Class III Uranium Updates and Common Issues

Dan Hannah P.G., UIC Permits Section

June 4, 2025

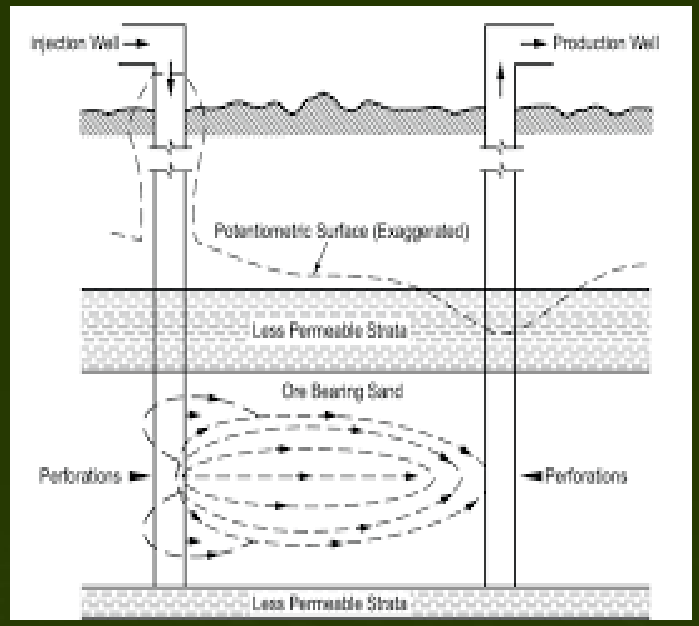
Overview

- Definitions
- Example of Class III *In-situ* Mining Process
- Permitted Class III Uranium Sites in Texas
- Class III *In-situ* Uranium Mining in Texas
- Class III Permitting Actions to Date Fiscal Year 2025
- Common Issues with Class III Permit Applications
- 89th Legislative Session
- Pending Permit Applications Information Webpage

