



RAILROAD COMMISSION OF TEXAS

HEARINGS DIVISION

OIL & GAS DOCKET NO. 8A-0302013, et al.

THE APPLICATION OF OCCIDENTAL PERMIAN, LTD. PURSUANT TO STATEWIDE RULE 36 AND STATEWIDE RULE 46 TO INJECT FLUID, INCLUDING RECYCLED CO₂ THAT CONTAINS H₂S AND METHANE, INTO A RESERVOIR PRODUCTIVE OF OIL OR GAS, SUNDOWN UNIT, WELL NOS. 2W, 5W, 7W, 9W, 13, 15W, 17W, 19W, 21W, 24W, 29W, 31W, 33W, 50W, 58, 60, 61, 62, 65, 66, 70WI, 71WI, 72WI, 74WI, 77, 90, 92 AND 95, SLAUGHTER FIELD, HOCKLEY COUNTY, TEXAS

HEARD BY: Brian Fancher, P.G. – Technical Examiner
Marshall F. Enquist – Administrative Law Judge

APPEARANCES:

APPLICANT:

John Soule
Ticiana Boncagni
Drew Scheinuk
Emeka Ndefo
Timothy Sanchez
Nicolas Bernabo

REPRESENTING:

Occidental Permian, Ltd.

EXAMINERS' REPORT AND RECOMMENDATION

STATEMENT OF THE CASE

The Technical Examiner and Administrative Law Judge's (collectively Examiners) Report and Recommendation is made of the following oil and gas docket numbers: 8A-0302013, 8A-0302359, 8A-0302360, 8A-0302361, 8A-0302362, 8A-0302363, 8A-0302364, 8A-0302365, 8A-0302366, 8A-0302367, 8A-0302368, 8A-0302369, 8A-0302370, 8A-0302371, 8A-0302372, 8A-0302373, 8A-0302374, 8A-0302375, 8A-0302376, 8A-0302378, 8A-0302379, 8A-0302380, 8A-030231, 8A-0302382, 8A-0302383, 8A-0302384, 8A-0302385, and 8A-0302386.¹

¹ Each above-named oil and gas docket number in this Examiners' Report and Recommendation is tied to one of the 28 proposed injection wells on the Sundown Unit. Those oil and gas docket numbers correspond to the Sundown Unit, Well Nos. 2W, 5W, 7W, 9W, 13, 15W, 17W, 19W, 21W, 24W, 29W, 31W, 33W, 50W, 58, 60, 61, 62, 65, 66, 70WI, 71WI, 72WI, 74WI, 77, 90, 92 and 95, respectively.

Pursuant to Statewide Rules 46 and 36², Occidental Permian Ltd. (OP) seeks authority to inject material containing hydrogen-sulfide (H₂S) into Well Nos. 2W, 5W, 7W, 9W, 13, 15W, 17W, 19W, 21W, 24W, 29W, 31W, 33W, 50W, 58, 60, 61, 62, 65, 66, 70WI, 71WI, 72WI, 74WI, 77, 90, 92 and 95 (Subject Wells) on its Sundown Unit (SDU), Slaughter Field, Hockley County, Texas (collectively, Subject Application). The Subject Wells are existing wells that are located approximately 2.5 miles northeast from Sundown, Texas.³

OP's 100 part per million (PPM) radius of exposure (ROE) at the SDU is 3,499 feet, and it includes six public areas. OP's 500 ppm ROE is 1,599 feet, and it includes five public areas and parts of four public roads.⁴ A public hearing is therefore required before the Subject Application to inject fluids containing H₂S may be granted.

The Subject Application is not protested and meets the requirements of Statewide Rule 36, with regard to the injection of fluids containing H₂S. The Examiners recommend that it be granted.

GOVERNING STATUTES AND COMMISSION RULES⁵

Statewide Rule 36

In general, Statewide Rule 36 applies to each operator who conducts operations associated with hydrocarbons that contain H₂S as a constituent, where H₂S is encountered through field production, transportation, and handling of said hydrocarbon fluids.⁶ The Subject Application falls within the applicability of Statewide Rule 36 and must provide safeguards to protect the general public from the harmful effects of H₂S. Specifically, Statewide Rule 36(c)(10) (A) states:

Injection of fluids containing hydrogen sulfide shall not be allowed under the condition specified in this provision unless first approved by the commission after public hearing:

- i. where injection fluid is a gaseous mixture, or would be a gaseous mixture in the event of a release to the atmosphere, *and* where the 100 ppm radius of exposure is in excess of 50 feet and includes any part of a public area except a public road; *or*, if the 500 ppm radius of exposure is in excess of 50 feet and includes any part of a public road, *or* if the 100 ppm radius of exposure is 3,000 feet or greater;
- ii. where the hydrogen sulfide content of the gas or gaseous mixture to be injected has been increased by a processing plant operation (*emphasis added*).

