

THE APPLICATION OF AMERICAN DISPOSAL SERVICES, LTD. FOR A COMMERCIAL PERMIT TO DISPOSE OF OIL AND GAS WASTE BY INJECTION INTO A POROUS FORMATION NOT PRODUCTIVE OF OIL OR GAS, FRIO SWD LEASE WELL NO. 1, PEARSALL (AUSTIN CHALK) FIELD, FRIO COUNTY, TEXAS

HEARD BY: Andres J. Trevino P.E., Technical Examiner
Michael Crnich, Hearings Examiner

APPEARANCES:

APPLICANT:

John Soule
John McBeath
Austin Ivey

REPRESENTING:

American Disposal Services, LTD

PROTESTANTS:

Michael Weiss

Self

PROCEDURAL HISTORY

Application Filed:	May 17, 2011
Request for Hearing:	August 16, 2011
Notice of Hearing:	October 27, 2011
Date of Hearing:	January 23, 2012
Proposal For Decision Issued:	April 13, 2012

EXAMINERS' REPORT AND PROPOSAL FOR DECISION

STATEMENT OF THE CASE

American Disposal Services, LTD (American Disposal) requests authority pursuant to Statewide Rule 9 to operate Well No. 1 on its Frio SWD Lease in Frio County as a commercial disposal well. This application is protested by Michael Weiss, an adjacent landowner to the tract on which the proposed disposal well is located.

DISCUSSION OF THE EVIDENCE

Applicant's Evidence

The subject well has not yet been drilled, and a permit to drill has not been issued by the Commission. It is proposed that the well be drilled through the Olmos to a maximum depth of 5,400 feet. It is proposed that the well have 3,700 feet of 10 $\frac{3}{4}$ " surface casing with cement circulated from the casing shoe to the ground surface, and 7" casing set through the Olmos, estimated to occur no deeper than 5,400 feet. The 7" casing will be cemented with 816 sacks of cement with cement circulated to the surface. (See Wellbore Diagram attachment). The Texas Commission on Environmental Quality recommends that usable-quality ground water be protected to a depth of 3,650 feet. TCEQ further recommends that fresh water contained in the interval from the land surface to a depth of 100 feet and the zone from a depth of 950 feet to 2,700 feet must be protected. Furthermore, the TCEQ identified the Carrizo from 1,700 feet to 2,250 feet contains superior quality water which must be isolated from water in the underlying and overlying beds.

The proposed injection will be through 3 $\frac{1}{2}$ " tubing set on a packer at approximately 5,050 feet, but no higher than 100 feet above the top of the injection interval. The proposed injection interval is the Olmos formation, the top of which is expected to occur at about 5,100 feet. The proposed injection interval is between 5,100 and 5,400 feet. This estimated depth of the Olmos is based on the log of the Clemco - Lancaster No. 1. This well is approximately 1/2 mile to the northwest of the proposed well and is the closest well which penetrated the Olmos and for which an electric log is available. The log shows there is approximately 1,000 feet of shale separating the top of the injection interval and the base of the usable quality water. Additionally, there is 1,000 feet of shale separating the base of the injection interval from the top of the Austin Chalk, the shallowest production in the area. The proposed maximum injection volume is 7,500 BWPD. Originally, American Disposal applied for 10,000 BWPD, but reduced their request as part of a settlement with other potential protestors (Goodrich Petroleum). The proposed maximum injection pressure is 1,500 psig.

There are no oil or gas wellbores within a $\frac{1}{4}$ mile radius of the proposed disposal well. Although only a $\frac{1}{4}$ mile radius area of review is required, a study was made of oil or gas wellbores within a $\frac{1}{2}$ mile radius of the proposed disposal well. Within a $\frac{1}{2}$ mile radius of the proposed disposal well there are four completions and two permitted locations. Late filed exhibits of well records of wells within the $\frac{1}{2}$ mile radius demonstrate the wells will not pose a potential threat to usable quality water or oil and gas production in the area. All wells have adequate cement and casing across the usable quality water, the Olmos formation and the Austin Chalk. The Julia Harris No. 2 has a DV tool set at 3,635 feet with cement set above the DV tool to the surface. The Julia Harris No. 2 was originally completed in the Pearsall (Austin Chalk) Field, with cement set from the casing shoe at 7,369 feet to a depth of 4,950 feet. The well is temporarily abandoned and may be converted as a fresh water well at a later date by American Disposal. The Julia Harris No. 4 is a plugged well that was originally completed in the Pearsall (Austin Chalk) Field, with cement set from the casing shoe at 6,710 feet to a depth of 340 feet. Surface casing is set at 568 feet with cement circulated to the surface. The Morales-Turnham No. 2 has surface casing set at 775 feet with cement circulated to the surface and a DV tool set at 3,903 feet with cement set above the DV tool to the surface. The Morales-Turnham No. 2 was originally completed in the Pearsall (Austin Chalk) Field, with cement set from the casing shoe at 6,639 feet to a depth

