General UIC Applications – Injection and Disposal Well Permits

Jason Lockie
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July 2025

Outline

- How to submit applications packets
- Types of forms
- Guidelines for permit applications
- RAD Letters
- Technical Review
  - Field/Lease, Completion , GAU Letter, AOR, Seismic search, Logs.
- Protest and hearing process for UIC applications

Submitting a New Permit Application Packet

- Payment Options – pay by credit card over phone, or by check
  - W-14 - $250
  - H-1/H-1A - $500 per well
- UIC_Permits@rrc.texas.gov email submission procedures
  - Email attachment size limit discussion (25 Mb) – what to do if larger than 25 MB
- Hard Copy or Mailing Procedures
  - Mailing address:

Railroad Commission of Texas

Underground Injection Control

1701 N. Congress

Austin, Texas 78701

SWR 9 – Form W-14 and SWR 46 – Form H1/H-1A

RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION

Form W-14
07/2016

APPLICATION TO DISPOSE OF OIL AND GAS WASTE BY INJECTION INTO A FORMATION NOT PRproductive OF OIL AND GAS

1. Operator Name _____ 2. Operator P-5 No. _____

3. Operator Address: _____

4. County _____ 5. RRC District No. _____

6. Field Name _____ 7. Field Number _____

8. Lease Name _____ 9. Lease/Gas ID No. _____

10. Well is _____ miles in a _____ direction from _____ (center of nearest town). 11. No. acres in lease _____

12. Legal description of location including distance and direction from survey lines _____

13. Latitude/Longitude, if known (Optional) Lat. _____ Long. _____

14. New Permit: Yes ☐ No ☐ If no, amendment of Permit No. _____ UIC# _____

15. Reason for amendment: Pressure ☐ Volume ☐ Interval ☐ Commercial ☐ Other (explain) _____

16.Well No.	17.API No.		18.Date Drilled			19.Total Depth		20.Plug Date, if re-entry
Casing	Size	Setting Depths	Hole Size	Casing Weight	Cement Class	Cement Sacks (#)	Top of cement	Top Determined by
21. Surface								
22. Intermediate								
23. Long String								
24. Liner								
25. Other								

26. Depth to base of Deepest Freshwater Zone _____ 27.Multiple completion? Yes ☐ No ☐

28. Multistage cement? Yes ☐ No ☐ If yes, DV Tool Depth: _____ft. No. Sacks: _____Top of Cement: _____

29. Bridge Plug Depth: _____ ft. 30. Injection Tubing Size: ____ in. and Depth _____ ft. 31. Packer Depth: _____ft.

32. Cement Squeeze Operations: (List all giving interval and number of sacks of cement and cement top and whether Proposed or Complete.):

33. Injection Interval from _____ to _____ ft. 34. Name of Disposal Formation _____

35. Any Oil and Gas Productive Zone within two miles? Yes ☐ No ☐
If yes, Depth _____ ft. and Reservoir Name _____

36. Maximum Daily Injection Volume _____ bpd 37. Estimated Average Daily Injection Volume _____bpd

38. Maximum Surface Injection Pressure _____ psig 39. Estimated Average Surface Injection Pressure_____ psig

40. Source of Fluids (Formation, depths and types): _____

41. Are fluids from leases other than lease identified in Item 8? Yes ☐ No ☐ 42. Commercial Disposal Well? Yes ☐ No ☐

43. If commercial disposal, will non-hazardous oil and gas waste other than produced water be disposed of? Yes ☐ No ☐

44. Type(s) of Injection Fluid: Salt Water ☐ Brackish Water ☐ Fresh Water ☐ CO_2 ☐ N_2 ☐ Air ☐ H_2S ☐
LPG ☐ NORM ☐ Natural Gas ☐ Polymer ☐ Other (explain) _____

CERTIFICATE
I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this report, that this report was prepared by me or under my supervision and direction, and that the data and facts stated therein are true, correct, and complete, to the best of my knowledge.

