

**OIL AND GAS DOCKET NO. 02-0276609**

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**THE APPLICATION OF TUNDRA ENERGY, LLC FOR COMMERCIAL DISPOSAL  
AUTHORITY PURSUANT TO STATEWIDE RULE 9 FOR THE TE YORKTOWN SWD  
LEASE, WELL NO. 1, DUBOSE (EDWARDS -A-) FIELD, DE WITT COUNTY, TEXAS**

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

**APPEARANCES:** **REPRESENTING:**

**APPLICANT:**

Stephen Fenoglio	Tundra Energy, LLC
Kerry Pollard	
Jason Roberts	
Justin McIntosh	

**PROTESTANTS:**

Will and Carlos Haun	Themselves
Alan and Iona Buchhorn	Themselves
Wilfred and Barbara Konrad	Themselves

**PROCEDURAL HISTORY**

Application Filed:	March 22, 2012
Protest Received:	April 2, 2012
Request for Hearing:	May 14, 2012
Notice of Hearing:	June 7, 2012
Hearing Held:	July 3, 2012
Transcript Received:	July 24, 2012
Proposal for Decision Issued:	July 31, 2012

**EXAMINERS' REPORT AND PROPOSAL FOR DECISION****STATEMENT OF THE CASE**

Tundra Energy, LLC ("Tundra") requests commercial disposal authority pursuant to Statewide Rule 9 for the TE Yorktown SWD Lease, Well No. 1, Dubose (Edwards -A-) Field, De Witt County, Texas.

Notice of the subject application was published in *The Cuero Record*, a newspaper of general circulation in De Witt County, on February 29, 2012. Notice of the application was sent to the De Witt County Clerk, offset operators within 1/2 mile and the surface owners of the disposal tract and each tract which adjoins the disposal tract on March 22, 2012.

The application is protested by surface owners adjacent and nearby to the tract on which the proposed disposal well is located.

**DISCUSSION OF THE EVIDENCE****Applicant's Evidence**

The proposed TE Yorktown SWD Lease, Well No. 1, and disposal facility are located on an 8.28 acre tract that is adjacent to, and west of, FM 108. County Road 3010 is adjacent to the west and north boundary of the proposed disposal tract and intersects FM 108 on the northeastern boundary. The tract is situated in a rural area approximately 11 miles northwest of the town of Yorktown, Texas. Tundra plans to drill a new injection well down to 8,000 feet. The well will have 9 5/8" surface casing set at 950 feet that will be cemented to the surface with 245 sacks of cement. Tundra proposes to run 7" production casing down to 8,000 feet that will be cemented to the surface with 1,270 sacks of cement. The well will be equipped with 4 1/2" tubing and packer set at 4,350 feet (See attached Tundra Exhibit No. 10 - Wellbore Diagram).

The proposed disposal interval is the Wilcox formation between 4,400 feet and 7,900 feet. The interval is suitable for disposal and is used for disposal in other area wells. There is no Wilcox formation production located within two and one half miles of the proposed disposal well. Additionally, there is over 2,000 feet of an impervious shale above the proposed disposal interval, which will serve to prevent the migration of injected fluids out of the Wilcox formation. Tundra requests authority to dispose of a maximum of 25,000 barrels of saltwater and RCRA exempt waste per day with a maximum surface injection pressure of 2,200 psig.

The Commission Groundwater Advisory Unit ("GAU") recommends that usable-quality ground water be protected to a depth of 850 feet below the land surface. The base of the underground source of drinking water ("USDW") is 1,500 feet. Tundra submitted a

GAU letter dated February 15, 2012, which stated that injection into the proposed injection interval will not harm usable-quality groundwater. Tundra submitted a tabulation of 17 fresh water wells located within a one mile radius of the proposed disposal facility. The tabulation showed an average fresh water well depth of approximately 250 feet with the deepest fresh water well at 770 feet.

There is one permitted Eagle Ford formation well, operated by Petrohawk Operating Company, located within the 1/4 mile radius of review for the proposed disposal well. There are no other wells located within the 1/2 mile radius of review for the proposed disposal well.

