THE APPLICATION OF METRO SALTWATER DISPOSAL, INC. TO AMEND ITS COMMERCIAL DISPOSAL PERMIT PURSUANT TO STATEWIDE RULE 9 FOR THE METRO SWD LEASE, WELL NO. 1, NEWARK, EAST (BARNETT SHALE) FIELD, JOHNSON COUNTY, TEXAS

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**HEARD BY:** Richard D. Atkins, P.E. - Technical Examiner

Gene Montes - Legal Examiner

APPEARANCES: REPRESENTING:

**APPLICANT:** 

Myron E. Kimball Malinda Kimbrough Kevin Ware Metro Saltwater Disposal, Inc.

## PROCEDURAL HISTORY

Application Filed: July 21, 2010

Request for Hearing:
Notice of Hearing:
Date of Hearing:
Record Closed:

November 18, 2010
December 16, 2010
February 17, 2011
May 2, 2011

Proposal For Decision Issued: May 2, 2011

June 14, 2011

### **EXAMINERS' REPORT AND PROPOSAL FOR DECISION**

# STATEMENT OF THE CASE

Metro Saltwater Disposal, Inc. ("Metro") requests to amend its commercial disposal authority pursuant to Statewide Rule 9 for the Metro SWD Lease, Well No. 1 (Permit No. 12757 Amended), in the Newark, East (Barnett Shale) Field, Johnson County, Texas. Metro proposes to increase the daily injection volume from 25,000 BWPD to 30,000 BWPD.

On September 29, 2010 Commission staff administratively denied an amended commercial disposal permit pursuant to Statewide Rule 9 because the application violated the staff's permitting policy. Under that policy, commercial injection in the Newark, East (Barnett Shale) Field area cannot exceed 25,000 BWPD. The Commission staff did not appear at the hearing to oppose the application.

The examiners recommend that the application for an amended commercial disposal permit pursuant to Statewide Rule 9 be approved.

# **DISCUSSION OF THE EVIDENCE**

# **Applicant's Evidence**

The Metro SWD Lease, Well No. 1, was drilled to a total depth of 12,823 feet and completed in January 2009 as a commercial disposal well in the Ellenburger formation from 11,056 feet to 12,607 feet. The well is located on a 6.65 acre tract south of the intersection of US Highway 287 and State Highway 360. The disposal tract is contained within a 50 acre light industrial tract that is situated approximately 3.0 miles southeast of the town of Mansfield, Texas.

The well has 9 5/8" surface casing that is set at 2,000 feet and is cemented to the surface with 800 sacks. The 7" production casing is set at 12,823 feet and is cemented to the surface in three stages with 1,970 sacks (DV Tools set at 4,005 feet and 8,039 feet). The well is equipped with 4  $\frac{1}{2}$ " tubing with a packer set at 10,969 feet. The Texas Commission on Environmental Quality ("TCEQ") recommends that usable-quality ground water be protected to a depth of 1,945 feet below the land surface.

The permitted disposal interval is the Ellenburger formation between 11,000 feet and 12,700 feet. The permitted disposal volume is 25,000 BWPD with a maximum injection pressure of 5,500 psig. Metro requests to increase the daily injection volume to 30,000 BWPD. The maximum injection pressure would remain at 5,500 psig.

There are five producing Barnett Shale horizontal wells located within a ¼ mile radius of review for the Metro SWD Lease, Well No. 1, disposal well. All of the wells have surface casing set and cemented to surface below the usable quality water at 1,945 feet. There is one non-commercial disposal well operated by EOG Resources, Inc. ("EOG") that is located approximately 4,000 feet to the west of the subject disposal well.

Metro's disposal facility is located on a 50 acre light industrial tract that is surrounded by the cities of Arlington, Mansfield and Grand Prairie. These cities only allow saltwater trucks to transport water between the hours of 7 AM and 7 PM. The restricted hauling times require operators to store produced frac and salt water at each well site.

Metro submitted a monthly graph of their injection volumes that showed the disposal facility has been at or near capacity since March 2010. As a result, Metro has to close its facility and reroute the saltwater hauling trucks to another disposal facility that is approximately 30 miles west of its facility. The main route is down Lone Star Road (FM 157) which is a narrow two-lane road that runs through residential areas and school zones. The trip takes 35-45 minutes in normal traffic and 1 to 1 ½ hours during rush hour traffic.

Metro submitted Chesapeake Operating, Inc.'s ("Chesapeake") frac schedule which shows that Chesapeake will be fracture stimulating 35 wells per month in this area over the next several months. In addition. Metro submitted letters from Chesapeake and EOG in support of Metro's request to increase its disposal capacity to 30,000 BWPD. These operators believe that an increase in capacity at Metro's disposal facility would decrease the amount of saltwater in temporary storage at their well sites.

Metro performed a truck emissions study to determine how much truck emissions would be eliminated by not diverting trucks as a result of an increased disposal capacity of 5,000 BWPD. The increased disposal capacity would eliminate 39 diverted trips per day and Metro calculated that this would remove 13.49 tons per year of truck emissions.

