





General UIC Applications – Injection and Disposal Well Permits

Jason Lockie Thanh Nguyen 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
- <u>UIC Permits@rrc.texas.gov</u> 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

For Office Use Only

RAILROAD COMMISSION OF TEXAS **OIL AND GAS DIVISION**

) DISPOSE (MATION N						N	07/2016
1 .Operator Name						2. 0	perator P-5	No		
3. Operator Addr	ess:									
4. County						5. R	RC District	No.		
6. Field Name						7. Fie	dd Number	51449		105
8. Lease Name						9. Le	ase/Gas ID I	No.		
					-					10.55
10. Well is								11. No. a	cres in les	ise
12. Legal descript										
13. Latitude/Long	gitude, if Kliot	wn (Optional)	Lat			Lor	ig		- 22	-
14. New Permit:	Yes 🗌 Ne	•	If no, amend	ment of P	ermit No		UIC			
15. Reason for an	nendment:	Pressure	U Volume	Interv	d 🗌 Con	nmercial 🗌	Other (exp	lain)		
16.Well No.	17.API N	0.	18.Date Drille	ł		19.Total De	pth	20.P	lug Date,	if re-entry
Casing	Size	Setting Depths	Hole Size	Casing Weight	Cement Class	Cement Sacks (#)	Top of cement	Top D	etermined	l by
21. Surface		Deptus		weight	Class	Sacks (#)	tement			
22. Intermediate						_		-		
23. Long String	-		2					-		
24 .Liner 25. Other	-		-	-		-	-	-		
29. Bridge Plug D 32. Cement Squee			30. Injection Tuk g interval and nun							
33. Injection Inte 35. Any Oil and O If yes, Depth	Gas Productiv		wo miles? Yes [isposal Form:	ition			
36. Maximum Da	ily Injection V	Volume	bpd	3'	. Estimated	Average Dail;	Injection \	'olume		bpd
38. Maximum Sur	face Injection	n Pressure	psig	3	9. Estimated	Average Surf	ace Injectio	n Pressure_		psig
40. Source of Flui	ds (Formatio	n, depths and ty	pes):							
41. Are fluids from	m leases other	r than lease iden	atified in Item 8?	Yes 🔲	No 🗆	42. Commerc	ial Disposal	Well?	Yes 🗌	No 🗌
43. If commercial	disposal, wil	l non-hazardous	oil and gas waste	other the	n produced	water be disp	osed of?		Yes 🗆	No 🗌
44. Type(t) of Inj	ection Fluid:	Salt Wa	ter 🗆 Brackis	h Water	🗌 Fresh	Water 🗆	co2 🗆	N2 🗆	Air 🗌	H25 🗆
LPG	NORM [as 🗌 Polym	er 🗆	Other (expla	in)				
I declare under p			1.143, Texas Natu	ral						
Resources Code, 1 report was prepare	that I am auth d by me or un	horized to make ider my supervisi	this report, that t on and direction, a	his Sign nd	ature				Da	te
that the data and f the best of my kno		rein are true, con	rect, and complete.			(type or print)				
FOR OFFICE US	ONIX	REGIST	FR NO	Pho	ne		Fax MOUNT \$			

ΔΡΡΙ ΙΩΔΤΙΟΝ ΤΟ ΙΝ.ΙΕΩΤ ΕΙ ΠΙΟ ΙΝΤ	O 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 □ If amendment, Fluid Injection Project No. F-	
Reason for Amendment: Add wells	Add or change types of fluids Change pressure
	Change interval Other (explain)
14 Name of Formation	10 100-00-0
11. Name of Formation	(e.g., dolomite, limestone, sand, etc.)
13. Type of Trap (anticline_fault trap_strationaphic trap_etc.)	14. Type of Drive during Primary Production
	ge 17. Current Bottom Hole Pressure (psig)
18. Average Horizontal Permeability (mds)	19. Average Porosity (%)
INJECTI	ON PROJECT DATA
20. No. of Injection Wells in this application	
	Aaintenance 🗆 Miscible Displacement 🗆 Natural Gas Storage 🗆
	ecovery Disposal Other
22. If disposal, are fluids from leases other than the lease ider	
23. Is this application for a Commercial Disposal Well ?	Yes No D
A DESTRUCTION A DEVICE S DE	waste other than produced water be disposed? Yes No
	waste other than produced water be disposed? Fes L No L
25. Type(s) of Injection Fluid:	
	CO2 N2 Air H2S LPG NORM
Natural Gas Delymer Other (explain)	
 If water other than produced salt water will be injected, aquifer and depths, or by name of surface water source: 	identify the source of each type of injection water by formation, or b
CERTIFICATE I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this report, that this	Signature Date
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.	Name of Person (type or print)
complete, to the pest of my knowledge.	Phone Fax

