



**David K. Walker**  
County Attorney  
Montgomery County

207 West Phillips  
Conroe, Texas 77301

936/539-7828  
Fax 936/760-6920

May 15, 2008

LaDonna Castañuela  
Chief Clerk  
Texas Commission on Environmental Quality  
Office of the Chief Clerk  
P. O. Box 13087  
Austin, Texas 78711

TEXAS  
COMMISSION  
ON ENVIRONMENTAL  
QUALITY  
2008 MAY 15 PM 4:35  
CHIEF CLERKS OFFICE

RE: *Application of TexCom Gulf Disposal, L.L.C., for Texas Commission on Environmental Quality Underground Injection Control Permit Nos. WDW410, WDW411, WDW412, and WDW413, SOAH Docket No. 582-07-2673, TCEQ Docket No. 2007-0204-WDW*

Dear Ms. Castañuela:

Enclosed herewith please find an original and twelve copies of the following document to be filed in the above-captioned case:

1. Aligned Protestants Montgomery County and City of Conroe's Exceptions to the Proposal for Decision.

Please return a file-stamped copy of the document to the courier.

Thank you for your usual courtesies.

Sincerely yours,

  
Julie B. Stewart  
Assistant County Attorney

Enclosures

cc: SOAH Service List  
The Honorable Catherine Egan  
The Honorable Thomas Walston

SOAH DOCKET NO. 582-07-2673  
TCEQ DOCKET NO. 2007-0204-WDW

APPLICATIONS OF TEXCOM GULF § BEFORE THE STATE OFFICE  
DISPOSAL, L.L.C. FOR TEXAS §  
COMMISSION ON ENVIRONMENTAL §  
QUALITY UNDERGROUND § OF  
INJECTION CONTROL PERMIT NOS. §  
WDW410, WDW411, WDW412, AND §  
WDW413 § ADMINISTRATIVE HEARINGS

ALIGNED PROTESTANTS MONTGOMERY COUNTY AND CITY OF CONROE'S  
EXCEPTIONS TO THE PROPOSAL FOR DECISION

TO THE HONORABLE COMMISSIONERS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY:

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY  
MAY 5 PM 4:35  
CHIEF CLERKS OFFICE

COME NOW Aligned Protestants Montgomery County and the City of Conroe ("Aligned Protestants") and submit their Exceptions to the Proposal for Decision ("PFD") and the corresponding order issued by the Administrative Law Judges ("ALJs") on April 25, 2008, and in support thereof would respectfully show the following:

**I. INTRODUCTION**

Aligned Protestants object and except to the ALJs' ultimate recommendation that the Commission grant TexCom Gulf Disposal, LLC's ("TexCom" or "Applicant") applications for Permit Nos. WDW410, WDW411, WDW412, and WDW413. Because TexCom failed to meet its burden of proof that its Application complies with all legal requirements, its permit application should be denied by the Commission. Aligned Protestants, along with Lone Star Groundwater Conservation District and the Individual Protestants, presented a substantial amount of evidence vigorously questioning the geologic suitability of the proposed injection interval and disputing TexCom's satisfaction of the statutory requirements. Aligned Protestants believe that evidence should be considered by the Commission but will not reiterate its closing

arguments here.<sup>1</sup> Aligned Protestants respectfully disagree with certain factual statements and legal conclusions proposed by the ALJs as set forth below in Sections II and III of this filing.

Aligned Protestants additionally object and except to the ALJs' recommendation of special conditions to the proposed permit, requiring that TexCom: (1) conduct additional fall-off testing, (2) conduct additional reservoir modeling, and (3) relocate the facility entrance in a manner not contemplated by TexCom's Application. Under the circumstances of this case, which is unique in that TexCom is attempting to utilize an existing injection well, these special conditions constitute an improper extension of the Underground Injection Control ("UIC") Application process beyond the conclusion of the contested case hearing. Such an extension is not contemplated by 30 Texas Administrative Code Sections 331.65 or 331.45, which detail the reporting requirements for new wells whose application materials have satisfied the threshold criteria applicable to the permitting of underground injection control wells.<sup>2</sup> For a "traditional" UIC application for a new well, a completion report is allowed under TCEQ rules only because the best available data and science supported the TCEQ's granting of the permit. In this case, the best available data and science available to TexCom, based on the completion report for existing well WDW315, showed reliable, valid input parameters that TexCom chose to disregard. What the ALJs have recommended as special permit conditions will set a dangerous precedent. Under TCEQ rules, a UIC applicant should not have the opportunity to first receive a permit, then conduct a fall-off-test and completion report, until the threshold criteria have been met. In this contested case, TexCom simply did not meet the threshold criteria, and the Commission should

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<sup>1</sup> AP's extensive closing arguments, response to closing arguments, and proposed Findings of Fact and Conclusions of Law fully discuss the supporting facts and provide a detailed analysis establishing that TexCom has not met its burden of proof by a preponderance of the evidence.

<sup>2</sup> See, e.g., Tex. Water Code § 27.051; 30 Tex. Admin. Code § 331.121 (a), (b), and (c); 30 Tex. Admin. Code § 281.5, 305.45, and 305.49.

not allow post-permit testing as a substitute for TexCom meeting its required burden of proof.

Additionally, if the facility entrance is moved from Creighton Road to F.M. 3083, protestants are left to wonder (1) whether this substantial modification will necessitate a redesign of the entire surface facility, and (2) whether the Texas Department of Transportation (“TxDOT”) would actually issue a driveway permit to TexCom. Again, TexCom would be allowed to make this modification completely outside the jurisdiction of the contested case, and no protestants will have the opportunity to review and comment on any revised application materials TexCom would be required to present to the TCEQ. Such an expansion of the permit application process by permit conditions is inappropriate and contrary to the TCEQ rules.