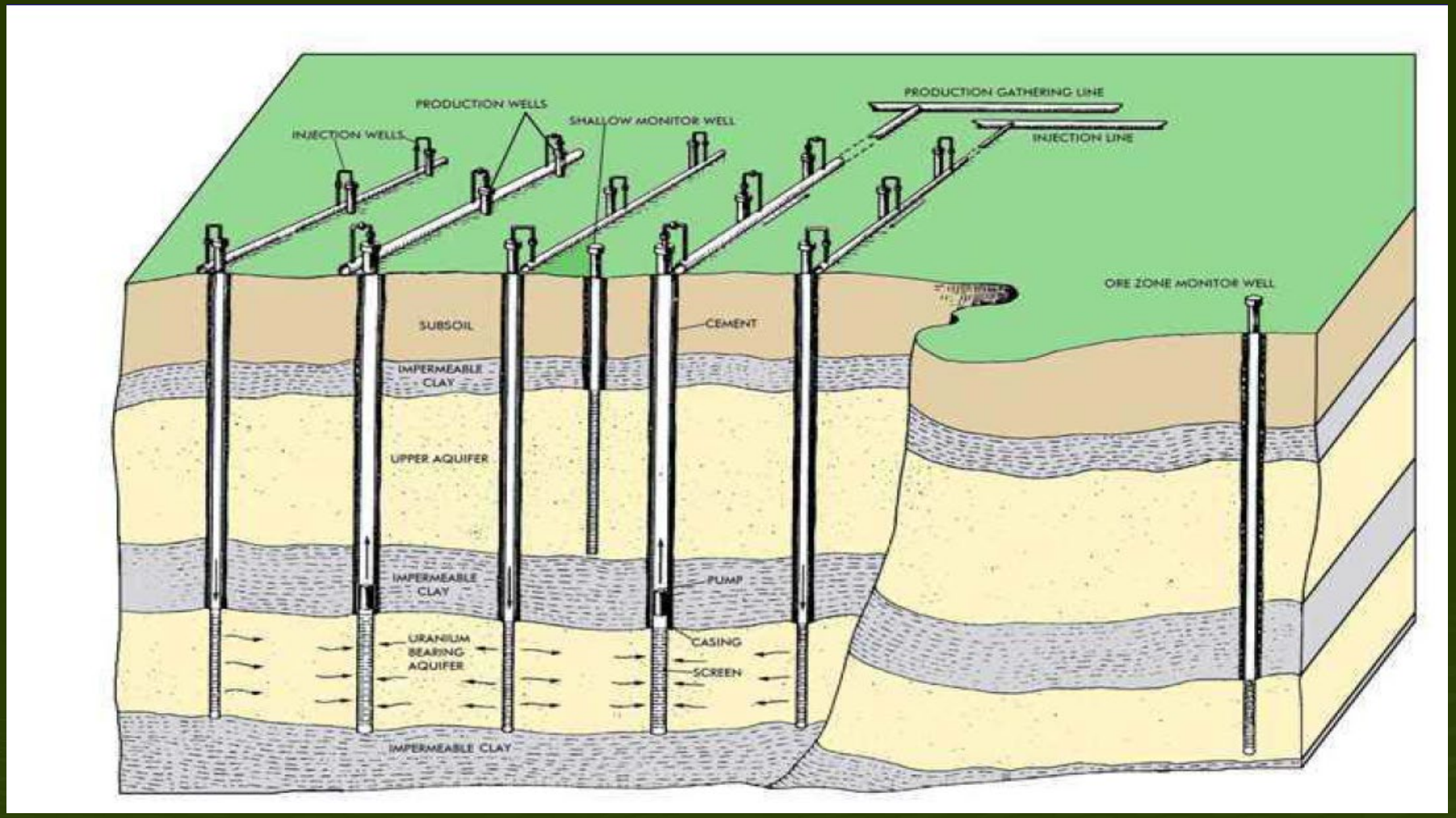
Definitions

- Class III – Injection wells used for *in-situ* recovery of minerals, exclusive of oil and gas

- *In-situ* recovery – The mining technique of using wells to inject fluids to dissolve underground mineral deposits and bring them to the surface



Example of Class III *In-situ* Mining Process



Permitted Class III Uranium Sites in Texas

- Alta Mesa Project (Brooks County)
  - Active permit UR03060 – PAA1 restored, PAA2 – PAA6 in standby mode, PAA7 production
- Burke Hollow Project (Bee County)
  - Active permit UR03090 – no production yet, PAA1 issued
- Goliad Project (Goliad County)
  - Active permit UR03075 – no production yet, PAA1 issued, contested permit renewal
- Kingsville Dome (Kleberg County)
  - Expired permit UR02827 – inactive, PAA1, PAA2 and PAA3 waiting on final set of stability sampling data
- La Palangana Uranium In-Situ Recovery Project (Duval County)
  - Active permit UR03070 – PAA1, PAA2, PAA3, PAA4 all in standby mode
- Rosita Project (Duval County)
  - Active permit UR02880 – PAA1 & PAA2 restored, PAA3 in standby mode, PAA5 production
- Upper Spring Creek ISR Project (Live Oak County)
  - Active permit UR03095 – no production yet