of 5,084 feet. The last completed well within the ½ mile radius is the Goodrich Petroleum Pedro Morales Unit No. 7H. The well is a horizontal well completed in the Briscoe Ranch (Eagleford) Field. The well has continuous cement and casing from 14,515 feet to the surface. The well has surface casing set at 3,929 feet and intermediate casing set at 7,960 feet.

The proposed facility will consist of a location pad with eight saltwater tanks, several gun barrels, oil tanks and injection pumps. The design of the facility is based on American Disposal's 20 years of experience operating disposal facilities. All tanks will sit inside a concrete secondary containment basin. All surface areas which are expected to handle fluids will be constructed of concrete. Fluids will be unloaded into a concrete disposal trench. The fluids will be pumped to a series of tanks to settle and separate any solids or oil from the injection water. The entire location pad will have a built up limestone base. American Disposal will have two 10,000 bbl freshwater tanks that will make available fresh water to operators to be used for drilling and completing new wells. Trucks will be able to off load saltwater, get a washout, and then pick up a load of fresh water if needed. The pad is large enough to accommodate numerous trucks on the property without the need to have trucks parked and waiting along the county road to off-load disposal fluids. A permit to construct the access driveway from Farm to Market Road 1583 to the facility was issued by the Texas Department of Transportation. The facility is approximately 900 feet away from State Highway 85 and the boundaries of Mr. Weiss property.

American Disposal plans to use the proposed well to dispose of produced water and frac water generated as a result of the active and ongoing development of the Eagle Ford Shale and Austin Chalk in the area. American Disposal believes that additional disposal facilities are necessary to accommodate the active drilling which generates large quantities of disposal fluids. American Disposal presented a graph showing over 220 new drilling permits issued in the last two years in Frio County. From 1995 to 2009 an average of 250 drilling permits per year were issued for Atascosa, Dimmit, Frio, La Salle, McMullen and Zavala Counties combined. In 2010 and 2011 there were approximately 3,300 drilling permits issued for the same counties. Data collected from Baker Hughes shows there are 12 active drilling rigs drilling for oil in Frio County as of January 16, 2012. American Disposal solicited from potential customers whether they had a need or interest in using the proposed disposal facility. American Disposal received 44 responses from approximately 20 operators that had drilling operations in the area. The operators indicated they would welcome and support additional disposal capacity the proposed facility would provide. American Disposal stated they would not engage in permitting and building the facility if they were not confident the facilities services would be in demand.

American Disposal Services LTD has an active P-5 on file with the Commission, with \$25,000 financial assurance. There are no active enforcement actions against American Disposal.

Notice of the subject application was published in *Frio Nueces Current*, a newspaper of general circulation in Frio and La Salle Counties, on May 19, 2011. A copy of the application was mailed on May 16, 2011, to the Frio County Clerk's Office and the offsetting

surface owners and operators within ½ mile of the proposed well. American Disposal owns the surface of the 201.4 acre tract on which the well is proposed.

Protestant's Evidence

Michael Weiss was present to voice his concerns over the proposed disposal well. Mr. Weiss is a partial owner of Morales Resources that owns land (a ranch) across State Highway 85 from the proposed disposal well's location. Mr. Weiss has concerns about the potential for surface and groundwater contamination due to improperly plugged old Pearsall (Austin Chalk) wells existing in the vicinity of the proposed disposal well. Mr. Weiss irrigates his property three to four times a week and has done so for over 50 years. He is concerned the water quality will decline and damage his crops. Mr. Weiss raised concerns of truck traffic, truck ingress and egress to the property, smells from the facility, dust, impacted property values and a general concern over facility safety operations if the disposal facility is approved.