² See 16 Tex. Admin. Code §§3.46 and 3.36.

³ See OP Exh. No. 10, Item Nos. 7 of Forms H-1A.

⁴ OP Exh. No. 24, Pg. 7.

⁵ The Commission's Statewide Rules 36 and 46 were the only rules considered in the Subject Application because those were the only authoritative Commission rules cited by OP for its requested relief in the immediate case.

⁶ See 16 Tex. Admin. Code §3.36(a)(1-2). Applicability.

Statewide Rule 46

Statewide Rule 46 requires that a permit be approved to conduct fluid injection operations in a reservoir productive of oil, gas, or geothermal resources. If no protest from any affected person is received by the Commission, the Commission's delegate may administratively approve the application without the need for a public hearing.⁷ Statewide Rule 46(c)(5)(B) defines "affected persons" as:

[A] person who has suffered or will suffer actual injury or economic damage other than as a member of the general public or as a competitor, *and* includes surface owners of property on which the well is located and commission-designated operators of wells located within one-half mile of the proposed disposal well (*emphasis added*).

DISCUSSION OF THE EVIDENCE

On June 14, 2016, OP provided copies of the Commission Forms H-1 and H-1A for the Subject Wells in accordance with Statewide Rule 46(c)(1) to the following person/entities: (1) surface owners of the well's tract (*i.e.*, Fasken, Ltd.); (2) oil and gas operators within one-half mile of the well's location (*i.e.*, OP); (3) the Sundown City Clerk; and (4) the Hockley County Clerk. Applicant also published notice of the application on June 29, 2016, in the *Lubbock Avalanche-Journal*, a newspaper of general circulation in Hockley County, Texas.⁸

On November 17, 2016, a Amended Notice of Hearing (NOH) was sent by U.S. mail to the list of persons identified on the NOH's November 17th Service List (List). The List is composed of the aforementioned persons and entities, as well as a second list (2nd List) of additional persons identified as "receptors" with dwellings located within the 100 and 500 ppm ROEs.⁹ At the December 9, 2016, hearing, representatives on behalf of OP brought to light that the List inadvertently excluded Vera O'Dell & Ernest O'Dell. As a result, the Examiners issued a letter to Ms. O'Dell that included a copy of the November 17th NOH, and an opportunity to protest the Subject Application. On January 16, 2017, the Examiners received electronic correspondence from Robert O'Dell, Ms. O'Dell's son, indicating his mother would not protest the Subject Application.¹⁰ The Examiners received no other indications of protest from the remaining persons that were sent notice of the Subject Application, rendering it unprotested.

The Slaughter Field (Field) was discovered in 1937 and produces from the San Andres Formation at an average depth of approximately 5,000 feet below ground surface. Casinghead gas produced from the Field has an H₂S concentration in excess of 100 parts per million (ppm) and is therefore subject to the requirements provided by Statewide Rule 36. For example, OP submitted a copy of a Form H-9 (Certificate of Compliance Statewide Rule 36) for the SDU, dated September 22, 2016,¹¹ that indicates the H₂S content at the SDU is approximately 7,000

⁷ See 16 Tex. Admin. Code §3.46(c)(6).

⁸ See Affidavit of Publication dated June 29, 2016 in the administrative file made for O&G Docket No. 8A-0302013, which is the master file for the captioned dockets.

⁹ See OP Exh. No. 24 (Contingency Plan); Pg. 7 with OP Exh. No. 22 (ROE Map).

¹⁰ See chain of correspondence in the administrative file made for O&G Docket No. 8A-0302013.

¹¹ OP Exh. No. 20.

ppm. Primary production on the SDU began in the 1940s. Waterflood (*i.e.* secondary recovery) of the SDU began in 1968. To date, cumulative production from the SDU has been about 12 million barrels of oil.

