STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION



**IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:**

**OWL SWD OPERATING, LLC APPLICATION FOR AUTHORIZATION TO INJECT** **Case No. 15723**

# OWL's OPENING LEGAL BRIEF

## I. INTRODUCTION

OWL SWD, LLC ("OWL") files this legal brief as requested by the Hearing Examiners at the conclusion of the public hearing on its application for a permit for the proposed Bobcat SWD No. 1 well. This hearing of this matter currently is continued until August 31, 2017 due to additional notices as required by the Hearing Examiners.

This legal brief identifies the key New Mexico statutes and the state and federal rules related to the granting of OWL's permit application. OWL reserves its written closing arguments, proposed findings, and responses to legal briefs filed by the other parties. Consequently, this legal brief discusses the statutory and rule requirements but does not address the specific facts of this case based upon the application and the testimony and does not present argument based on the application of the evidence to the law. OWL reserves those arguments for its filings due on September 22.

The Oil Conservation Division ("OCD") and the State Land Office ("SLO") filed prehearing statements in this matter and presented technical witnesses. The City of Jal did not file

a prehearing statement and did not present any testimony, but appeared through counsel at the meeting, was allowed to make a statement and to cross examine witnesses, and filed a legal brief.

OCD's prehearing statement raised a concern whether the proposed injection would impact the Capitan Reef Aquifer. SLO's prehearing statement contends that ground water within the Yates, Seven Rivers, and Tansill formations exists with concentrations of total dissolved solids ("TDS") less than 10,000 mg/l and is "protectable ground water," and such ground water may be impacted by the proposed injection. The City of Jal in general raised concerns that the proposed injection could affect its present or potential future water supplies. Consequently, while this brief identifies all of the legal requirements relating to the granting of OWL's application, it focuses on the provisions relating to the protection of water supplies and ground water quality.

OCD also raised an issue with respect to correlative rights. During the hearing, the Hearing Examiners determined that additional owners of mineral interests outside of the area for which notice of the application was required under 19.15.26.8.B(2) NMAC and within the Yates/Seven Rivers formation should receive notice of the application. The hearing is presently continued until after the additional notices have been sent. OWL will file documentation of the additional notices before August 31.

## II. RELEVANT PROVISIONS OF THE OIL AND GAS ACT

The Oil and Gas Act ("Act") establishes the basic framework and jurisdiction of the Oil Conservation Commission ("Commission") and the Oil Conservation Division ("Division") to regulate the injection of produced water. First, a basic tenet of the Act is to prohibit waste: "The production or handling of crude petroleum oil or natural gas of any type or in any form, or the handling of products thereof, in such manner or under such conditions or in such amounts as to constitute or result in waste is each hereby prohibited." § 70-2-2 NMSA 1978. As it relates to this

matter, "waste" is defined by the Act as follows: "'underground waste' as those words are generally understood in the oil and gas business, and in any event to embrace the inefficient, excessive, or improper, use or dissipation of the reservoir energy, including gas energy and water drive, or any pool, and the locating, spacing, drilling, equipping, operating or producing, of any well or wells in a manner to reduce or tend to reduce the total quantity of crude petroleum oil or natural gas ultimately recovered from any pool, and the use of inefficient underground storage of natural gas." § 70-2-3(A) NMSA 1978. The Commission and the Division have the authority and duty to prevent waste and to protect correlative rights by making and enforcing rules, regulations and orders. § 70-2-3(A) NMSA 1978.

The Act further provides more specific authority to the Division to make rules, regulations and orders "to prevent the drowning by water of any stratum or part thereof capable of producing oil or gas or both oil and gas in paying quantities and to prevent the premature and irregular encroachment of water or any other kind of water encroachment that reduces or tends to reduce the total ultimate recovery of crude petroleum oil or gas or both oil and gas from any pool." § 70-2-12(B)(4) NMSA 1978. The Division also is authorized "to regulate the disposition of water produced or used in connection with the drilling for or producing of oil or gas or both and to direct surface or subsurface disposal of the water, including disposition by use in drilling for or production of oil or gas, in road construction or maintenance or other construction, in the generation of electricity or in other industrial processes, in a manner that will afford reasonable protection against contamination of fresh water supplies designated by the state engineer." § 70-2-12(B)(15) NMSA 1978.

Thus, the Act establishes two basic principles for the regulation of the disposal by injection of produced water from oil and gas operations:

1. The injection for disposal of produced water must be conducted in a manner that avoids waste; and

2. The injection for disposal of produced water must be conducted in a manner that affords reasonable protection against contamination of fresh water supplies designated by the state engineer.

With regard to the second point, "fresh water supplies designated by the state engineer are understood to be water supplies with a total dissolved solids ("TDS") concentration of 10,000 mg/l or less based upon a 1967 letter from the State Engineer.