The proposed Tundra facility is located in the northwestern portion of De Witt County. There are no other commercial disposal wells within a 10 mile radius of the proposed facility. Tundra stated that the existing facilities in a 15 mile radius are at, or near, capacity and have wait times. County Road 3010 intersects FM 108 on the northeastern edge of the proposed facility and contains a lot of oilfield traffic, as there are many drilling rigs running in the area. Tundra contends that the use of the proposed disposal well will reduce truck traffic, travel time and miles traveled, resulting in reduced costs to operators.

The Eagle Ford formation development core area encompasses northwestern De Witt County and the adjacent counties of Gonzales and Karnes. Tundra submitted a map depicting numerous permitted and completed Eagle Ford formation horizontal wells within a ten mile radius of the proposed disposal well. The wells are being completed with large multi-stage fracs and, with the large number of permitted locations, this will create a tremendous volume of frac flow-back water. Tundra opined that the Eagle Ford formation trend wells will produce significant volumes of frac and produced water.

Tundra believes that additional disposal facilities are necessary to accommodate the Eagle Ford formation development that is ongoing in this part of De Witt County and the adjacent counties of Gonzales and Karnes. Tundra submitted a letter from an operator in the area, Magnum Hunter Resources Corporation ("Magnum"), which stated a need for additional disposal in the area. Magnum stated that they were hauling between 30 and 50 loads of saltwater per day in the area and the proposed disposal well would save them approximately 1.5 hours of hauling time per truck load. The reduced hauling time would result in a savings of \$7,125 per day in disposal costs.

### **The Facility**

The area surrounding the proposed injection facility is rural ranching and farming land. Access to the disposal facility will be off of FM 108, which is a paved two lane public highway. The surface facility will comply with all permit conditions requested by the Commission staff. At an average injection rate of 20,000 BWPD, there will be approximately 150 trucks per day accessing the facility. The facility will have a circular

driveway and will be of sufficient size to allow trucks access without having to wait on the highway. The proposed access to the facility will have adequate sight distance for entering and exiting trucks.

Tundra submits that it has the expertise to build and manage the proposed facility. Tundra has a current approved Form P-5 (Organization Report), a posted \$25,000 financial assurance bond and no pending Commission enforcement actions.

### **Protestants' Evidence**

The protestants are surface owners adjacent and nearby to the proposed disposal tract. They believe that the application for the proposed commercial disposal well and facility should be denied. The protestants' evidence fell into several general categories: 1) potential of pollution of surface or subsurface waters; 2) noise, dust and odor nuisances which would result from the operation of the facility; and 3) increased heavy truck traffic on FM 108 near the intersection of County Road 3010, causing county road deterioration and public safety issues. Collectively, the testimony and statements in opposition to the facility assert that the proposed commercial disposal facility will have adverse effects on traffic safety, property values and the quality of life in and around the area of the intersection of FM 108 and County Road 3010.

### **EXAMINERS' OPINION**

The examiners recommend that the application for commercial disposal authority be approved. Tundra has established:

1. The freshwater resources (surface and sub-surface) will be adequately protected from pollution;
2. The proposed injection well will not endanger or injure any oil, gas, or mineral formations;
3. The proposed injection is in the public interest; and
4. The applicant has made a satisfactory showing of financial responsibility, as required under Commission statutes and Commission regulatory requirements.

The well will be completed in a manner which will protect usable-quality water resources and injected fluids will be confined to the injection interval. The proposed disposal well will have cement behind the production casing to the surface and there is over 2,000 feet of impervious shale overlying the Wilcox disposal interval. Injection will be through tubing set on a packer to confine injected fluids to the Wilcox formation between 4,400 feet and 7,900 feet. Finally, there is only one permitted Eagle Ford formation well, operated by Petrohawk Operating Company, located within the 1/4 mile radius of review

for the proposed disposal well. There are no other wells located within the 1/2 mile radius of review for the proposed disposal well.