OP plans to implement a CO₂ tertiary recovery project on the SDU, using water alternating-gas (WAG) and water injection wells (*i.e.* the Subject Wells).¹² OP seeks to permit a injection interval spanning from 4,600 to 5,300 feet. For each Subject Well, OP requests to inject up to 5,000 barrels of saltwater per day, 300 barrels of fresh water per day, and 10,000,000 cubic feet (10,000 MCF) of recycled CO₂ per day that contains H₂S and methane (*i.e.* sour CO₂). The source of sour CO₂ for injection on the SDU is the Mallet CO₂ Recovery Plant that receives produced gas from a number of OP-operated CO₂ injection projects in Hockley, Chochran and Terry Counties. Once CO₂ injection begins on the SDU, produced casinghead gas from the SDU will also be sent to the Malet CO₂ Recovery Plant for removal of hydrocarbon gas before the sour CO₂ is recycled for reinjection on the SDU and other projects operated by OP.

OP proposes to use the 28 Subject Wells for WAG injection. Of the 28 Subject Wells, 26 already have injection authority for salt water and fresh water. Two additional wells that are existing production wells will be converted to injection wells to makeup the 28 Subject Wells. Several of the already-permitted injection wells are authorized for CO₂ injection, but not for injection of H₂S. OP represented that CO₂ injection operations have yet to occur at the SDU. OP will initiate its CO₂ flood on the SDU in early 2017. After the initial injection of a “bank” of sour-CO₂, OP will shift to WAG injection in the Subject Wells.

OP filed administrative applications for injection authority as to the Subject Wells with the Oil and Gas Division’s Underground Injection Control group (UIC) on or about June 14, 2016. The UIC subsequently made determinations that those administrative applications satisfy the requirements of Statewide Rule 46, but noted that a public hearing would be required because they involve injection of H₂S.

OP submitted evidence that indicates it operates several other CO₂ recovery projects, similar to the SDU, in Hockley, Cochran and Terry Counties (Central Mallet Unit, Levelland Unit, Northwest Mallet Unit, Southeast Levelland Unit and West RKM Unit).¹³ The purpose of that evidence is to show that OP is an experienced operator of both CO₂ and sour-CO₂ floods, and that those projects resulted in increased oil recovery.¹⁴

OP used 7,000 ppm H₂S concentration to prepare Forms H-9 for the CO₂ Supply and Gathering Lines to and from the SDU and for sour-CO₂ injection operations through the Subject Wells. OP represented that the current H₂S concentrations of sour-CO₂ being recycled from other projects that will be used for injection on the SDU is approximately 4,500 ppm. OP believes that using 7,000 ppm H₂S for preparation of the Forms H-9 provides an extra margin of safety (*i.e.* it yields a greater radius of exposure (ROE) than would result from using 4,500 ppm H₂S).

¹² OP Exh. Nos. 9 and 10. Forms H-1 and H-1A, respectively.

¹³ OP Exh. No. 23.

¹⁴ OP Exh. No. 2.

The town of Sundown is approximately 2.5 miles southwest of the SDU. OP provided evidence that the prevailing winds in the area travel from the southwest (*i.e.* from the SDU away from the town of Sundown). There are five occupied and one unoccupied dwellings (Public Areas) with the 100 ppm ROE, all but one of which are also located within the 500 ppm ROE. There are four public roads within the 100 and 500 ppm ROE.

The Commission's Midland District Office approved the Form H-9 and Contingency Plan submitted by OP for sour-CO₂ injection operations on the SDU. The Contingency Plan complies with the requirements of Statewide Rule 36, including safeguards to protect the general public from the harmful effects of any H₂S release.

All equipment associated with the Subject Wells for injection of sour-CO₂ satisfies the requirements in the latest edition of NACE Standard MR-0175. The SDU supply and gathering lines will be monitored for pressure loss via automated pressure transmitters and emergency shut down valves. There are two similar shut down valves on the SDU. Low level H₂S detectors will be installed at the location of the Subject Wells' nearest dwellings located on or near the SDU within the 100 and 500 ppm ROEs. Alarms will notify OP employees if the emergency shut down valves or the detectors are activated, indicating the possible presence of a leak.