Signature Date

Name of Person (type or print)

Phone _____ Fax _____

FOR OFFICE USE ONLY | REGISTER NO. | AMOUNT $

APPLICANT ALSO MUST COMPLY WITH THE INSTRUCTIONS ON THE REVERSE SIDE

RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION

Form H-1
05/2004

APPLICATION TO INJECT FLUID INTO A RESERVOIR PRODUCTIVE OF OIL OR GAS

1. Operator name _____ 2. Operator P-5 No. _____
(as shown on P-5, Organization Report)

3. Operator Address _____

4. County _____ 5. RRC District No. _____

6. Field Name _____ 7. Field No. _____

8. Lease Name _____ 9. Lease/Gas ID No. _____

10. Check the Appropriate Boxes: New Project ☐ Amendment ☐

If amendment, Fluid Injection Project No. F-_____

Reason for Amendment: Add wells ☐ Add or change types of fluids ☐ Change pressure ☐

Change volume ☐ Change interval ☐ Other (explain) _____

RESERVOIR DATA FOR A NEW PROJECT

11. Name of Formation _____ 12. Lithology _____
(e.g., dolomite, limestone, sand, etc.)

13. Type of Trap _____ 14. Type of Drive during Primary Production _____
(anticline, fault trap, stratigraphic trap, etc.)

15. Average Pay Thickness _____ 16. Lse/Unit Acreage _____ 17. Current Bottom Hole Pressure (psig) _____

18. Average Horizontal Permeability (mds) _____ 19. Average Porosity (%) _____

INJECTION PROJECT DATA

20. No. of Injection Wells in this application _____

21. Type of Injection Project: Waterflood ☐ Pressure Maintenance ☐ Miscible Displacement ☐ Natural Gas Storage ☐
Steam ☐ Thermal Recovery ☐ Disposal ☐ Other _____

22. If disposal, are fluids from leases other than the lease identified in Item 9? Yes ☐ No ☐

23. Is this application for a Commercial Disposal Well ? Yes ☐ No ☐

24. If for commercial disposal, will non-hazardous oil and gas waste other than produced water be disposed? Yes ☐ No ☐

25. Type(s) of Injection Fluid:
Salt Water ☐ Brackish Water ☐ Fresh Water ☐ CO_2 ☐ N_2 ☐ Air ☐ H_2S ☐ LPG ☐ NORM ☐
Natural Gas ☐ Polymer ☐ Other (explain) _____

26. If water other than produced salt water will be injected, identify the source of each type of injection water by formation, or by aquifer and depths, or by name of surface water source:

CERTIFICATE
I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this report, that this report was prepared by me or under my supervision and direction, and that the data and facts stated therein are true, correct, and complete, to the best of my knowledge.

Signature Date

Name of Person (type or print)

Phone _____ Fax _____

For Office Use Only | Register No. | Amount $

See Reverse Side for Required Attachments

RAILROAD COMMISSION OF TEXAS – OIL AND GAS DIVISION

Form H-1A

INJECTION WELL DATA (attach to Form H-1)

1. Operator Name (as shown on P-5) 2. Operator P-5 No.

3. Field Name 4. Field No.

5. Current Lease Name 6. Lease/Gas ID No.

7. Lease is _____ miles in a _____ direction from _____ (center of nearest town).

8. Well No.	9. API No.	10. UIC No.	11. Total Depth	12. Date Drilled	13. Base of Usable Quality Water (ft)

14. (a) Legal description of well location, including distance and direction from survey lines:

(b) Latitude and Longitude of well location, if known (optional) Lat. _____ Long. _____

15. New Injection Well ☐ or Injection Well Amendment ☐ Reason for Amendment: Pressure ☐ Volume ☐ Interval ☐ Fluid Type ☐
Other (explain) _____

Casing	Size	Setting Depth	Hole Size	Casing Weight	Cement Class	# Sacks of Cement	Top of Cement	Top Determined by
16. Surface								
17. Intermediate								
18. Long string								
19. Liner								

