

OIL AND GAS DOCKET NO. 03-0257498

THE APPLICATION OF REDDY DISPOSALS, LLC FOR A COMMERCIAL PERMIT TO DISPOSE OF OIL AND GAS WASTE BY INJECTION INTO A POROUS FORMATION NOT PRODUCTIVE OF OIL OR GAS, CONKLIN LEASE WELL NO. 1, HUEBNER (9,270 FRIO) FIELD, MATAGORDA COUNTY, TEXAS

HEARD BY: Andres J. Trevino P.E., Technical Examiner
James M. Doherty, Hearings Examiner

APPEARANCES:

APPLICANT:

Don Rhodes
Hoss Owens

REPRESENTING:

Reddy Disposals, LLC

PROTESTANTS:

Haskell Simon

Himself,
Coastal Plains Groundwater Conservation
District

PROCEDURAL HISTORY

Application Filed:	June 13, 2008
Request for Hearing:	May 01, 2008
Notice of Hearing:	June 13, 2008
Date of Hearing:	July 21, 2008
Proposal For Decision Issued:	March 26, 2009

EXAMINERS' REPORT AND PROPOSAL FOR DECISION

STATEMENT OF THE CASE

Reddy Disposals, LLC ("Reddy") requests authority pursuant to Statewide Rule 9 to operate Well No. 1 on its Conklin Lease in Matagorda County as a commercial disposal well. This application is protested by Haskell L. Simon, an adjacent landowner owner to

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the proposed well and the President of the Coastal Plains Groundwater Conservation District which oversees groundwater issues in the area.

DISCUSSION OF THE EVIDENCE

Applicant's Evidence

The subject well is a temporarily abandoned gas well drilled and completed in July 2004. The well was drilled to a depth of 10,200 feet and completed at a depth of 9,252 feet into the Huebner (9,270 Frio) Field. The well only produced from September 2004 through May 2005. Reddy will recomple and convert the well into a saltwater disposal well. The well has 1,525 feet of 9⁵/₈" surface casing with cement circulated from the casing shoe to the ground surface, and 2⁷/₈" casing set at 10,200 feet. The top of cement behind the longstring casing is estimated to be 7,322 feet. The Texas Commission on Environmental Quality recommends that usable-quality ground water be protected to a depth 1,250 feet. TCEQ further states the Chicot aquifer, which is estimated to occur from 350 feet to 1,000 feet, contains water of superior quality and must be isolated from overlying and underlying beds.

The proposed injection will be through 2" tubing set on a packer at approximately 5,825 feet, but no higher than 100 feet above the top of the injection interval. The proposed injection interval is the Miocene/Frio formation. The proposed injection interval is between 5,900 and 6,400 feet. The proposed maximum injection volume is 3,000 BWPD, with an estimated average of 2,000 BWPD. The proposed maximum injection pressure is 1,200 psig.

There are two wellbores within a 1/4 mile radius of the proposed disposal well. The Huebner Well No. 1, drilled by Esenjay Petroleum Corp. was plugged as a dry hole on October 10, 1983. The second well is Reddy Disposals's Hurst, A.I. Well No. B-2. This well was drilled in 1963 to a total depth of 10,462 feet. The well is currently an active disposal well operated by Reddy. The Hurst No. B-2 is permitted to dispose of up to 4,000 barrels of saltwater per day at a maximum injection pressure of 1,500 psi. The permitted injection interval is from 3,450 feet to 3,650 feet.

Reddy plans to use the proposed well to dispose of produced saltwater from area gas wells. Reddy will use the proposed Conklin No.1 disposal well as a back up well to it's Hurst No. B-2 disposal well. The proposed Conklin No.1 will be used should the Hurst No. B-2 would ever need to be shut in or is out of service for any reason. The Conklin No. 1 will be permitted to dispose at a depth of 5,900 feet while the Hurst No, B-2 is permitted at a depth of 3,450 feet. By having two disposal wells at different locations within the existing surface facilities and disposing at different depths, Reddy can better manage their disposal fluids. Reddy can direct it's incoming disposal water into either or both of the wells. This flexibility in directing disposal water will not only reduce wear and tear on the mechanical aspects of the wells but will also reduce loading in both geologic formations. Reddy

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believes that reliable disposal facilities are necessary to accommodate the active drilling and existing production occurring in the area.

