THE APPLICATION OF IWOC, INC. FOR COMMERCIAL DISPOSAL AUTHORITY PURSUANT TO STATEWIDE RULE 9 FOR THE GURU SWD LEASE, WELL NO. 1, NEWARK, EAST (BARNETT SHALE) FIELD, BOSQUE COUNTY, TEXAS

HEARD BY: Richard D. Atkins, P.E. - Technical Examiner
James M. Doherty - Legal Examiner

APPEARANCES: REPRESENTING:

APPLICANT:
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Roland R. Baker
Daniel Parish
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IWOC, Inc.

PROTESTANTS (PARTY STATUS):
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Brenda Clayton, Attorney
David C. Triana
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Honorable Judge Cole Word

Bosque County
Middle Trinity Groundwater Conservation District

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OBSERVERS:
James R. and Mary Lou Starnater
Jeff Brooks

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EXAMINERS’ REPORT AND PROPOSAL FOR DECISION

STATEMENT OF THE CASE

This is the application of IWOC, Inc. (“IWOC”) for a permit to operate a commercial saltwater disposal facility in Bosque County. The proposed well is the Guru SWD Lease, Well No. 1, which was drilled in April 2007 by WEC, Inc. (“WEC”). A commercial disposal permit was denied to WEC by the Commission in Docket No. 09-0251512, by Final Order effective May 29, 2008. The owners of IWOC are some of the investors in the Guru SWD Lease, Well No. 1, drilled by WEC.

Numerous letters of protest were received from residents of Bosque County and numerous individuals attended the hearing. Due to the unusually large number of protest letters and attendees at the hearing who traveled from Bosque County, the examiners provided individuals an opportunity to make statements as part of the argument presented in opposition to the proposed well and facility.

MATTERS OFFICIALLY NOTICED

The examiners took official notice of RRC Online System computer records from the UIC Database for injection volumes reported in disposal wells located within a 20 mile radius of the proposed disposal well. Additionally, official notice was taken of RRC Online System computer records from the Production Data Query Database for all historical production through October 2009 from wells completed in the Newark, East (Barnett Shale) Field in Bosque County.
DISCUSSION OF THE EVIDENCE

Applicant’s Evidence

The Guru SWD Lease, Well No. 1, was drilled in April 2007 by WEC, Inc. The total depth of the well is 8,720 feet and it is completed as follows:

- 9 5/8" surface casing is set at 1,130 feet with cement circulated from the casing shoe to the ground surface.
- 7" longstring casing is set at 6,816 feet and is cemented in 2-stages using a DV Tool set at 3,415 feet. Based on a cement bond log, the longstring is cemented from the casing shoe up to 5,770 feet and from the DV Tool at 3,415 feet up to 1,350 feet.
- 4 1/2" tubing is set on a packer at 6,759 feet.

Pursuant to the Texas Commission on Environmental Quality (“TCEQ”), the interval from the land surface to 20 feet below the base of the Cretaceous-age beds must be protected. In this area, the base of Cretaceous-age beds is estimated to occur at a depth of 1,075 feet (TCEQ Letter dated February 13, 2007). The proposed maximum injection volume is 25,000 barrels per day and the maximum surface injection pressure is 2,500 psig.

The top of the Barnett Shale is ± 6,500 feet and the shale is ±150 feet thick in this area. The top of the Ellenburger Formation is at 6,640 feet. The proposed disposal interval is from 6,816 feet to 8,720 feet subsurface depth. IWOC filed a cement bond log with its application. The cement bond log run on this well was run without pressure on the casing because this is an open-hole completion from the casing shoe down to total depth.

Some concerns were noted by the Commission Staff during the administrative review process, as the proposed disposal interval is only about 160 feet below the top of the Ellenburger and there is minimal cement across the Barnett Shale and Ellenburger formations. To address these concerns, IWOC amended its application to include the running and cementing of a 5 ½" liner from the 7" casing shoe down to 6,890 feet. The amended disposal interval is from 6,890 feet to 8,720 feet subsurface depth with a corresponding packer setting to be within 100’ of the 5 ½” liner casing shoe.