20. Tubing size	21. Tubing depth	22. Injection tubing packer depth	23. Injection interval _____ to _____

24. Cement Squeeze Operations (List all)	Squeeze Interval (ft)	No. of Sacks	Top of Cement (ft)

25. Multiple Completion? Yes ☐ No ☐	26. Downhole Water Separation? Yes ☐ No ☐	NOTE: If the answer is "Yes" to Item 25 or 26, provide a Wellbore Sketch

27. Fluid Type	28. Maximum daily injection volume for each fluid type (rate in bpd or mcf/d)	29. Estimated average daily injection volume for each fluid type (rate in bpd or mcf/d)

30. Maximum Surface Injection Pressure: for Liquid _____ psig for Gas _____ psig.

8. Well No.	9. API No.	10. UIC No.	11. Total Depth	12. Date Drilled	13. Base of Usable Quality Water (ft)

14. (a) Legal description of well location, including distance and direction from survey lines:

(b) Latitude and Longitude of well location, if known (optional) Lat. _____ Long. _____

15. New Injection Well ☐ or Injection Well Amendment ☐ Reason for Amendment: Pressure ☐ Volume ☐ Interval ☐ Fluid Type ☐
Other (explain) _____

Casing	Size	Setting Depth	Hole Size	Casing Weight	Cement Class	# Sacks of Cement	Top of Cement	Top Determined by
16. Surface								
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27. Fluid Type	28. Maximum daily injection volume for each fluid type (rate in bpd or mcf/d)	29. Estimated average daily injection volume for each fluid type (rate in bpd or mcf/d)

30. Maximum Surface Injection Pressure: for Liquid _____ psig for Gas _____ psig.

Guidelines For Permit Applications

- https://www.rrc.state.tx.us/oil-and-gas/applications-and-permits/injection-storage-permits/oil-and-gas-waste-disposal/injection-disposal-permit-procedures/permit-transfer-amendment-and-expiration/guidelines-for-permit-amendments-rule-46/
- https://www.rrc.state.tx.us/oil-and-gas/applications-and-permits/injection-storage-permits/oil-and-gas-waste-disposal/injection-disposal-permit-procedures/permit-transfer-amendment-and-expiration/guidelines-for-permit-amendments-rule-9/

Requires Additional Documentation (RAD) Letters

- Use the UIC_Permits@rrc.Texas.gov email address to submit additional/missing attachments to the original application packet

- Show RAD letter example using EDMS – Tracking # 50000 - https://webapps.rrc.state.tx.us/eds/eds_searchUic.xhtml?faces-redirect=true

- Discuss response timeline and extension requests

Technical Review: Field/Lease

- H-1/H-1A Field Name:
  - Is correlative to injection/disposal formation
  - Use deepest if more than one formation or keep current Field Name if the well is on proration schedule in one of the proposed formations.

- W-14 Field Name:
  - May be correlative by formation name more than 2 miles away, or correlative to the formation that is the source of disposal fluids

- Lease Name:
  - If the well is already built as a producer and the field name is changing, the lease name may stay the same but a new lease number will always be assigned.

Technical Review: Completion (1 of 2)

- Surface Casing
  - Commercial and new injection wells (to be drilled) must set and cement surface casing through the BUQW.
  - Base of usable-quality water (BUQW) determined by GAU.
- Production Casing
  - Cement must be adequate to confine fluids to the injection interval.
  - Top of Cement (TOC) Requirements:
    - At least 600 feet if TOC is based on volume calculation.
    - 250 feet if TOC is determined by temperature survey run at time of cementing.
    - 100 feet if TOC is determined by cement bond log. The CBL must show at least 80% bonding with no indication of channeling.