Reddy has an active P-5 on file with the Commission, with \$50,000 financial assurance. There are no pending enforcement actions against Reddy.

Notice of the subject application was published in *The Bay City Tribune*, a newspaper of general circulation in Matagorda County, on February 3, 2008. A copy of the application was mailed on February 8, 2008 to the Matagorda County Clerk's Office and the offsetting surface owners and operators within ½ mile of the proposed well. Reddy owns the surface of the 116.5 acre tract on which the well is proposed.

Protestant's Evidence

Haskell L. Simon is President of the Coastal Plains Groundwater Conservation District and is an adjacent landowner to the proposed disposal well. Mr. Simon stated he is not opposed to disposal wells in general, but is concerned this well may contaminate the groundwater and he did not have enough information regarding the proposed well prior to the hearing. Mr. Simon feared oil and gas wastes other than produced water were proposed to be disposed of into groundwater aquifers. Mr. Simon presented a list of exempt exploration and production wastes (28 wastes) exempt from Subtitle C of the Resource Conservation and Recovery Act (RCRA) and asked representatives from Reddy if they were going to dispose of any of those wastes into the proposed disposal well. Mr. Simon asked an additional 14 questions that he and adjacent land and home owners had. Mr. Simon stated disposal of oil and gas wastes into the aquifers would cause irreversible damage.

Mr. Simon expressed his concerns that the Evangeline Aquifer may become contaminated as a result of direct injection into it. A cross section of the aquifers along the Gulf Coast provided by Mr. Simon shows the Evangeline Aquifer lies directly below the Chicot Aquifer. The cross section shows the Chicot lies from the ground surface to about 1,200 feet and the Evangeline lies from 1,200 feet to about 3,300 feet. These depths were based on wells in Calhoun County, adjacent to Matagorda County. He stated the Evangeline is a brackish water reservoir but should be protected because as future water resources become scarce, the water from the Evangeline may be treated by reverse osmosis to make it potable. Mr. Simon stated the majority of home owners including the 15 upscale homes across the road from the Reddy Disposals' facility use water wells for their primary source of water.

EXAMINERS' OPINION

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The examiners believe that this application should be approved. With the recommended remedial cementing, the Conklin No.1 will be completed in a manner which will confine disposal fluids to the proposed disposal interval in the Miocene/Frio formation at a depth of 5,900 feet to 6,400 feet. Surface casing is set at a depth of 1,525 feet and cemented through the base of usable quality water. The cemented surface casing will isolate and protect the superior water quality of the Chicot aquifer as required by the TCEQ. The longstring production casing will require cement block squeezes immediately above and below the proposed injection interval of 5,900 feet to 6,400 feet with sufficient cement to prevent migration from the injection interval. In addition to the cement block squeezes, two bridge plugs will be required to be set. One will be required to be set at a depth of approximately 9,252 feet to isolate existing perforations. A second bridge plug will be required immediately below the bottom of the injection interval at 6,400 feet with 20 feet of cement to prevent disposal fluids from traveling below the injection interval inside the casing. There is a plugged dry hole and a disposal well operated by Reddy within the ¼ mile radius of review and the water wells in the area will be protected by surface casing as recommended by the TCEQ.

Reddy Disposals will limit disposal fluids to produced saltwater. They will verify the contents of the trucks carrying wastes to ensure only produced saltwater will be injected into the disposal well. Reddy will reject any load which is not produced saltwater. Disposal will not be in the Evangeline Aquifer but in the Miocene/Frio formation, a formation 3,000 feet below the Evangeline. The Evangeline is a brackish water formation that the TCEQ does not recommend as a formation to protect with surface casing.