FINDINGS OF FACT

1. Pursuant to 16 Texas Administrative Code §§3.36 ("Statewide Rule 36") and 3.46 ("Statewide Rule 46"), Occidental Permian, Ltd. ("Applicant or OP") seeks a non-commercial injection permit for its Sundown Unit ("Unit"), Well Nos. 2W, 5W, 7W, 9W, 13, 15W, 17W, 19W, 21W, 24W, 29W, 31W, 33W, 50W, 58, 60, 61, 62, 65, 66, 70WI, 71WI, 72WI, 74WI, 77, 90, 92 and 95, Slaughter Field, Hockley County, Texas ("Subject Wells") to inject material containing hydrogen sulfide ("H₂S") ("Subject Application").
2. Applicant seeks a non-commercial injection permit for the Subject Wells to inject up to 10,000,000 cubic feet of gas per day ("10 MMCFGD"), which contains up to 7,000 parts per million of hydrogen-sulfide ("H₂S"). The remainder of the total 10 MMCFGD is made of carbon-dioxide ("CO₂") and methane ("HC_G") (collectively, "sour-CO₂").
3. On June 14, 2016, OP provided copies of the Commission Forms H-1 and H-1A for the Subject Wells in accordance with Statewide Rule 46(c)(1) to the following person/entities: (1) surface owners of the well's tract (*i.e.*, Fasken, Ltd.); (2) oil and gas operators within one-half mile of the well's location (*i.e.*, OP); (3) the Sundown City Clerk; and (4) the Hockley County Clerk. Applicant also published notice of the application on June 29, 2016, in the *Lubbock Avalanche-Journal*, a newspaper of general circulation in Hockley County, Texas.
4. On November 17, 2016, a Amended Notice of Hearing (NOH) was sent by U.S. mail to the list of persons identified on the NOH's November 17th Service List (List). The List is composed of the persons and entities described above in Finding of Fact No. 3, as well as a second list (2nd List) of additional persons (Receptors) with dwellings located within the 100 and 500 ppm radii of exposures (ROEs).

5. One Receptor, Vera O'Dell, was not included on the List prior to the December 9, 2016, hearing held for the Subject Application.
6. By letter dated December 9, 2016, the Administrative Law Judge (ALJ) assigned to the Subject Application issued a letter to Vera O'Dell (Ms. O'Dell), along with OP's counsel, that included a copy of the November 17, 2016 Amended Notice of Hearing made for the Subject Application.
7. On January 16, 2017, Robert O'Dell, a son of Ms. O'Dell, sent electronic mail to the ALJ and OP's counsel stating that Ms. O'Dell will not be protesting the Subject Application.
8. No other indications of protest from the remaining persons that were sent notice of the Subject Application were received, rendering it unprotested.
9. The Subject Application was rendered administratively complete by the Railroad Commission's Oil and Gas Division prior to the hearing held for the Subject Application.
10. Applicant's injection interval in each of the Subject Wells is limited to the depth intervals listed on OP's Exhibit Number 10, Forms H-1A, Item Numbers 23, respectively.
11. The source of sour-CO₂ for injection on the Unit is the Mallet CO₂ Recovery Plant that receives produced gas from a number of OP-operated CO₂ injection projects in Hockley, Cochran and Terry Counties, Texas.
12. Operation of the Subject Wells will provide OP a means of disposal of H₂S and CO₂.
13. Each of the Subject Wells' 100 and 500 part per million radii of exposures were calculated to extend no further than 4,622 feet and 2,122 feet, respectively, from each subject well based on a maximum escape volume of 2,000,000 cubic feet of gas per day.
 - a. There are five public areas within the 500 ppm ROE. There is one additional public area within the 100 ppm ROE.
 - b. There are four public roads (Sage Brush Road, Rawhide Road, Hard Hat Road and Gusher Road) within the 100 and 500 ppm ROEs.
 - c. The town of Sundown is about 2.5 miles southwest of the SDU. The prevailing winds in the area are from the southwest traveling away from the town of Sundown from the Unit.
14. The Commission's Midland District Office approved the Form H-9 (Certificate of Compliance with Statewide Rule 32) and the Contingency Plan submitted by OP for sour-CO₂ injection on the Unit.
15. The planned sour-CO₂ flood will result in the recovery of incremental hydrocarbons at the Unit.

16. Approval of the application is reasonable pursuant to Statewide Rules 36 and 46.

CONCLUSIONS OF LAW

1. Resolution of the Subject Application is a matter committed to the jurisdiction of the Railroad Commission of Texas. Tex. Nat. Res. Code § 81.051
2. Proper notice was issued in accordance with all applicable statutes and regulatory codes. 16 Tex. Admin. Code § 3.46
3. Occidental Permian Ltd's Subject Application meets the applicable requirements of Statewide Rules 36 and 46.

EXAMINERS' RECOMMENDATION

The Examiners recommend that Occidental Permian, Ltd.'s application for its proposed injection authority in its Sundown Unit ,Well Nos. 2W, 5W, 7W, 9W, 13, 15W, 17W, 19W, 21W, 24W, 29W, 31W, 33W, 50W, 58, 60, 61, 62, 65, 66, 70WI, 71WI, 72WI, 74WI, 77, 90, 92 and 95, Slaughter Field, Hockley County, Texas to inject materials containing hydrogen sulfide be granted.