Technical Review: Completion (2 of 2)

- Packer Depth
  - Rule 9: Set within 100 feet of the permitted zone
  - Rule 46: Staff recommends the same 100 feet
    - Amendment flexibility: 150 feet below deepest groundwater and 200 feet below TOC
    - Needs cement and no permeable zones between the packer and the top of the permitted zone
- Total Vertical Depth (TVD) vs Measured Depth (MD)
  - If the subject well is deviated (directional or horizontal) the following fields must be provided in TVD and MD
    - Total Depth
    - Injection interval
    - Packer depth

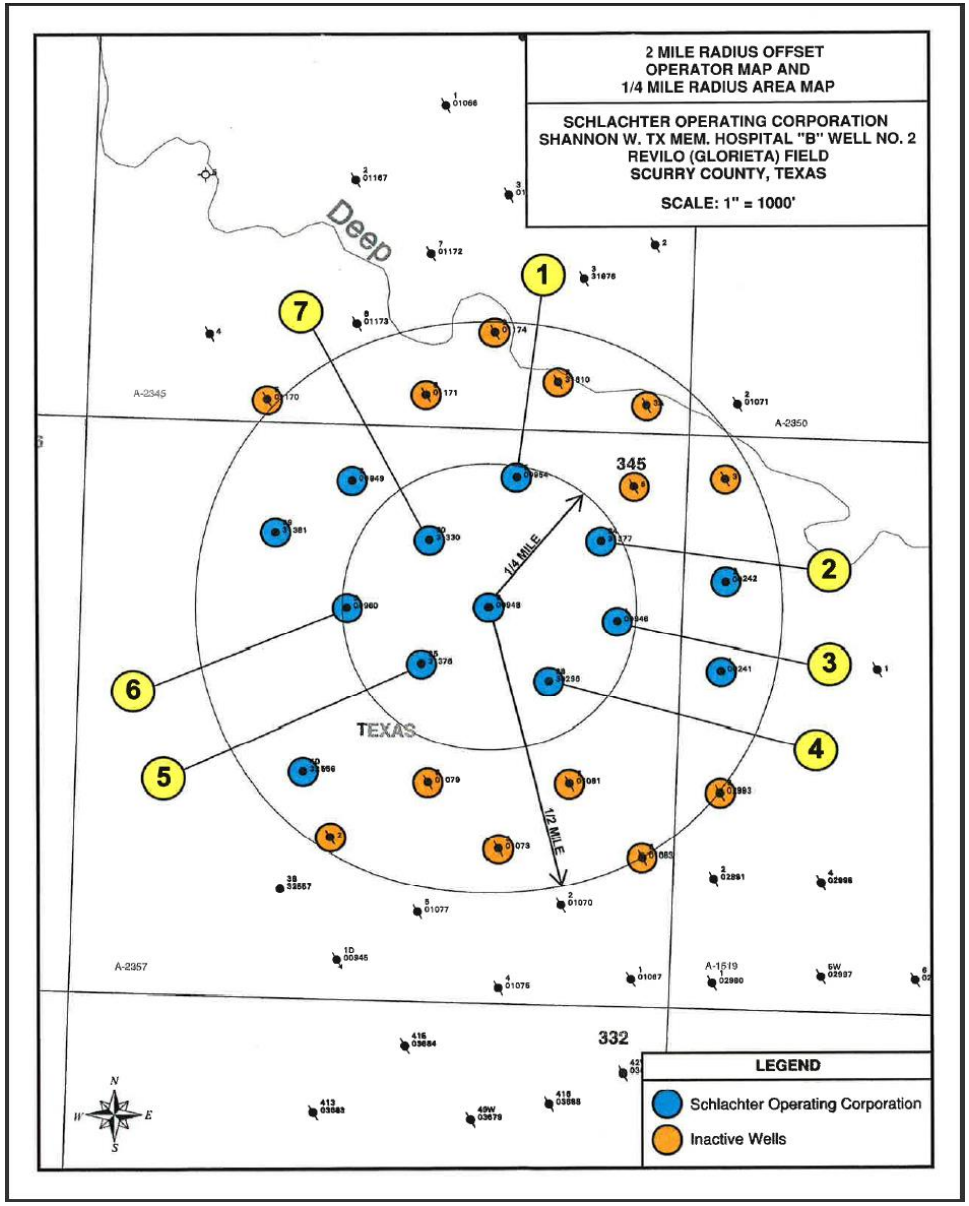
Technical Review: GAU Letter

- RRC Groundwater Advisory Unit (GAU) issues the Groundwater Protection Determination (GW-2). States the Base of Usable Quality Water (BUQW – TDS 3,000 ppm) and the Usable Source of Drinking Water (USDW – TDS 10,000 ppm)
- H-1/H-1A: Form GW-2 stating the depth to the BUQW and USDW must be protected
- Form W-14: Form GW-2 stating the depth to which usable-quality water (UQW) and USDW must be protected. Additionally, the letter must state that the proposed injection will/will not endanger usable quality groundwater.

Technical Review: AOR (1 of 4)

- Provide scaled map of ALL wells within ¼-mile radius of the subject well.
- Table of wells within AOR with:
  - Lease name and number
  - API and well numbers
  - Total depth and date drilled
  - Current status (producing, shut-in, P&A'd, etc)