## III. RULES GOVERNING INJECTION OF PRODUCED WATER

The Commission has adopted rules under the Act that prohibit waste and that specify reasonable protections against contamination of fresh water supplies. First, with regard to "waste," the basic rule requirement is found in 19.15.2.8 NMAC:

> **A.** The production or handling of oil or gas of any type or in any form or the handling of oil or gas products in a manner, under conditions or in an amount as to constitute or result in waste is prohibited.
>
> **B.** Operators, contractors, drillers, carriers, gas distributors, service companies, pipe pulling and salvaging contractors, treating plant operators or other persons shall conduct their operations in or related to the drilling, equipping, operating, producing, plugging and abandonment of oil, gas, injection, disposal and storage wells or other facilities in a manner that prevents waste of oil and gas, the contamination of fresh waters and shall not wastefully utilize oil or gas or allow either to leak or escape from a natural reservoir or from wells, tanks, containers, pipe or other storage, conduit or operating equipment.

In addition to these general requirements, wells are subject to specific requirements for sealing off strata:

> **19.15.16.9 SEALING OFF STRATA:**
>
> **A.** During the drilling of an oil well, injection well or other service well, the operator shall seal and separate the oil, gas and water strata above the producing or injection horizon to prevent their contents from passing into other strata.
>
> **B.** The operator shall ensure that fresh waters and waters of present or

probable value for domestic, commercial or stock purposes are confined to their respective strata and are adequately protected by division-approved methods. The operator shall take special precautions by methods satisfactory to the division in drilling and abandoning wells to guard against loss of artesian water from the strata in which it occurs, and the contamination of artesian water by objectionable water, oil or gas.

**C.** The operator shall ensure that water is shut off and excluded from the various oil- and gas-bearing strata that are penetrated. The operator shall ordinarily make water shut-offs by cementing casing.

Compliance with these basic requirements is further accomplished by the requirement to obtain a permit for injection:

**19.15.26.8 INJECTION OF FLUIDS INTO RESERVOIRS:**

**A.** Permit for injection required. An operator shall not inject gas, liquefied petroleum gas, air, water or other fluid into a reservoir or formation to maintain reservoir pressure or for secondary or other enhanced recovery or for storage or inject water into a formation for disposal except pursuant to a permit the division has granted after notice and hearing, or that the division has granted by administrative order as authorized in 19.15.26.8 NMAC. The division shall grant a permit for injection under 19.15.26.8 NMAC only to an operator who is in compliance with Subsection A of 19.15.5.9 NMAC. The division may revoke a permit for injection issued under 19.15.26.8 NMAC after notice and hearing if the operator is not in compliance with Subsection A of 19.15.5.9 NMAC.

Section 19.15.26.8 NMAC further addresses requirements for water disposal wells:

**E.** Water disposal wells.

**(1)** The director may grant an application for a water disposal well administratively, without hearing, only when the waters to be disposed of are mineralized to such a degree as to be unfit for domestic, stock, irrigation or other general use and when the waters are to be disposed of into a formation older than Triassic (Lea county only) and the division receives no objections pursuant to Subsection C of 19.15.26.8 NMAC.

**(2)** The division shall not permit disposal into zones containing waters having total dissolved solids concentrations of 10,000 mg/l or less except after public notice and hearing, provided that the division may, by order issued after public notice and hearing, establish exempted aquifers for such zones where the division may administratively approve the injection.

Specific requirements for casing and cementing of injection wells also are specific by rule:

**19.15.26.9 CASING AND CEMENTING OF INJECTION WELLS:** The operator of a well used for injection of gas, air, water or other medium into a formation shall case the well with safe and adequate casing or tubing so as to

> prevent leakage, and set and cement the casing or tubing to prevent the movement of formation or injected fluid from the injection zone into another zone or to the surface around the outside of a casing string.

To summarize the rule requirements, the Division or the Commission may issue a permit for a new injection well for the disposal of produced water following a hearing based on findings that:

1. The injection will be conducted in a manner that will not constitute or result in waste (or that will prevent waste);

2. The injection will be conducted in a manner that will not contaminate fresh waters;

3. The well will be constructed and operated in a manner that complies with the requirement for sealing off strata, including the casing and cementing requirements.

4. The operator is in compliance with 19.15.5.9 NMAC.

A few key terms are defined by rule. First, the term "waste" is defined consistent with the definition in the Act quoted above. 19.15.2.7.W(1) NMAC. Second, the term "fresh water" is defined as follows:

> **(3)** "Fresh water" to be protected includes the water in lakes and playas (regardless of quality, unless the water exceeds 10,000 mg/l TDS and it can be shown that degradation of the particular water body will not adversely affect hydrologically connected fresh ground water), the surface waters of streams regardless of the water quality within a given reach, and underground waters containing 10,000 mg/l or less of TDS except for which, after notice and hearing, it is found there is no present or reasonably foreseeable beneficial use that contamination of such waters would impair.