There are no wells within the ¼ mile radius of the proposed disposal well. One well is present within a ½ mile radius and only a “scout ticket” was found for that well. The well is the Telegram - J.W. Burns Lease, Well No. 1, drilled in 1922 to a total depth of 4,575 feet. The well was apparently a dry hole and there is no conclusive evidence of plugging. However, the well is over 2,000 feet shallower than the top of the proposed disposal interval.
The Facility

IWOC believes that the specific location of the facility will have minimal adverse effects on the general public, yet still be beneficial to the industry. The entrance to the facility is on County Road 1191, about ½ mile off of State Hwy 174 on which truck traffic already exists. The primary containment facility has already been constructed. It is a large above-ground concrete vat (approx. 70’x100’ with a capacity of ±4300 barrels) into which trucks will unload. Water unloaded from trucks will flow through various chambers to allow any solid particles to settle. In addition, the Commission would require that the vat be emptied at least once a year for inspection. The vat will also be covered to keep birds and other animals out. No Spill Prevention, Control and Countermeasure Plan (“SPCC”) was submitted by IWOC but it believes that the completion of the subject well and the design of the surface facility protects both surface and subsurface usable quality water.

IWOC’s witness submitted a map showing the 2008 TXDOT average daily vehicle count on the highways within a 20 mile radius of the proposed disposal facility. The average daily vehicle count on State Hwy 174 next to the facility was 1,750. Proceeding north on State Hwy 174 to the Hill-Johnson County line the vehicle count increased to 6,400 and at the intersection of State Hwy 174 and State Hwy 67 in central Johnson County the vehicle count increased to 19,300. Proceeding west on State Hwy 67 approximately four miles, the highest vehicle count shown was 32,000. The witness felt that the proposed injection facility was ideally situated in an area that had the lowest daily vehicle count which would result in fewer accidents and less road damage.

Public Interest - Industry Need

IWOC believes this disposal well and facility are in the public interest because it will facilitate the anticipated development of the Barnett Shale trend in Bosque County. IWOC claims that the proposed well and facility will result in less travel time and wait time for disposing of produced water. This in turn will reduce the overall completion expense for a new well and monthly lease operating expenses related to saltwater disposal. The lower costs will result in the recovery of additional reserves.

IWOC asserts there is an industry need for a commercial disposal facility in this area of Bosque County. IWOC believes that the Guru SWD facility will primarily service the industry for wells completed within a 20 mile radius. Currently, there are 18 injection wells/permits issued for disposal wells within 20 miles of the subject site. All of the wells are permitted for Ellenburger Formation disposal. Fifteen of the wells are classified as “public” access wells and the remaining three are private injection wells. IWOC did not provide any evidence or documentation showing that other commercial wells in neighboring counties were operating at capacity or that lengthy wait times were prevalent at those facilities.
A review of drilling permits and completions demonstrates a high density of wells to the north-northeast of the proposed facility in central Johnson County. Barnett Shale wells must be fracture stimulated with 30,000 to over 100,000 barrels of water, which must be disposed of subsequent to its use in completing the well. IWOC contends that the development trend shows a progression from Wise and Denton Counties southward into Parker and Johnson Counties. Further, the leading edge of the development has now extended into Hood, Somervell, Hill and Bosque Counties.

IWOC observed that, although the number of well completions in the counties associated with the Barnett Shale trend is declining, there is still enough to justify another disposal well. For example, in Johnson County, there were 891 completions in 2007 and 727 completions in 2008. Year to date in 2009, there are 106 completions. In Bosque, Hill, Hood and Somervell Counties, there were 344 completions in 2007 and 309 completions in 2008. Year to date in 2009, there are 22 completions. IWOC asserted that these new completions will result in increased demand for associated services, such as salt water disposal. In addition, IWOC noted that several disposal facilities had recently filed for bankruptcy, thereby reducing the available disposal capacity within the twenty mile radius.