  - Plugged wells, include plug date and W-3

Technical Review: AOR (2 of 4)



Technical Review: AOR (3 of 4)

1/4 MILE RADIUS WELL TABULATION
SCHLACHTER OPERATING CORPORATION
SHANNON W. TX MEM. HOSPITAL "B" WELL NO. 2
REVILO (GLORIETA) FIELD
SCURRY COUNTY, TEXAS

MAP #	OPERATOR NAME LEASE NAME & WELL #	API #	FIELD NAME	DATE DRILLED	TOTAL DEPTH	STATUS
1	Schlachter Operating Corporation Shannon W. TX Mem. Hospital "B" #5	415-00954	Revilo (Glorieta)	06/21/57	2878'	On Schedule - Producing
2	Schlachter Operating Corporation Shannon W. TX Mem. Hospital "B" #34	415-31377	Revilo (Glorieta)	08/23/79	2914'	On Schedule - Producing
3	Schlachter Operating Corporation Shannon W. TX Mem. Hospital "B" #1	415-00946	Revilo (Glorieta)	04/13/57	2893'	On Schedule - Producing
4	Schlachter Operating Corporation Shannon W. TX Mem. Hospital "B" #28	415-30296	Revilo (Glorieta)	04/09/74	2845'	On Schedule - Producing
5	Schlachter Operating Corporation Shannon W. TX Mem. Hospital "B" #35	415-31376	Revilo (Glorieta)	08/29/79	2928'	On Schedule - Producing
6	Schlachter Operating Corporation Shannon W. TX Mem. Hospital "B" #9	415-00960	Revilo (Glorieta)	07/18/57	2907'	On Schedule - Producing
7	Schlachter Operating Corporation Shannon W. TX Mem. Hospital "B" #30	415-31330	Revilo (Glorieta)	04/12/79	2900'	On Schedule - Producing

* Plugging reports attached hereto for all wells which are currently plugged as shown above.

Page 1

Technical Review: AOR (4 of 4)