	a (as ave	en an P-5)					2. Oper	ntor P-5 No.
3. Feid Name	-						4.74	ić No.
5. Current Lease	No. of Lot of Lo							In Gas ID No.
or chulait man	name						5.164	NUM STREET
7. Lease is B. Well No.	R.APIN	lies in a RC.	NO. UIC N	direction fro	m Total Depth	12. Date Drilled		nter of nearest town) a of Usable Quality
14. (A) Legal de	acription d	feel location, Indu	ding distant	ce and direct	Son from survey	inex:		
(t) Lattude	and Longs	tude of well location	F known ()	optional) L	M		Long	
15. New Injector	n Well 🗆	or injection Well A	zendrvert	8 J. (20)	n for Amendmen Isopiairí	t Presure 🗆	Volume 🗆	literal 🗆 RuleTy
Casing	Size	Setting Depth	Hole Size	Casing	Cement	# Dacks of	Tep of	Top Determined I
16. Surface	2	1. 2.0		Weight	Class	Cerrent	Ceinert	
17. Intermediate			1 1		12		-	
18. Long string				2	1	13	2	
18. Uner 20. Tubing size	21.Tub	ing depth	22. Inject	ion tubing pe	ickier depth	23. kjedior	Interval	
34. Certent Squ	estre Oper	ations (List all)	Squeep	a interval 🚓		No. of Geo	ka.	Top of Cement
an analysi soo	ipletion?		20. Down	hole Water D	Separation?			er to leve 25
Yan □ 1 27.	No CI Fluid Type		20. March	Yes D N	keΠ	or 26, provid	e e Welbore :	Skelch Ily injection volume to
Yes D 1 27. 1 30. Maximum Su 8. Well No.	vo [] Fuld Type stace injec () R.APTN	idon Preteruni: Ib.	20. Masth anch fluid for Liqu 10. UIC No.	Yea 🗆 N num daily ný i type (stas in ad	ve 🗆 ection volume fo htpd or motify per Total Depth	or 36, provids r 29, Entimate fluid type (nil g for Gas 12, Date Drilled	e e Welbore : d everage dal te in bod or m	Skelch Ily injection volume to
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APPLICANT ALSO MUST COMPLY WITH THE INSTRUCTIONS ON THE REVERSE SIDE

See Reverse Side for Required Attachments

Amount \$

Register No.

Guidelines For Permit Applications



- <u>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/</u>
- <u>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/</u>

Requires Additional Documentation (RAD) Letters



- Use the <u>UIC_Permits@rrc.Texas.gov</u> 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	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)



								1	2	
Plugging Record		RAILROA		MISSION					Z	FORM W-3 Rev. 10/78
					Г	API NO. (if available)			1. RRC D	istrict
FILE IN	DUPLICATE WI	TH DISTRIC	T OFFI	CE OF			ICH		9	
WELL	IS LOCATED		IRTY D	AYS AF					056	
2. FIELD NAME (as per			3. Leas						5. Well Nu 50	unber
Wichita County 6. OPERATOR	y Regular		6a, Orag	W. St	-1 Filed	I in Name of:			10. County	
Texaco Inc.			P	roducer	s Oil	Company			Wic	hita
7. ADDRESS P. O. Box 127	0 Midland	, TX 79702				filed in Name	of:		11. Date Dr Permit N/A	Illing Issued
 Location of Well, Rela of Lease on which this 	tive to Nearest Lear	se Boundaries	1360 F	eet From	East	Line and 62	20 Fe	et From	12, Permit	Number
			South L	ine of the	J. W.	Stringer	C Lee	180	N/A	
9a. SECTION, BLOCK, AN						From Nearest		is	13. Date Di Commer 6-2	need
2, H&GN, A-65	5	Completion * !	1.5	Miles	NW of	Electra	11		6-2	9-02
16. Type Well (Oil, Gas, Dry) WTW 196 18. If Gas, Amt. of Cond. of	7	Completion List	All Field	Names and	C	GAS ID or DIL LEASE	011-0 Gas-G	VaLL	14 Luter 1. Compte 7-2	0-62 bli Plugged
Hand at time of Pluggin	ag								5-3	0-85
CEMENTING TO PLU	G AND ABANDON	DATA:	PLUG #1	PLUG #2	PLUG	#3 PLUG #4	PLUG #	5 PLUG	A6 PLUG	#7 PLUG #8
*19. Comenting Date		1985	5-23	5-29	5-29	5-30				
20, Size of Hole or Pipe in	which Plug Placed		7	2-7/8	2-7/					
21. Depth to Bottom of Tul	oing or Drill Pape (ft	.)	1710	1200	800	400				
+22. Saoks of Cement Used	(each plug)		400	50	50	100				
*23. Slurry Volume Pumped	(ou. 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			_		_
*27. Type Cement			"C"	129, W	"C"	"C"	Metarial (C	ther .	T Ye	
28. CASING AND TUBING				ti	an Casir	on - Drillable I ng) Left in Thi	s Well			
		93'	9" .		d briefly	to above 18 "Y describe non are space is no	-drillable	material.	(Use Rever	rse Side of
7" N/A 179 /2" N/A 28			-1/4"		oran at mo	ne apace is in	eded.y			
/6 N/A ***						,				
30. LIST ALL OPEN HOL	E AND/OR PERF	DRATEO INTER	VALS							
FROM 1790'	TO	1935'		FR	ом			то		
FROM	то			FR	OM			TO		
FROM	TO			FR	OM			TO		
FROM	TO			FR	OM			TO		
				FR				TO		
FROM	то									
I have knowledge that the Designates items to be co	cementing operation	s, as reflected by g Company. Iter	the inform as not so d	nation foundering	hall be c	completed by C	perator.		d by such in	Ionna Lion.
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I have knowledge that the Designators items to be co- Signators of Committee or As CENTIFICATS: I declars under report was prepar to the beat of m	comenting operation mplated by Smentin What Here whorized Regression enables prescribed do by me or under my y knowledge.	ig Company. Iter tive	rexas Natu I direction, Engine	nal Resource and that d	Hall be of Ha	illiburto menting Comp , that I am aut acts stated the	n Serv: any horized to trein are to	ices make thi	s report, the	t this plote,
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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: (<u>http://earthquake.usgs.gov/earthquakes/search/</u>)



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



- 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 <u>https://apps.rrc.texas.gov/portal/s/find-a-case</u>
 - 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



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