Brian Fancher, P.G.
Technical Examiner



Marshall F. Enquist
Administrative Law Judge

**RAILROAD COMMISSION OF TEXAS
HEARINGS DIVISION**

OIL AND GAS DOCKET NOS.

8A-0302013, 8A-0302359, 8A-0302360,
8A-0302361, 8A-0302362, 8A-0302363,
8A-0302364, 8A-0302365, 8A-0302366,
8A-0302367, 8A-0302368, 8A-0302369,
8A-0302370, 8A-0302371, 8A-0302372,
8A-0302373, 8A-0302374, 8A-0302375,
8A-0302376, 8A-0302378, 8A-0302379,
8A-0302380, 8A-030231, 8A-0302382,
8A-0302383, 8A-0302384, 8A-0302385, and
8A-0302386

**SLAUGHTER FIELD, HOCKLEY
COUNTY, TEXAS**

**FINAL ORDER
APPROVING THE APPLICATION OF OCCIDENTAL PERMIAN, LTD. FOR
AUTHORITY PURSUANT TO STATEWIDE RULES 36 AND 46
SUNDOWN UNIT,
WELL NOS. 2W, 5W, 7W, 9W, 13, 15W, 17W, 19W, 21W, 24W, 29W, 31W, 33W, 50W,
58, 60, 61, 62, 65, 66, 70WI, 71WI, 72WI, 74WI, 77, 90, 92 AND 95
SLAUGHTER FIELD
HOCKLEY COUNTY, TEXAS**

The Commission finds that after statutory notice in the above-numbered dockets heard on December 9, 2016, the presiding administrative law judge and technical examiner have made and filed a report and recommendation containing findings of fact and conclusions of law, for which service was not required, that the proposed applications are in compliance with all statutory requirements; and that this proceeding was duly submitted to the Railroad Commission of Texas at conference held in its offices in Austin, Texas.

The Commission, after review and due consideration of the administrative law judge and technical examiner's report and recommendation, the findings of fact and conclusions of law contained therein, hereby adopts as its own the findings of fact and conclusions of law contained therein, and incorporates said findings of fact and conclusions of law as if fully set out and separately stated herein.

Therefore, it is **ORDERED** by the Railroad Commission of Texas that Occidental Permian, Ltd. is hereby authorized to conduct injection operations into the Sundown Unit, Well Nos. 2W, 5W, 7W, 9W, 13, 15W, 17W, 19W, 21W, 24W, 29W, 31W, 33W, 50W, 58, 60, 61, 62, 65, 66, 70WI, 71WI, 72WI, 74WI, 77, 90, 92 and 95, in the Slaughter Field, Hockley County Texas, subject to the following terms and conditions:

SPECIAL CONDITIONS:

1. For each well authorized by this permit, the PERMITTED INJECTION WELL TABLE (Attachment A) specifies the permitted subsurface injection interval, each permitted injection gas and fluid, the maximum injection volume for each gas and fluid, and the maximum permitted surface injection pressure for each gas fluid. The PERMITTED INJECTION WELL TABLE (Attachment A) is attached hereto and incorporated herein as a part of this permit.
2. An annual annulus pressure test must be performed on each well listed in Attachment A, and the results submitted in accordance with the instructions of Form H-5.

STANDARD CONDITIONS:

1. Injection must be through tubing set on a packer. The packer must be set no higher than 100 feet above the top of the permitted injection interval.
2. The District Office must be notified 48 hours prior to:
 - a. running tubing and setting packer;
 - b. beginning any workover or remedial operation;
 - c. conducting any required pressure tests or surveys.
3. The wellhead must be equipped with a pressure observation valve on the tubing and for each annulus.
4. Prior to beginning injection, and subsequently after any workover, an annulus pressure test must be performed. The test pressure must equal the maximum authorized injection pressure or 500 pounds per square inch gauge (psig), whichever is less, but must be at least 200 psig. The test must be performed annually and the results submitted in accordance with the instructions of Form H-5.
5. The injection pressure and injection volume must be monitored at least monthly and reported annually on Form H-10 to the Commission's Austin office.
6. Within 30 days after completion, conversion to disposal, or any workover which results in a change in well completion, a new Form W-2 or G-1 must be filed to show the current completion status of a well. The date of the injection well permit and the permit number must be included on the new Form W-2 or G-1.
7. Written notice of intent to transfer the permit to another operator by filing Form P-4 must be submitted to the Commission at least 15 days prior to the date of the transfer.