The owners of IWOC admit that they have no expertise or experience in the oil/gas industry or in the operation of a commercial saltwater disposal facility. They will employ personnel with experience and guidance to set-up and manage the facility or contract with another operator as a partner if the Commission grants the subject permit. However, IWOC testified that the facility will be constructed in accordance with all the requirements that are associated with a commercial disposal well facility.

IWOC has a current approved Form P-5 (Organization Report) and posted a $25,000.00 financial assurance bond. IWOC does not currently have any general liability insurance.

Notice was given to the affected persons, the County Clerk of Bosque County, all surface owners of adjoining tracts and all operators within one-half mile. Notice of this application was published in the *Bosque County News*, a newspaper of general circulation in Bosque County, on July 29, 2009.

**Protestants’ Evidence**

Protestants believe that the application for the proposed commercial disposal well and facility should be denied. Protestants’ evidence fell into several general categories: 1) IWOC’s failure to establish a current need for an additional commercial disposal facility in Bosque County; 2) potential of pollution of surface or subsurface waters; 3) potential negative consequences to the development of the Barnett Shale in the vicinity of the proposed well due to the poor cementing of the production casing and the volumes of fluid injected into the underlying Ellenburger Formation; 4) noise, lighting, and odor nuisances which would result from the operation of the facility; and 5) increased heavy truck traffic on Country Road 1191, causing county road deterioration and public safety concerns.
Additionally, several individuals residing in the general vicinity provided statements in opposition to the proposed facility citing similar concerns.

**Day-North’s Case**

The Day-North protestants are adjacent property owners of livestock ranches. There is a small spring fed creek that runs from the disposal facility tract and continues across their property. This creek runs into Plowman Creek and ultimately reaches the Brazos River. There are also stock ponds on the property, which are downhill from the proposed disposal facility. These protestants also have domestic water wells on their property. Aquifers underlying the property are the Paluxy, First Trinity and Second Trinity. They are also concerned about an old well, the J.W. Burns Well No. 1, that was drilled back in the 1920's that is only 1100 feet from the proposed facility.

These protestants believe that the site location for the proposed facility is not suitable for a commercial industrial facility. The facility is located on County Road 1191, which is a narrow county road only about 20 feet in width. There are numerous school bus stops on the county road and increased traffic would create a hazard for school children. The facility is about ½ mile off of State Hwy 174. The turn off from State Hwy 174 onto County Road 1191 is not tractor-trailer friendly, as it is difficult in a regular vehicle.

**Barnett Shale Development in Bosque County**

The Day-North protestants do not believe that there is a need for the proposed disposal well at this time, as Barnett Shale development has not occurred in Bosque County. This belief is substantiated by a review of past and current activity. A general investigation was performed by mapping the locations of permitted wells and the completions over time, by county for the area within 20 miles of the proposed well. The investigation confirms that the Barnett Shale development has trended from north to south. However, recent permits issued in Johnson County, have moved back to the north, away from the Johnson-Bosque County Line. In the adjoining counties of Hill, Hood and Somervell, there have been only 59 total drilling permits issued in 2009.

Protestants observed that Barnett Shale activity in Bosque County has been minimal with few changes in the last several years. In Bosque County, there have been 44 total drilling permits issued and, as of this hearing, only 1 drilling permit had been issued in 2009. Of the 44 total drilling permits, there are currently 21 Barnett Shale gas wells, 13 undrilled locations, 6 unsuccessful wells and one injection well. The 21 producing wells have a cumulative production through August 2009 of 888.1 MMCFG or 42.3 MMCFG per well. The average daily production is only 107 MCFG per well.