Metro has a current approved Form P-5 (Organization Report), a posted \$25,000 financial assurance bond and no pending Commission enforcement actions.

# **EXAMINERS' OPINION**

The examiners recommend approval of the application to increase the permitted injection volume for the existing commercial disposal authority. Approval of the amended application is in the public interest. The Barnett Shale development area encompasses Johnson County and the adjacent Tarrant County and disposal wells are the best means for disposing of produced frac and salt water. Metro has shown that the increased disposal capacity is necessary to accommodate the Barnett Shale development that is ongoing in the area within hauling distance of the Metro SWD Lease, Well No. 1.

The top of the Barnett Shale formation is at 7,728 feet and the top of the Ellenburger formation is at 8,684 feet. The permitted disposal interval is the Ellenburger formation between 11,000 feet and 12,700 feet, which is almost 2,500 feet below the base of the Barnett Shale formation. As result, the examiners believe that the increased injection will be contained within the Ellenburger formation and will not pose a threat to the productive Barnett Shale formation.

When the Metro SWD injection facility is at capacity, Metro's saltwater disposal trucks have to travel to another facility located to the west, resulting in a 60 mile round trip through residential areas and school zones. The proposed increased injection capacity will eliminate the additional milage traveled on public highways by the saltwater disposal trucks. The increased disposal capacity would also eliminate 39 diverted trips per day and would remove 13.49 tons per year of truck emissions.

The examiners recommend that the amended application for a commercial disposal permit pursuant to Statewide Rule 9 be approved and that the Commission adopt the following Findings of Fact and Conclusions of Law.

# FINDINGS OF FACT

- 1. Notice of this application and hearing was provided to all persons entitled to notice.
- 2. The proposed injection into the Metro SWD Lease, Well No. 1, will not endanger useable quality water.
  - a. The Texas Commission on Environmental Quality ("TCEQ") recommends that usable-quality ground water be protected to a depth of 1,945 feet below the land surface.
  - b. The well has 9 5/8" surface casing that is set at 2,000 feet and is cemented to the surface with 800 sacks.
  - c. There are five producing Barnett Shale horizontal wells located within a ¼ mile radius of review for the Metro SWD Lease, Well No. 1, disposal well. All of the wells have surface casing set and cemented to surface below the usable quality water at 1,945 feet.
- 3. The proposed injection into the Metro SWD Lease, Well No. 1, will not endanger production from other oil, gas or mineral bearing formations.
  - a. The 7" production casing is set at 12,823 feet and is cemented to the surface in three stages with 1,970 sacks (DV Tools set at 4,005 feet and 8,039 feet).
  - b. The well is equipped with  $4\frac{1}{2}$ " tubing with a packer set at 10,969 feet.
  - c. The top of the Barnett Shale formation is at 7,728 feet and the top of the Ellenburger formation is at 8,684 feet. The permitted disposal interval is the Ellenburger formation between 11,000 feet and 12,700 feet, which is almost 2,500 feet below the base of the Barnett Shale formation.
- 4. Amending the commercial disposal permit for the Metro SWD Lease, Well No. 1, is in the public interest because it will provide needed commercial disposal capacity to accommodate the Barnett Shale development that is ongoing in the area of the facility.
  - a. The Barnett Shale development area encompasses Johnson and Tarrant Counties.
  - b. When the Metro SWD injection facility is at capacity, Metro's saltwater disposal trucks have to travel to another facility located to the west, resulting in a 60 mile round trip through residential areas and school zones. The trip takes 35-45 minutes in normal traffic and 1 to 1 ½ hours during rush hour traffic.

- c. The increased disposal capacity will eliminate 39 diverted trips per day and would remove 13.49 tons per year of truck emissions.
- d. The increased disposal capacity will also eliminate the additional 60 miles traveled on public highways by the saltwater disposal trucks.
- 5. Metro has a current approved Form P-5 (Organization Report), a posted \$25,000 financial assurance bond and no pending Commission enforcement actions.

# **CONCLUSIONS OF LAW**

- 1. Proper notice was issued in accordance with the applicable statutory and regulatory requirements.
- 2. All things necessary to give the Railroad Commission jurisdiction to consider this matter have occurred.
- 3. Approval of the application will not harm useable quality water resources, will not endanger oil, gas, or geothermal resources, will promote further development in the area of Johnson County and is in the public interest pursuant to Sec. 27.051 of the Texas Water Code.
- 4. Metro Saltwater Disposal, Inc. has met its burden of proof and its application satisfies 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 of fact and conclusions of law, the examiners recommend that the amended application of Metro Saltwater Disposal, Inc. for commercial disposal authority in its Metro SWD Lease, Well No. 1, be approved, as set out in the attached Final Order.

Respectfully submitted,

Gene Montes Legal Examiner Richard D. Atkins, P.E. Technical Examiner