19.15.2.7.F(3) NMAC. As it relates to this case, only the portion of the definition of "fresh water" relating to "underground waters" applies. If the relevant part of the definition of "fresh water" is used to replace that term in point no. 2 stated above, that requirement would read as follows:

2. The injection will be conducted in a manner that will not contaminate underground waters containing 10,000 mg/l or less of TDS except for which, after notice and hearing, it is found

there is no present or reasonably foreseeable beneficial use that contamination of such waters would impair.

The provision relating to "exempt aquifers" in 19.15.26.8.E(2) provides for the designation of an exempt aquifer for a zone where the division may **administratively** approve applications for permits for injection. OWL's application is not being processed administratively, but is being considered following public notice through the hearing process. Consequently, there is no need for any designation of an "exempt aquifer" to issue the permit. Instead, OWL's application may be granted based upon a finding that there is no present or reasonably foreseeable beneficial use that contamination of underground waters containing 10,000 mg/l or less of TDS would impair.

That said, the rules define "exempted aquifer," and that definition may be of some use to guide the Hearing Examiners:

> **(5)** "Exempted aquifer" means an aquifer that does not currently serve as a source of drinking water, and that cannot now and will not in the foreseeable future serve as a source of drinking water because:
>
> **(a)** it is hydrocarbon producing;
>
> **(b)** it is situated at a depth or location that makes the recovery of water for drinking water purposes economically or technologically impractical; or
>
> **(c)** it is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption.

19.15.2.7.E(5) NMAC. Again, for clarity, OWL has not sought, and does not need, a designation of an "exempted aquifer" in order for its application to be granted following this hearing. That said, and assuming that the geologic formation (or part of a formation) where OWL proposes to inject (the Yates/Seven Rivers formations) would even qualify as an "aquifer," the Hearing Examiners might consider, among other things, the criteria for an "exempted aquifer" in deciding whether there is any present or reasonably foreseeable future use of the waters that may exist within the proposed injection zone.

## IV. RELEVANT FEDERAL SAFE DRINKING WATER ACT PROVISIONS

The genesis of the language now contained in 19.15.26.8 is in Rule 701, adopted by Commission Order R-6702 in Case 7272, issued on June 17, 1981. In that same Order, the Commission also adopted by the definitions of "aquifer," "exempted aquifer" and "underground source of drinking water." The primary purpose for the Commission to adopt this rule, and related rules and rule amendments, was to allow the Division and the Commission to issue permits for Class II injection wells under the federal Safe Drinking Water Act ("SDWA"). The SWDA allows a state to apply for authority to issue permits in lieu of the need to obtain a federal underground injection control ("UIC") program permit. The Division applied for and obtained approval from the U.S. Environmental Protection Agency to issue permits for injection wells related to the production of oil and gas. *See* 47 Fed. Reg. 5412 (Feb. 5, 1982). Consequently, a permit issued by the Division obviates the need for a federal permit. *See* 40 C.F.R. § 146.1(b). Because the Division has the authority to issue permits in lieu of a federal permit, the SDWA rule requirements are not legally applicable to this matter, and instead the criteria under the Oil and Gas Act and the rules adopted thereunder govern. However, the SDWA rule language may be useful to the Hearing Examiners interpreting the state requirements.

The criteria for a state permit program to issue permits in lieu of the federal permit program is contained in 40 C.F.R. Part 145. That Part references various requirements in 40 C.F.R. Part 144. That part, in turn reference 40 C.F.R. Part 146, which are the specific federal technical requirements for injection wells.

The centerpiece of the federal regulations is that injection is prohibited if it would result in the movement of fluid into underground sources of drinking water:

> § 144.12 Prohibition of movement of fluid into underground sources of drinking water. (a) No owner or operator shall construct, operate, maintain, convert, plug,

> abandon, or conduct any other injection activity **in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR part 142 or may otherwise adversely affect the health of persons.** The applicant for a permit shall have the burden of showing that the requirements of this paragraph are met.(b) For Class I, II, III, and VI wells, if any water quality monitoring of an underground source of drinking water indicates the movement of any contaminant into the underground source of drinking water, **except as authorized under part 146**, the Director shall prescribe such additional requirements for construction, corrective action, operation, monitoring, or reporting (including closure of the injection well) as are necessary to prevent such movement. In the case of wells authorized by permit, these additional requirements shall be imposed by modifying the permit in accordance with § 144.39, or the permit may be terminated under § 144.40 if cause exists, or appropriate enforcement action may be taken if the permit has been violated. In the case of wells authorized by rule, see §§ 144.21 through 144.24. For EPA administered programs, such enforcement action shall be taken in accordance with appropriate sections of the SDWA.