8. A well herein authorized cannot be converted to a producing well and have an allowable assigned without filing an amended form W-1 and receiving Commission approval.
9. Unless otherwise required by conditions of the permit, completion and operation of the well shall be in accordance with the information represented on the application (Forms H-1 and H-1A).
10. This permit will expire when the Form W-3, Plugging Record, is filed with the Commission for a well listed in Attachment A. Furthermore, permits issued for wells to be drilled will expire three (3) years from the date of the permit unless drilling operations have commenced.
11. The permit number shall be _____.

Note: Amends injection permits for the wells in Attachment A that were previously in effect prior to the date of this Final Order.

Provided further that, should it be determined that such injection fluid is not confined to the approved injection interval, then the permission given herein is suspended and the injection operation must be stopped until the fluid migration from such interval is eliminated. Failure to comply with all conditions of this permit may result in the operator being referred to enforcement to consider assessment of administrative penalties and/or the cancellation of the permit.

Done this 14th day of February, 2017.

RAILROAD COMMISSION OF TEXAS

**(Order approved and signatures affixed by
Hearings Divisions' Unprotected Master Order
Dated February 14, 2017)**

ATTACHMENT A¹
PERMITTED INJECTION WELL TABLE

Well Nos.	T/I.I.	B/I.I.	SW/D	FW/D	CO ₂ , H ₂ S & METHANE/D	MSIP(L)	MSIP(G)
2W	4,600	5,300	5,000	300	10,000	2,300	3,450
5W	4,600	5,300	5,000	300	10,000	2,300	3,450
7W	4,600	5,300	5,000	300	10,000	2,300	3,450
9W	4,600	5,300	5,000	300	10,000	2,300	3,450
13	4,600	5,300	5,000	300	10,000	2,300	3,450
15W	4,600	5,300	5,000	300	10,000	2,300	3,450
17W	4,750	5,300	5,000	300	10,000	2,375	3,550
19W	4,800	5,300	5,000	300	10,000	2,400	3,600
21W	4,600	5,300	5,000	300	10,000	2,300	3,450
24W	4,600	5,300	5,000	300	10,000	2,300	3,450
29W	4,500	5,300	5,000	300	10,000	2,250	3,375
31W	4,600	5,300	5,000	300	10,000	2,300	3,450
33W	4,650	5,300	5,000	300	10,000	2,325	3,475
50W	4,500	5,300	5,000	300	10,000	2,250	3,375
58	4,600	5,300	5,000	300	10,000	2,300	3,450
60	4,600	5,300	5,000	300	10,000	2,300	3,450
61	4,600	5,300	5,000	300	10,000	2,300	3,450
62	4,400	5,300	5,000	300	10,000	2,200	3,300
65	4,600	5,300	5,000	300	10,000	2,300	3,450
66	4,600	5,300	5,000	300	10,000	2,300	3,450
70WI	4,600	5,300	5,000	300	10,000	2,300	3,450
71WI	4,600	5,300	5,000	300	10,000	2,300	3,450
72WI	4,800	5,300	5,000	300	10,000	3,400	3,600
74WI	4,600	5,300	5,000	300	10,000	2,300	3,450
77	4,600	5,300	5,000	300	10,000	2,300	3,450
90	4,600	5,300	5,000	300	10,000	2,300	3,450
92	4,600	5,300	5,000	300	10,000	2,300	3,450
95	4,600	5,300	5,000	300	10,000	2,300	3,450

¹ Attachment A is based on the information and parameters listed in the Forms H-1 and H-1A, dated June 14, 2016, by representatives of Occidental Permian Ltd. (*i.e.* Applicant's Exh. Nos. 9 and 10). From left to right, the columns in Attachment A are the parameters (*i.e.* restrictions) for each individual well authorized by this permit and expressed in short-hand for the following: (1) Well Numbers; (2) Top of the Permitted Injection Interval for Each Well; (3) Base of the Permitted Injection Interval for Each Well; (4) Maximum Volume of Saltwater Per Day Per Well; (5) Maximum Volume of Freshwater Per Day Per Well; (6) Maximum Volume of the combined elements Carbon-Dioxide, Hydrogen-Sulfide, and Methane Per Day Per Well; (7) Maximum Surface Injection Pressure for Liquids in Pounds Per Square Inch Gauge; and (8) Maximum Surface Injection Pressure for Gas in Pound Per Square Inch Gauge.