Although no reserve study was performed, the protestants allege that the wells are not economical. Protestants therefore argued that there is no evidence of massive development of the Barnett Shale in Bosque County. Protestants urged that success breeds drilling permits and successful Barnett Shale wells have not been completed in any
part of Bosque County. In addition, the protesters noted that a 6,207 acre lease on Whiskey Canyon Ranch, which is located to the north adjacent to the proposed disposal well, had expired and there were no pending offers or inquiries to lease the acreage.

**Existing Disposal Capacity in the Area**

The Day-North Protestants asserted the current capacity of the saltwater disposal wells within 20 miles of the subject facility is more than adequate to service industry. There are 18 facilities with a "permitted" capacity of 375,000 BWPD. Three are private or non-commercial facilities and two are permitted as commercial but are only used for disposal of water generated by Chesapeake. The protesters noted that a review of the P18 reports submitted by IWOC shows that the injection volumes at most of the public disposal wells within the 20 mile radius are down by at least fifty percent. In addition, there are several disposal wells that are permitted but not yet completed, as well as, several disposal well companies that have filed for bankruptcy possibly due to the lack of disposal volumes.

The protestant’s witness testified that he was a truck driver and had been hauling salt water in this area for over four and a half years. He knew that the frac technology had improved dramatically, as fifty percent less water is now used. He stated that when he worked for Salty’s SWD in 2007, it would take two to three weeks on a typical flow-back with 20 trucks running 24 hours a day. Today, he has only five trucks dedicated to a flow-back and can haul the water in less than three days. He testified that he has personally seen the effects of the reduced water hauling volumes and knows of several disposal well companies that have filed for bankruptcy.

In addition, the protesters conducted actual site inspections at some of the salt water disposal facilities for the purpose of determining wait times. All of the active facilities appeared to have additional capacity and no appreciable wait times.

**Increased Traffic and Public Interest**

The Day-North Protestants contended that there is not an industry need for a commercial well at this site or in this general geographical area. These protesters believe that IWOC failed to meet its burden of proof to support the proposed permit because it did not investigate how potential increased truck traffic will affect the public interest. Protestants contend this public interest issue must be addressed pursuant to the Texas Water Code Sect 27.051(b)(1).

**Adequacy of Cement Bond**

The Day-North Protestants also contend that the subject well has not been properly completed to assure zonal confinement of injected fluids. The top of the cement behind the bottom of the longstring is found at about 5,770 feet and from the DV Tool at 3,415 feet up to 1,350 feet. The protesters believe there should be excellent cement bonding through the entire cased Ellenburger and Barnett Shale formations. Interpretation of the cement
bond log from the casing shoe at 6,816 feet to the top of the Barnett Shale does not establish good bonding, with less than 20 feet indicated to be 60% bonded, which is the accepted industry standard for good bonding. Good bonding does not occur until 6,500 feet, which is about the depth of the top of the Barnett Shale. The top of the Ellenburger is at 6,640 feet.

With very few feet of good bonding (60% or more) between the casing shoe and 6,500 feet, there is no assurance that the injected fluids will be confined only to the Ellenburger Formation. The protestants opined that it would be almost impossible to squeeze cement the long string or cement a casing liner, since there is over 1,900 feet of open hole below the casing shoe. They believe that any attempt to cement would cause lost circulation in the well and the cement would be lost downhole in the exposed Ellenburger formation.

**Bosque County’s Case**

The County Judge and the County Attorney of Bosque County attended the entire hearing. The Honorable Judge Cole Word asserts that the proposed facility is not in the public interest due to the potential impact on county roads. The county roads, paved or unpaved, were not designed to handle industrial truck traffic.

The speed limit on County Road 1191 that accesses the disposal location is 15 mph and the road is 20-25 feet wide. County Road 1191 is an unpaved road in an area that has developed into a primarily residential area now rather than a rural area. The county contends that County Road 1191 is too narrow for continual 18-wheeler truck traffic, especially when considering the impact on residential vehicular traffic and pedestrians, including children who live in the area.