40 C.F.R. § 144.12 (emphasis added).

Injection wells associated with oil and gas production are classified under the SDWA as "Class II" injection wells. These wells are defined by federal law as follows:

> (b) *Class II.* Wells which inject fluids:
>
> (1) Which are brought to the surface in connection with conventional oil or natural gas production and may be commingled with waste waters from gas plants which are an integral part of production operations, unless those waters are classified as a hazardous waste at the time of injection.
>
> (2) For enhanced recovery of oil or natural gas; and
>
> (3) For storage of hydrocarbons which are liquid at standard temperature and pressure.

40 C.F.R. § 144.6(b); *see also* 40 C.F.R. § 146.1(b). The technical criteria for approval of Class II injection wells under the federal permit program are set forth in 40 C.F.R. §§ 146.21 to .24. Note that under 40 C.F.R. Part 145, these criteria are considered by EPA in approving a state permit program, and once a state permit program is approved, the permitting is done under the state program, so the criteria in 40 C.F.R. Part 146 are not legally applicable to the issuance of a state

permit.

The key requirement for construction of a new Class II well is stated in 40 C.F.R. § 146.22(a): "All new Class II wells shall be sited in such a fashion that they inject into a formation which is separated from any USDW by a confining zone that is free of known open faults or fractures within the area of review." The rules then contain specific requirements for casing and cementing and relevant factors to be considered in the granting of a permit. 40 C.F.R. § 146.22(b). The state analog requirement is in 19.15.26.9 NMAC. Additional technical requirements for new wells, such as logging and testing and technical information to be considered are addressed in 40 C.F.R. § 146.22(f) and (g). Operating, monitoring and reporting requirements are addressed in 40 C.F.R. § 146.23. The state analog requirements are addressed in 19.15.26.10-.13 NMAC. As discussed above, the genesis of the state requirements that were intended to comply with the federal program requirements discussed above were established in Commission Order R-6702.

The federal regulations contain several definitions of the terms used in 40 C.F.R. section 146.22(a):

> *Aquifer* means a geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.
>
> *Formation* means a body of rock characterized by a degree of lithologic homogeneity which is prevailingly, but not necessarily, tabular and is mappable on the earth's surface or traceable in the subsurface.
>
> *Underground source of drinking water* (USDW) means an aquifer or its portion:
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> (1)(i) Which supplies any public water system; or

(ii) Which contains a sufficient quantity of ground water to supply a public water system; and

(A) Currently supplies drinking water for human consumption; or

(B) Contains fewer than 10,000 mg/l total dissolved solids; and

(2) Which is not an exempted aquifer.

*USDW* means "underground source of drinking water."

40 C.F.R. §§ 144.3 and 146.3. An additional relevant definition is contained in section 146.3 only:

*Confining zone* means a geological formation, group of formations, or part of a formation that is capable of limiting fluid movement above an injection zone.

## V. NEW MEXICO WATER QUALITY ACT AND WATER QUALITY CONTROL COMMISSION REGULATIONS

As discussed above, the Oil and Gas Act regulations the disposal of water produced from oil and gas production. Consequently, the injection of produced water is exempt from regulation under the Water Quality Act by virtue of section 76-6-12(G) NMSA 1978: "The Water Quality Act does not apply to any activity or condition subject to the authority of the oil conservation commission pursuant to provisions of the Oil and Gas Act [Chapter 70, Article 2 NMSA 1978], Section 70-2-12 NMSA 1978 and other laws conferring power on the oil conservation commission to prevent or abate water pollution."

## VI. CONCLUSION

OWL submits this brief to advise the Hearing Examiners regarding the applicable and important provisions of the Oil and Gas Act and the regulations adopted thereunder to the consideration of OWL's application and the evidence presented during the hearing of this matter. In addition, OWL has addressed related provisions under the federal Safe Drinking Water Act that,

while not legally applicable to the issuance of the permit sought by OWL, may provide useful information for the Hearing Examiners to consider. OWL will present its arguments based on the application of the technical evidence presented at the hearing of this matter to the applicable legal requirements in its written closing argument, along with citations to the record. In addition, OWL intends to present its proposed findings along with the closing argument and responses to legal briefs filed by other parties by September 22, 2017.

Respectfully submitted,

GALLAGHER & KENNEDY, P.A.

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## CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing OWL's Opening Legal Brief was served via e-mail upon the following counsel this 25th day of August, 2017:

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