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Plugging Record

RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION

FORM W-3
Rev. 10/78

FILE IN DUPLICATE WITH DISTRICT OFFICE OF DISTRICT IN WHICH WELL IS LOCATED WITHIN THIRTY DAYS AFTER PLUGGING

API NO. (if available):
1. RRC District: 9
4. RRC Lease or Id. Number: 05685
2. FIELD NAME (as per RRC Records): Wichita County Regular
3. Lease Name: J. W. Stringer
5. Well Number: 50
6. OPERATOR: Texaco Inc.
6a. Original Form W-1 Filed in Name of: Producers Oil Company
10. County: Wichita
7. ADDRESS: P. O. Box 1270 Midland, TX 79702
6b. Any Subsequent W-1's Filed in Name of: --
11. Date Drilling Permit Issued: N/A
8. Location of Well, Relative to Nearest Lease Boundaries of Lease on which this Well is Located: 1360 Feet From East Line and 620 Feet From South Line of the J. W. Stringer Lease
12. Permit Number: N/A
9a. SECTION, BLOCK, AND SURVEY: 2, H&GN, A-655
9b. Distance and Direction From Nearest Town in this County: 1.5 Miles NW of Electra, Tx
13. Date Drilling Commenced: 6-29-62
16. Type Well (Oil, Gas, Dry): WIW
Total Depth: 1967
17. If Multiple Completion List All Field Names and Oil Lease or Gas ID No.'s — GAS ID or OIL LEASE # | Oil-O Gas-G | WELL #
14. Date Drilling Completed: 7-20-62
18. If Gas, Amt. of Cond. on Hand at time of Plugging
15. Date Well Plugged: 5-30-85

CEMENTING TO PLUG AND ABANDON DATA:	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7	PLUG #8
*19. Cementing Date 1985	5-23	5-29	5-29	5-30				
20. Size of Hole or Pipe in which Plug Placed (inches)	7	2-7/8	2-7/8	2-7/8				
21. Depth to Bottom of Tubing or Drill Pipe (ft.)	1710	1200	800	400				
*22. Sacks of Cement Used (each plug)	400	50	50	100				
*23. Slurry Volume Pumped (cu. ft.)	528	66	66	132				
*24. Calculated Top of Plug (ft.)	Surf.	900	500	Surf.				
25. Measured Top of Plug (if tagged) (ft.)	Surf.	--	--	--				
*26. Slurry Wt. #/Gal.	14.8	14.8	14.8	14.8				
*27. Type Cement	"C"	"C"	"C"	"C"				

28. CASING AND TUBING RECORD AFTER PLUGGING

SIZE	WT. #/FT.	PUT IN WELL (ft.)	LEFT IN WELL (ft.)	HOLE SIZE (in.)
7"	N/A	1793'	1793'	9"
4-1/2"	N/A	281	281	6-1/4"

29. Was any Non-Drillable Material (Other than Casing) Left in This Well ☐ Yes ☒ No

29a. If answer to above is "Yes" state depth to top of "junk" left in hole and briefly describe non-drillable material. (Use Reverse Side of Form if more space is needed.)

30. LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS

FROM	TO	FROM	TO
1790'	1935'		

I have knowledge that the cementing operations, as reflected by the information found on this form, were performed as indicated by such information.
* Designates items to be completed by Cementing Company. Items not so designated shall be completed by Operator.

Signature of Cementer or Authorized Representative

Halliburton Services
Name of Cementing Company

CERTIFICATE:
I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this report, that this report was prepared by me or under my supervision and direction, and that data and facts stated herein are true, correct, and complete, to the best of my knowledge.

REPRESENTATIVE OF COMPANY — TITLE: Engineer's Assistant — DATE: 8-5-85 — Phone A/C 915 NUMBER 688-4219

SIGNATURE: REPRESENTATIVE OF RAILROAD COMMISSION

RECEIVED
R. R. C. of TEXAS
AUG 13 1985
WICHITA FALLS, TEXAS

64

NOV 22 1920

FORM 4

Railroad Commission of Texas

PLUGGING RECORD

County Wichita Company The Texas Co. Prod Dept. Well No. Stringer 33

Survey H & G Abs 654 and 655 City Block No. Lot No.

Character of Well (whether it was Oil or Gas or Dry) Oil Well (Ceased Producing)

Total depth 581 feet. Top of each producing sand 526 feet

Was the well filled with mud-laden fluid according to regulations of the Railroad Commission? Yes

Was well shot? No Show all shoulders left for casing, depth of each, and size of casing used, size and kind of plugs used, and depth placed. Also amount of cement and rock.