Class III *In-situ* Uranium Mining in Texas

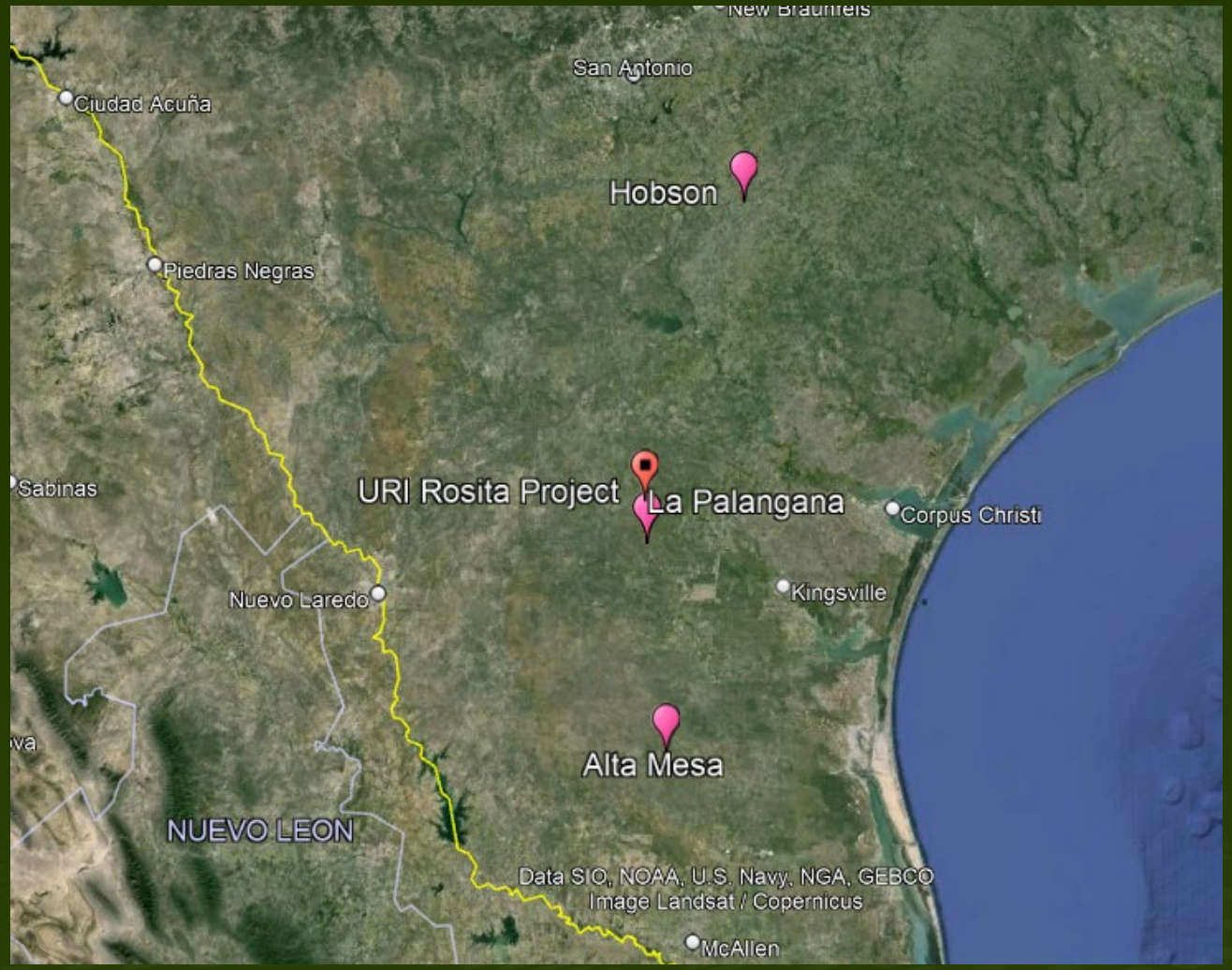
As of October 2024, a total of 4,682 Class III wells at all permitted *in-situ* uranium mines in Texas

Sites currently producing

- URI Rosita (PAA 5)
- enCore Alta Mesa (PAA 7)

Sites in standby

- STMV Hobson (processing only)
- STMV La Palangana



Class III Permitting Actions to Date Fiscal Year 2025 (September 1, 2024 through August 31, 2025)

Pending

- New Applications - 0
- Renewal Applications – 3
- PAAs – 0
- Amendments/Modifications – 2
- Endorsements - 0

Completed

- New Applications - 0
- Renewal Applications – 0
- PAAs – 1
- Amendments/Modifications – 1
- Endorsements – 8

