
- September 2018

Stakeholder Meetings on Preliminary Draft Rule
- March – April 2019

Formal Rule Process (Public Hearing, GRRC)
- April 2019 – January 2020

Submit to EPA – April 2020
Voice of the Customer (You)

This is the part where we listen to you

- What pitfalls do you see?
- What do you value?
- What concerns do you have about transitioning from APP to UIC?
- What principals and features are important for the rule?
# Pros and Cons to AZ UIC Primacy

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<th>Cons</th>
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