Further, State Highway 174 is a major artery from Dallas and Ft. Worth areas to Lake Whitney (2.3 million visitors a year according the Corps of Engineers). The speed limit on State Highway 174 is 70 miles per hour. In addition, there are sand and gravel companies hauling on Hwy 174. The addition of even more heavy industrial truck traffic will increase not only maintenance expenses for State Highway 174, but will increase accidents and injuries from the mix with automobiles.

The County is not opposed to a disposal facility, but wants to make sure it is in the right area. The county does not believe this facility is in the public interest because it is in the middle of a residential subdivision. The county is specifically concerned that the entrance to the facility is in close proximity to an existing school bus stop.

To address these concerns, the Bosque County Commissioners passed two County Ordinances, Ordinances No. 7 and 8 on March 12, 2007. Ordinance No. 7 makes it unlawful to locate an industrial facility motor vehicle entrance with access to a county road within 500 feet of a school-bus stop if the entrance will be used by more than 25 vehicles during any 24 hour period. Ordinance No. 8 makes it unlawful to locate an industrial facility
motor vehicle entrance on a county road if the entrance will be used by more than 50 vehicles during any 24 hour period. Industrial facilities are defined in the ordinance as including waste disposal facilities for petroleum or petroleum bi-product waste.

**Statements in Opposition**

Joe Cooper, general manager of the Middle Trinity Groundwater Conservation District, stated that the district currently serves Bosque, Comanche and Erath Counties and is charged by Chapter 36 of the Water Code to protect the quality and quantity of groundwater resources. He testified that the Trinity Aquifer is one of the state's nine major aquifers and underlies the entirety of Bosque County. Since the proposed injection site is within the boundaries of the Trinity Aquifer, the Board of Directors mandates that they oppose the application. The district has a policy whereby it would retract its opposition if the applicant performs an initial benchmark fresh water test of the site of the proposed injection well before any water is ever injected. In addition, four different monitoring well sites must be selected within a mile of the proposed injection well strategically located, north, south, east and west. These monitor wells must be tested once a year at the expense of the applicant and the results of those tests shared with the Groundwater District. Mr. Cooper stated that the applicant has not committed to this policy and therefore, the Groundwater District was appearing in protest of this application.

Protestant Merle Dean Frailey, Jr. is an adjacent property owner and is concerned that any spill from the facility would run onto his property. He and his wife and daughter live on 100 acres and their home is about 4,000 feet from the proposed disposal well. Mr. Frailey is concerned about the possibility of fumes, dust, noise and lights from the facility. He is also concerned about the possible adverse effects of the disposal to fresh water resources. He believes that his family’s quality of life will be diminished and that his property value will decrease as a result of the disposal well operation.

Numerous individuals participated in the hearing either to provide statements, or to ask questions of applicant’s witnesses. Collectively, the testimony, statements and letters submitted in opposition to the facility assert that the proposed commercial disposal facility will have adverse effects on traffic safety, property values, and quality of life in and around the area. Several individuals expressed concerns about air pollution and contamination of both surface and subsurface waters. They request the Commission consider these issues in determining whether the proposed facility is in the public interest.

**APPLICABLE AUTHORITY**

Texas Water Code Section 27.051 (b) provides guidelines with respect to permitting disposal and injection wells:

(b) The railroad commission may grant an application in whole or part and may issue the permit if it finds:
(1) that the use or installation of the injection well is in the public interest;
(2) that the use or installation of the injection well will not endanger or injure any oil, gas, or other mineral formation;
(3) that, with proper safeguards, both ground and surface fresh water can be adequately protected from pollution; and
(4) that the applicant has made a satisfactory showing of financial responsibility if required by Section 27.073 of this code.