Approval of the application is in the public interest. The Eagle Ford formation development core area encompasses all of northwestern De Witt County and the adjacent counties of Gonzales and Karnes. Tundra has shown that the proposed disposal well is necessary to provide needed capacity for disposal of frac and produced water from numerous Eagle Ford formation wells to be drilled and produced within northeastern De Witt County. The proposed disposal well is closer to the most recently permitted wells than any other commercial disposal well and the existing commercial disposal wells in the area have a limited capacity with some wait times. Use of the proposed disposal well will reduce truck traffic, travel time and miles traveled, resulting in reduced disposal costs to operators. The reduced disposal costs will lower the economic limit of the producing wells and, thereby, ultimately increase total production.

The surface facility will be newly constructed and is of sufficient size to accommodate trucks hauling water to the facility without backing up onto the highway that provides access to the facility. The proposed access to the facility will have adequate sight distance for entering and exiting trucks. Compliance with permit conditions will minimize the risk of spills at the facility and will prevent the migration of any spills that occur, thereby protecting both ground and surface water.

### **FINDINGS OF FACT**

1. Notice of the application and hearing was provided to all persons entitled to notice. Notice of the application was sent to the De Witt County Clerk, offset operators within 1/2 mile and the surface owners of the disposal tract and each tract which adjoins the disposal tract on March 22, 2012.
2. Notice of the subject application was published in *The Cuero Record*, a newspaper of general circulation in De Witt County, on February 29, 2012.
3. The proposed injection into the TE Yorktown SWD Lease, Well No. 1, will not endanger useable quality water.
  - a. The Commission Groundwater Advisory Unit ("GAU") recommends that usable-quality ground water be protected to a depth of 850 feet below the land surface.
  - b. The well will have 9 5/8" surface casing set at 950 feet that will be cemented to the surface with 245 sacks of cement.
  - c. There is over 2,000 feet of impervious shale overlying the Wilcox disposal interval.

4. The proposed injection into the TE Yorktown SWD Lease, Well No. 1, will not endanger production from other oil, gas or mineral bearing formations.
  - a. Tundra Energy, LLC ("Tundra") plans to drill a new injection well down to 8,000 feet.
  - b. Tundra proposes to run 7" production casing down to 8,000 feet that will be cemented up to the surface with 1,270 sacks of cement.
  - c. The well will be equipped with 4 1/2" tubing and packer set at 4,350 feet.
  - d. There is one permitted Eagle Ford formation well, operated by Petrohawk Operating Company, located within the 1/4 mile radius of review for the proposed disposal well. There are no other wells located within the 1/2 mile radius of review for the proposed disposal well.
5. Use of the TE Yorktown SWD Lease, Well No. 1, as commercial disposal well is in the public interest because it will reduce hauling distances and will provide needed commercial disposal capacity for wells to be drilled, completed and produced in the area of the proposed facility.
  - a. The Eagle Ford formation development core area encompasses all of northwestern De Witt County and the adjacent counties of Gonzales and Karnes.
  - b. The proposed disposal well will provide needed capacity for disposal of frac and produced water from numerous Eagle Ford formation wells to be drilled and produced within northwestern De Witt County and the adjacent counties of Gonzales and Karnes.
  - c. The proposed disposal well is closer to a vast majority of recently permitted wells than any other commercial disposal well and the existing commercial disposal wells in the area have a limited capacity with some wait times.
  - d. The Eagle Ford formation trend wells are being fraced with large volumes of freshwater and, with the large number of permitted locations, this will create a tremendous volume of frac flow-back water.
  - e. The Eagle Ford formation trend wells will produce significant volumes of frac and produced water and additional disposal facilities are

necessary to accommodate the Eagle Ford formation development that is expected in northeastern De Witt County.

- f. Use of the proposed disposal well will reduce truck traffic, travel time and miles traveled, resulting in reduced disposal costs to operators.
  - g. The reduced disposal costs will lower the economic limit of the producing wells and, thereby, ultimately increase total production.
6. Tundra 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 this area of De Witt County and is in the public interest pursuant to Sec. 27.051 of the Texas Water Code.
- 4. Tundra Energy, LLC 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 Commission approve the application of Tundra Energy, LLC for commercial disposal authority pursuant to Statewide Rule 9 for the TE Yorktown SWD Lease, Well No. 1, as set out in the attached Final Order.

Respectfully submitted,

Richard D. Atkins, P.E.  
Technical Examiner

Michael Crnich  
Legal Examiner