8" Casing set at 117 feet., 5-3/16" Casing was set at 514 feet., a 4-3/4" x 3' Wooden plug was set at 526 feet with 20 feet of Rock, Sand and Cement and Mud laden fluid on top of plug. 4-3/4" x 3' Wooden plug set at 270' with 20' of Rock, Sand and Cement and Mud laden fluid on top of plug., 10" x 3' Wooden plug set at 10' with Rock, Sand and Cement on top of plug.

Show depth found and thickness of all fresh water, oil and gas formations Water at 70'. Small show of oil 260' to 270'. Water sandy 340' to 350'. Shale 350' to 450' with water at 370'. Oil sandy 526' to 544'. Total Depth 581 feet.

The names of adjacent lease, royalty and land-owners with their address in each instance is as follows:
Magnolia Petroleum Company, Dallas, Texas.

Date well was plugged Was Completed Plugging 11/9/20.

P. J. May,
Representative of Company

Correspondence regarding this well should be addressed to Name The Texas Co., Prod. Dept.

Address Box 4983, Wichita Falls, Texas.

I, P. J. May being first duly sworn on oath, state that I have knowledge of the facts and matter herein set forth and that the same are true and correct.

Subscribed and sworn to before me this 16th, day of Nov., 1920

Notary Public.
Wichita County, Texas

Technical Review: Seismic (1 of 2)

- Seismicity screen
  - See Statewide Rules 9(3)(B) & 46(b)(1)(C):
  - Historical USGS seismic events with M ≥ 2.0 within a circular area of 100 square miles (9.08 km / 5.64 mi).
- **An earthquake event of 2.0 M or greater within the 9.08 km area of interest (AOI) will trigger the seismic review**
  - RRC Staff will consider both USGS and TexNet catalogs in assessing the seismic trigger.
  - USGS Earth Archive Search – use following link: (http://earthquake.usgs.gov/earthquakes/search/)

Technical Review: Seismic (2 of 2)

If seismicity screen is positive, supplemental information is required to assess the state of the disposal zone and adjacent strata:

- Structure map(s)
- Isopach map(s)
- Cross-sections
- Fault hazard analysis may be required.
- May also submit other relevant information to assist with scoring

Technical Review: Logs

- A complete electric log or similar log of the proposed injection/disposal well
- If well log is not available for proposed well, a log from a nearby well may be submitted.

Protests and Hearing Process

- Protest Requirements
  - Protest letter requirements:
    - Name, Address, Protest Statement, Information about permit
    - Protest Withdrawal Procedures
  - 15 day deadline discussion
    - Specific SWR language that determines protest deadline:
      - (i) If a protest from an affected person or local government is made to the commission within 15 days of receipt of the application or of publication, whichever is later, or if the commission or its delegate determines that a hearing is in the public interest, then a hearing will be held on the application after the commission provides notice of hearing to all affected persons, local governments, or other persons, who express an interest, in writing, in the application.
    - Untimely Protest Process and Options to Contest Untimely Protest Letter
      - Hearing Request & Official Complaints compared to a Protest
- CASES discussion - https://apps.rrc.texas.gov/portal/s/find-a-case
  - Use CASES to look up hearing documents with UIC Tracking No.
    - All UIC application documents are uploaded to CASES for protested applications that reach the hearing phase

Post Hearing Review Procedures

- Final Orders are forwarded to UIC after the Order is official
  - Likely Hearing Outcomes
    - Approved or Denied
    - Protest is dismissed – failure to prosecute, lack of standing, etc..
    - Application is dismissed – failure to prosecute, operator requests to withdraw application
  - Some final orders are effective immediately, others have a 25-100 day waiting period for rebuttal.
- If no amendment at the hearing, permits approved within 1-2 weeks.
  - If amended at hearing – could trigger additional technical review and may require up to 30 days for review before approval.

Contact Information

Jason Lockie
Jason.Lockie@rrc.texas.gov
(512) 463 – 4032

Thanh Nguyen
Thanh.Nguyen@rrc.texas.gov
(512) 463 – 9928

Injection-Storage Unit (UIC) Technical Permitting
UIC_Permits@rrc.texas.gov
(512) 463 – 6792