EXAMINERS’ OPINION

In considering an application for a commercial disposal well and the affiliated facility, the Commission may consider an operator’s resources and ability to comply with the provisions of the Texas Natural Resources Code, Commission rules and the conditions and provisions of Commission permits and orders. This is particularly true here as it appears applicant may be the operator of a commercial disposal facility in name only with some other unidentified persons or entity engaging in the actual construction and day-to-day operations. There is an admitted absence of knowledge and expertise in the design and operation of a commercial disposal well facility and no evidence that applicant has any of the necessary financial resources to support such operations.

Public Interest - Industry Need

The examiners evaluated the application under Texas Water Code Section 27.051 (b)(1) which requires the Railroad Commission, when issuing a permit to find “that the use or installation of the injection well is in the public interest”. The term “public interest” is not defined under Chapter 27 of the Texas Water Code. Additionally, the term is not defined in Statewide Rules 9 or 46. In this case, IWOC’s argument concerning public interest focused on the third factor listed in the Discussions of Law, Practice and Procedure that extra disposal capacity is needed in the area of the proposed well to facilitate the future development of the Barnett Shale. The evidence presented by IWOC addressed two issues, the water use associated with fracture stimulation of Barnett Shale wells and the trend of development in the area.

It was undisputed that extensive water use is associated with fracture stimulation of Barnett Shale wells and that the safest method for the disposal of water used is through underground injection. However, the parties hotly contested the question of whether the development trend of the Barnett Shale is increasing in Bosque County. Based on the applicant’s testimony at the hearing, and the nature of the evidence presented, the examiners believe the applicant seeks to get out in front of the anticipated Barnett Shale development by obtaining a Commission permit in advance of the predicted demand for a commercial disposal facility. The evidence supplied by applicant to demonstrate the future need for the facility were maps showing well completions and locations based on exhibits
generated from queries to the Commission’s Drilling Permit System Database in the Barnett Shale trend area. This result is used to project the future need for applicant’s proposed commercial disposal facility.

The protestants claim that applicant failed to meet the required burden of proof because: 1) applicant did not provide any evidence that existing disposal wells in the area are insufficient to meet current need; 2) applicant provided no evidence of a contract for the use of the facility; 3) applicant admitted that there were no wells or drilling activities within the immediate area of the proposed well; and 4) the issuance of a drilling permit for a Barnett Shale well is not direct evidence of future demand for an additional commercial disposal facility.

The burden of proof to establish that a proposed commercial disposal facility is in the “public interest” as required under Texas Water Code §27.051(b)(1) is placed on the applicant for the permit. “Public interest” is typically established by showing that: 1) the safe and proper disposal of saltwater serves the public interest; and, 2) the economic disposal of produced saltwater serves the public interest as it allows for the recovery of additional reserves due to the proximity to the new disposal facility, reserves that would otherwise be uneconomical to produce. The examiners believe that the competing reviews of Commission permits, well completions and production and excess capacity at existing commercial disposal facilities provide an indisputable answer to this question. In fact, a review of the P18 reports submitted by IWOC shows that the injection volumes at most of the public disposal wells within the 20 mile radius are down by at least fifty percent from January 2008 to August 2009. In addition, there are several disposal wells that are permitted but not yet completed, as well as several disposal well companies that have filed for bankruptcy possibly due to the lack of disposal volumes.

The Commission failed to find an industry need in the previous WEC application that was denied in 2008. The evidence in this case is weaker, as the development in the Barnett Shale has been trending downward since 2007 which was the most active period of development. In addition, the increased development in Bosque County has not come to fruition and no operators or saltwater haulers appeared at the hearing or submitted statements expressing a need for additional disposal capacity.