Approval of the requested permit is in the public interest. Having a reliable disposal facility close to the productive gas wells will help maintain low disposal costs. Low disposal costs will extend the economic life of the wells. Extending the economic life of the wells will allow the well to produce more hydrocarbons. Reddy Disposals currently operates a disposal well onsite that disposes at a depth of 3,450 feet. Having a second well disposing at a depth of 5,900 feet will not only reduce wear and tear on the mechanical aspects of the disposal wells but will also reduce loading in both geologic formations.

The evidence establishes that the operation of the subject disposal well will not adversely impact any surface or subsurface useable quality water.

FINDINGS OF FACT

1. Notice of this hearing was given to all persons entitled to notice at least ten (10) days prior to the hearing. Notice of the application was published in *The Bay City Tribune*, a newspaper of general circulation in Matagorda County, on February 3, 2008.
2. The Conklin No. 1 is a depleted gas well drilled in 2004. Reddy Disposals, LLC

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plans to recompleate the well to inject between 5,900 feet to 6,400 feet. The top of the Miocene/Frio occurs at approximately 5,900 feet.

3. The maximum requested injection volume is 3,000 barrels of produced saltwater water per day and the maximum requested surface injection pressure is 1,200 psi. The requested disposal interval is the Miocene/Frio formation between approximately 5,900 feet to 6,400 feet.
4. The Conklin No. 1 is cased and will be cemented in a manner to protect usable quality water and injection will be confined to the injection interval.
 - a. The subject well has 1,525 feet of 9⁵/₈" surface casing cemented to surface.
 - b. The subject well has 10,200 feet of 27⁷/₈" casing with top of cement at approximately 7,322 feet.
 - c. A block cement squeeze will be required immediately above and below the injection interval with adequate cement to place 400-600 feet above the injection interval.
 - d. A bridge plug will be required to be set at a depth of approximately 9,252 feet to isolate existing perforations and a bridge plug will be required immediately below the bottom of the injection interval at 6,400 feet with 20 feet of cement.
 - e. Injection will be through tubing set on a packer no higher than 100 feet above the top of the injection interval.
 - f. The Texas Commission on Environmental Quality recommends that usable-quality water be protected to 1,250 feet in the area of the proposed well and that the Chicot, which is estimated to occur from 350 feet to 1,000 feet is of superior quality and must be isolated from other water zones.
5. There are two wellbores within ¼ mile of the proposed disposal well. These wells will not provide a conduit for migration of fluids out of the disposal zone.
6. Reddy Disposals currently operates a disposal well onsite that disposes at a depth of 3,450 feet. Having a second well disposing at a depth of 5,900 feet will allow Reddy to better manage disposal fluids at the facility by reducing wear and tear on the mechanical aspects of the disposal wells and will also reduce loading in both geologic formations.
7. There is a need for a second well due to increasing water production and increasing drilling in the area.
8. Reddy Disposals, LLC has an active P-5 on file with the Commission, with \$50,000

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financial assurance.

CONCLUSIONS OF LAW

1. Proper notice was issued in accordance with the applicable statutory and regulatory requirements.
2. All things have occurred to give the Railroad Commission jurisdiction to consider this matter.
3. The use or installation of the proposed injection well is in the public interest.
4. The use or installation of the proposed injection well will not endanger or injure any oil, gas, or other mineral formation.
5. With proper safeguards, as provided by terms and conditions in the attached final order which are incorporated herein by reference, both ground and surface fresh water can be adequately protected from pollution.
6. Reddy Disposals, LLC has made a satisfactory showing of financial responsibility to the extent required by Section 27.073 of the Texas Water Code.
7. Reddy Disposals, LLC has met its burden of proof and satisfied the requirements of Chapter 27 of the Texas Water Code and the Railroad Commission's Statewide Rule 9.

EXAMINERS' RECOMMENDATION

Based on the above findings and conclusions, the examiners recommend that the application be approved as set out in the attached Final Order.

Respectfully submitted,

Andres J. Trevino
Technical Examiner

James M. Doherty
Hearings Examiner