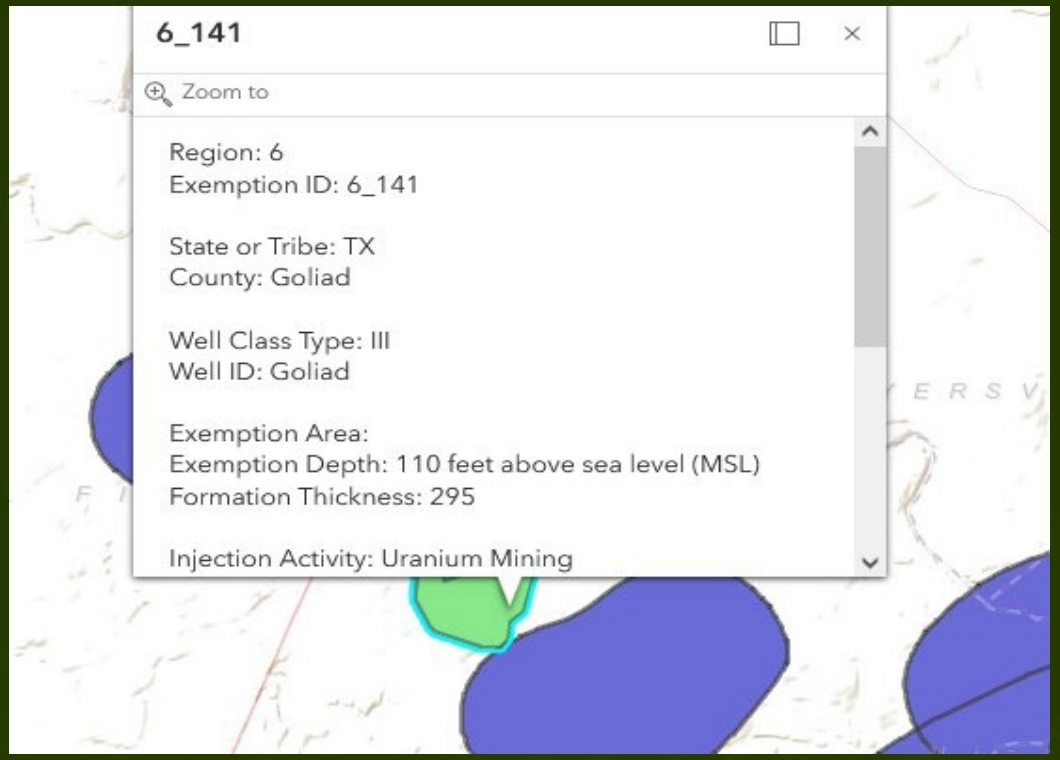
Common Issues with Class III Permit Applications

Aquifer Exemptions (AEs)

- Frequent inconsistency with AE depths referenced to a specific datum (i.e., depths provided as either below ground level or relative to mean sea level) – some applications reference both when describing the AE – can be confusing
- Example (right) from EPA's AE webpage shows exemption depth relative to mean sea level, while TCEQ AE Orders are in feet below ground level

Production Area Authorizations (PAAs)

- PAA application(s) can be submitted with area permit application or after area permit has been issued – may be expedient to submit with area permit application
- Consider amending PAAs, if needed, during area permit renewal - may reduce permit processing time



https://www.epa.gov/uic/aquifer-exemptions-map

Common Issues with Class III Permit Applications (cont.)

Well Construction

- Ensure that construction features, such as centralizers, packers, screens, cement placement, etc. are depicted accurately on well schematics
- Well registration forms (TCEQ-20541) need only be submitted for non-production wells completed before application submittal and/or during application review, prior to permit issuance

Excursion Parameters

- Select excursion parameters that tend to remain in soluble form and are more easily mobilized, even after injection activities have ceased (i.e., chlorides, total alkalinity)
- Avoid selecting excursion parameters that exhibit redundancy, such as TDS and conductivity, when one or the other is sufficient

Common Issues with Class III Permit Applications (cont.)

Surface Facilities

- Ensure that surface facility construction features, such as berms, containment pads, tankage, pipelines, RO units, IX columns, etc. are clearly identified on engineering plans/schematics

Hydrogeology

- Ensure groundwater elevation measurements and calculated gradients are from the same aquifer – do not combine data across separate, isolated aquifers
- For all groundwater chemical analyses, provide complete laboratory analytical reports

89th Legislative Session

Legislation potentially impacting the UIC Class III program, specifically public comment/hearing requirements for certain types of amendment to production area authorizations, was introduced during the regular session, 89th Texas Legislature.

Pending Permit Applications Information Webpage

This webpage contains applicant information and permit documents for pending Class III applications including the Plain Language Summary and notice information.

https://www.tceq.texas.gov/permitting/radmat/uic_permits/uic-pending-permit-apps

TCEQ Contact Information

Dan Hannah, P.G.
UIC Permits Section
Radioactive Materials Division
Texas Commission on Environmental Quality
dan.hannah@tceq.texas.gov
512-239-2161

For general UIC questions:
uic@tceq.texas.gov
512-239-6466

For GovDelivery (Email and Text Updates):

https://public.govdelivery.com/accounts/TXTCEQ/subscriber/new?topic_id=TXTCEQ_342