Applicant’s evidence only focused on the potential future need for a commercial disposal facility based primarily on a county wide drilling permit search for Bosque County and its study of Barnett Shale development in adjacent counties. This study does not address the issue of whether the proposed well will serve the public interest by allowing for the recovery of additional reserves because it does not directly establish an industry need for the well. It only hypothesizes a potential future need. As this was the only evidence presented addressing public interest, the examiners conclude that the proposed facility is not in the public interest in order to meet a current industry need for commercial disposal facilities to support the continued development of natural gas resources in the Barnett Shale trend.
Public Interest - Increased Traffic

Bosque County’s opposition to the proposed facility was based in its entirety on the potential impact of increased heavy truck traffic on county maintained roads, and specifically the impact on State Highway 174 and County Road 1191. Concerns regarding traffic within the immediate vicinity of the proposed facility were echoed by the other protestants and individuals providing statements. The County passed two ordinances to address the impact of the facility on county infrastructure and traffic safety.

The Commission action of granting a permit, whether it be for an oil or gas well, commercial disposal well, or other Commission regulated activity, does not prevent local government from taking any action over which it can properly exercise its jurisdiction. The Commission approval of a permit would not invalidate the ordinances passed by the county. In other words, the fact that a permit is granted by the Commission, does not relieve an operator from complying with any applicable local ordinances. Regardless of any Commission action granting a permit, an operator will have to address any applicable ordinances.

The general concerns regarding traffic safety on State Highway 174 and County Road 1191 are obviously important to the local residents. The concerns with respect to roadway design, traffic studies, traffic safety, and other traffic related infrastructure issues are subject to the jurisdiction of the appropriate federal, state, and local authorities. As previously discussed, Bosque County has already undertaken action in this regard with respect to County Road 1191. The examiners have considered the road safety concerns and there is evidence on both sides of the issue. However, it is not necessary to decide whether protestant’s road safety concerns, standing alone, would warrant disapproval of the application. Regardless of the road safety issue, the examiners believe that the application should be denied based on IWOC’s failure to prove that use or installation of the proposed injection well is in the public interest and would not endanger or injure any oil, gas or other mineral formation.

Protection of Water Resources

The usable quality water above and below the ground surface will not be placed at risk of pollution or contamination. The surface casing is set and cemented from 1,130 feet to surface, as confirmed by a cementing affidavit Form W-15.

Protection of Oil and Gas Resources

Based on the testimony concerning the cement bond log, the examiners believe that there is little if any cement or cement bonding to effectively isolate the Ellenburger and Barnett Shale formations. Interpretation of the cement bond log from the casing shoe at 6,816 feet to the top of the Barnett Shale shows less than 20 feet of cement indicated to be 60% or more bonded, which is the accepted industry standard for good bonding. Good bonding does not occur until 6,500 feet, which is about the depth of the top of the Barnett.
Shale. The examiners also agree with the protestant’s assertion that any attempt to cement the proposed injection well would cause a lost circulation condition in the over 1,900 feet of exposed Ellenburger formation and the cement would probably be lost downhole. The examiners conclude that the applicant did not meet its burden of proof on this issue.

CONCLUSION

The protestants contested every element the Commission is required to evaluate with respect to the issuance of a permit under Texas Water Code Section 27.051(b). IWOC did not provide the necessary evidence for the examiners to recommend the findings of fact required under Texas Water Code Section 27.051(b)(1) and (2). Accordingly, the examiners recommend the application be denied.

FINDINGS OF FACT

1. Notice of hearing was given to the affected persons, the County Clerk of Bosque County, all surface owners of adjoining tracts and all operators within one-half mile. Notice of this application was published in the Bosque County News, a newspaper of general circulation in Bosque County, on July 29, 2009.

2. The Guru SWD No. 1 was drilled in April 2007 and is completed in a manner to protect usable quality water.
   a. The Texas Commission on Environmental Quality recommends that usable-quality water be protected to 1,095 feet in the area of the proposed well.
   b. The subject well has 1,130 feet of 9 3/8" surface casing cemented to surface.
   c. The only well within 1/2 mile of the proposed injection well, the Telegram - J.W. Burns Lease, Well No. 1, was drilled in 1922 to a total depth of 4,575 feet. The well was apparently a dry hole and there is no conclusive evidence of plugging. However, the well is over 2,000 feet shallower than the top of the proposed disposal interval.