EXAMINERS' OPINION

The examiners believe that this application should be approved. The Frio SWD No. 1 will be completed in a manner which will confine disposal fluids to the proposed disposal interval in the Olmos. Surface casing will be set and cemented through the base of usable quality water. The longstring casing will also be cemented to the surface to prevent migration from the injection interval. There are no oil or gas wells within the ¼ mile radius of review. There are several wells within a ½ mile radius of the Frio SWD No. 1, but all wells have cement and casing protecting the usable quality water, the Olmos (disposal formation), and the Austin Chalk (productive interval in the area). It is highly unlikely the operation of the Frio SWD No. 1 will result in the contamination of surface or subsurface water or will endanger or injure any oil, gas, or other mineral formation.

Approval of the requested permit is in the public interest given it is in the public interest to promote the development of the Eagle Ford Shale and Austin Chalk formations in Frio County and adjacent counties. The majority, if not all, of Frio County is believed to be productive due to the widespread presence of the Eagle Ford Shale. This disposal well and others will be needed to accommodate current and future disposal needs. Drilling permits issued in Atascosa, Dimmit, Frio, La Salle, McMullen and Zavala Counties in the last two years have increased over 700% over previous years. Letters from operators in the area support and welcome additional disposal capacity. Having a disposal facility close to the horizontal wells will reduce disposal cost and increase hydrocarbon recovery. American Disposal has reduced the volume of fluid to be injected to accommodate some of the Protestant's concerns over injection volumes.

The Commission does not have direct jurisdiction over issues regarding site selection, traffic patterns, and dust or noise abatement. The examiners believe that any impact on the Protestant's property will be minimal due to the distances involved. The evidence indicates that the operation of the subject disposal well and facility 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 *Frio Nueces Current*, a newspaper of general circulation in Frio and La Salle Counties, on May 19, 2011.
2. The Frio SWD No. 1 has not been drilled. American Disposal plans to drill the well to a maximum depth of approximately 5,400 feet. The top of the Olmos is expected to occur at approximately 5,100 feet.
3. The maximum requested injection volume is 7,500 barrels of water per day and the maximum requested surface injection pressure is 1,500 psi. The requested disposal interval is the Olmos formation between approximately 5,100 and 5,400 feet.
4. The Frio SWD No. 1 will be cased and cemented in a manner to protect usable quality water, and injection will be confined to the injection interval.
 - a. The subject well will have 3,700 feet of 10³/₄" surface casing cemented to surface.
 - b. The subject well will have approximately 5,400 feet of 7" casing, cemented with 816 sacks of cement with a top of cement at the surface.
 - c. Injection will be through tubing set on a packer no higher than 100 feet above the top of the injection interval.
 - d. The Texas Commission on Environmental Quality recommends that usable-quality water be protected to 3,650 feet in the area of the proposed well.
5. There are no wellbores within ¼ mile of the proposed disposal well. All wellbores within ½ mile radius of the proposed disposal well have cement isolating the usable quality water, the Olmos (disposal formation), and the Austin Chalk (productive interval in the area).
6. There have been over 220 new drilling permits issued in the last two years in Frio County. From 1995 to 2009 an average of 250 drilling permits per year were issued for Atascosa, Dimmit, Frio, La Salle, McMullen and Zavala Counties combined. In 2010 and 2011 there were approximately 3,300 drilling permits issued for the same counties.
7. American Disposal received 44 responses from approximately 20 operators that had drilling operations in the area. The operators indicated they would welcome and support additional disposal capacity the proposed facility would

provide.

8. Due to increasing development of the Eagle Ford Shale with horizontal drilling in this area, large quantities of produced water must be disposed of. Use of the Frio SWD No. 1 as a commercial disposal well is in the public interest of promoting this development by providing a safe and economic means of disposal of the fluids associated with drilling and production.
9. Having a disposal facility close to the horizontal wells will reduce disposal cost and increase hydrocarbon recovery.
10. American Disposal Services, LTD has an active P-5 on file with the Commission, with \$25,000 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. American Disposal Services, LTD has made a satisfactory showing of financial responsibility to the extent required by Section 27.073 of the Texas Water Code.
7. American Disposal Services, LTD 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

Michael Crnich
Hearings Examiner