3. IWOC failed to show that the use of the proposed commercial disposal facility would not endanger or injure any oil, gas, or other mineral formation.
   a. The subject well has the top of the cement behind the bottom of the longstring at about 5,770 feet and from the DV Tool at 3,415 feet up to 1,350 feet.
   b. The cement bond log from the casing shoe at 6,816 feet to the top of
the Barnett Shale shows less than 20 feet of cement indicated to be 60% or more bonded, which is the accepted industry standard for good bonding.

c. Good bonding does not occur until 6,500 feet, which is about the depth of the top of the Barnett Shale.
d. The well has little if any cement or cement bonding to effectively isolate the Ellenburger and Barnett Shale formations.
e. Any attempt to cement the proposed injection well would cause a lost circulation condition in the over 1,900 feet of exposed Ellenburger formation and the cement would probably be lost downhole.

4. IWOC did not establish a current or imminent future need for additional disposal capacity in the area of the proposed commercial disposal facility or otherwise establish that use or installation of the proposed injection well is in the public interest.

a. The current capacity of the saltwater disposal wells within 20 miles of the subject facility is more than adequate to service industry, as there are 18 facilities with a “permitted” capacity of 375,000 BWPD.
b. In Bosque County, there have been 44 total drilling permits issued and, as of this hearing, only 1 drilling permit had been issued in 2009. In the adjoining counties of Hill, Hood and Somervell, there have been only 59 total drilling permits issued in 2009.
c. No saltwater hauler or operator testified at the hearing regarding a need to use the proposed disposal well.
d. Frac technology has improved dramatically, as fifty percent less water is now used.
e. A review of the P18 reports submitted by IWOC shows that the injection volumes at most of the public disposal wells within the 20 mile radius are down by at least fifty percent from January 2008 to August 2009.
f. Site inspections at some of the salt water disposal facilities showed that the facilities had additional capacity and no appreciable wait times.
g. There are several disposal wells that are permitted but not yet completed, as well as, several disposal well companies that have filed for bankruptcy possibly due to the lack of disposal volumes.
h. A 6,207 acre lease on Whiskey Canyon Ranch, which is located to the north adjacent to the proposed disposal well, has expired and there were no pending offers or inquiries to lease the acreage.

5. Installation and use of the proposed disposal well will result in a heavier volume of truck traffic along State Hwy 174 and County Road 1191 and potentially have an impact on traffic conditions in the area of the disposal well. The county roads, paved or unpaved, were not designed to handle industrial type truck traffic.

6. IWOC has a current approved Form P-5 (Organization Report) and posted a $25,000.00 financial assurance bond. IWOC does not currently have any general liability insurance.

CONCLUSIONS OF LAW

1. Proper notice was timely given to all parties entitled to notice pursuant to applicable statutes and rules.

2. All things have occurred and have been accomplished to give the Commission jurisdiction in this case.

3. The applicant has not complied with the requirements for approval set forth in Statewide Rule 9 and the provisions of §27.051 of the Texas Water Code.
   a. IWOC failed to meet its burden of proof to establish that a proposed commercial disposal facility is in the "public interest" as required under Texas Water Code §27.051(b)(1).
   b. IWOC failed to show that the use of the proposed commercial disposal facility would not endanger or injure any oil, gas, or other mineral formation as required under Texas Water Code §27.051(b)(2).
EXAMINERS’ RECOMMENDATION

Based on the above findings of fact and conclusions of law, the examiners recommend that the application of IWOC, Inc. for commercial disposal authority pursuant to Statewide Rule 9 for the Guru SWD Lease, Well No. 1, be denied.

Respectfully submitted,

Richard D. Atkins, P.E.  
Technical Examiner

James M. Doherty  
Legal Examiner