The ALJs had the opportunity to require TexCom to obtain the required permission from TxDOT for its proposed driveway on F.M. 3083, but failed to do so during the contested case. The ALJs also had the opportunity to require TexCom to submit revised application materials showing the effect that relocation of its entrance and exit would have on its surface facility design. Finally, the ALJs should have required TexCom conduct an additional fall-off testing and reservoir modeling during the pendency of the contested case. The time to request both additional testing and substantial modifications to the permit application was during the contested case, not after the permit is granted.

## **II. EXCEPTIONS TO SPECIFIC FINDINGS OF FACT**

Aligned Protestants except to the following Findings of Fact proposed by the ALJs:

### **A. General Findings and Procedural Issues**

#### **Finding of Fact No. 18:**

The Aligned Protestants object and except to Finding of Fact Number 18 on the grounds that it is contrary to substantial evidence presented by Aligned Protestant witness Dr. Paul

Pearce. Dr. Pearce reviewed TexCom's Application and the list of prospective industrial waste materials to be accepted and disposed of by TexCom. Dr. Pearce, a Ph.D. in microbiology since 1973, was unable to determine from that list the components of the prospective injected waste.<sup>3</sup> Dr. Pearce was unable to determine if EPA-prohibited water contaminants would be included in the proposed waste stream.<sup>4</sup> Dr. Pearce further testified that dilution of the waste stream would not protect drinking water if the stream encountered a subterranean aquifer.<sup>5</sup> Dr. Pearce reviewed TexCom's Waste Acceptance Program in the Application and testified that the program would not provide for the detection of water contaminants in the waste stream.<sup>6</sup> Given Dr. Pearce's compelling testimony concerning his review of TexCom's Waste Acceptance Program and the generic list of proposed wastes included in the Application, Finding of Fact Number 18 is not supported by the great weight of the evidence and therefore should be overturned.

**Finding of Fact No. 22:**

Aligned Protestants object and except to Findings of Fact Number 22 on the grounds that it constitutes an erroneous statement. TexCom's applications for Permit Nos. WDW410, WDW411, WDW412, and WDW413 were declared both administratively and technically complete by the TCEQ-ED prior to the contested case hearing. Although TexCom apparently submitted the documentation required by the TCEQ UIC Permits Team checklist, protestants submitted substantial evidence that TexCom's permit applications were incomplete in showing all known or suspected faults within the Area of Review, contain insufficient records for the

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<sup>3</sup> AP Exh. 2, p. 16, ln. 14-19.

<sup>4</sup> AP Exh. 2, p. 17, ln. 13-15.

<sup>5</sup> AP Exh. 2, p. 26, ln. 13-16.

<sup>6</sup> AP Exh. 2, p. 29, ln. 11-21.

artificial penetrations within its Cone of Influence, and failed to reference all water wells identified by public records within the Area of Review. In fact, the ALJs have agreed that TexCom did not identify every artificial penetration within the Area of Review.<sup>7</sup> Finding of Fact Number 22 should be amended to state that the TCEQ-ED has found that the applications for Permit Nos. WDW410, WDW411, WDW412, and WDW413 are administratively and technically complete.

### **B. Injection Well Construction and Operation**

#### **Finding of Fact No. 51:**

Aligned Protestants object and except to Finding of Fact Number 51 on the grounds that it incorrectly quotes material from TexCom's UIC permit application. The surface hole for existing well WDW315 was drilled to approximately 4,128 feet<sup>8</sup> instead of 4,110 feet, and the injection well was completed with 4.5-inch tubing set on a packer at 5,125 feet.<sup>9</sup> Finding of Fact Number 51 should be amended to correctly reflect the material contained in TexCom's application as referenced above.

#### **Finding of Fact No. 52:**

Aligned Protestants object and except to Finding of Fact Number 52 on the grounds that it is speculative and not supported by any evidence. The Finding is speculative because TexCom's Application makes it clear that compatibility of all components of the well with the proposed injection fluid cannot be absolutely determined. TexCom's application states that "the TexCom Facility has not been built and the final composition of the waste stream cannot be determined until the facility is built and clients for disposal are put under contract. Therefore,

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<sup>7</sup> ALJs' PFD, p. 26.

<sup>8</sup> TexCom Exh. 6, p. 99.

<sup>9</sup> TexCom Exh. 6, p. 99.

there is no compatibility testing that can be conducted in the material of construction at this time. The waste stream will be kept in a condition as to reduce the corrosive nature of the fluids on the well construction materials.”<sup>10</sup> Because no one knows what will be accepted for disposal, a finding that the existing well WDW315 was constructed out of materials compatible with the proposed injection fluid is conjecture. The draft permits would authorize TexCom to accept waste characterized by a pH of 3 to 9. TexCom’s own witness testified that a waste with a pH level of 3 would be an acidic waste.<sup>11</sup> Further acknowledging that the proposed injected fluids will be corrosive, TexCom’s witness testified that the corrosion of any steel pipe, depending on its alloy, is really a function of how long the contact of that material is within the pipe.<sup>12</sup> No one, not even TexCom, can state with any certainty the length of time the injected waste will remain within a pipe. Finding of Fact Number 52 should be overturned because it is not supported by any record evidence.

**Finding of Fact No. 56:**

Aligned Protestants object and except to Finding of Fact Number 56 on the grounds that it incorrectly quotes material from TexCom’s UIC permit application. As stated above in the exception to Finding of Fact Number 51, the surface hole for existing well WDW315 was drilled to approximately 4,128 feet<sup>13</sup> instead of 4,110 feet. Finding of Fact Number 54 states that the same construction techniques used to construct WDW315 will be used to construct each of TexCom’s proposed wells. Finding of Fact Number 56 should be amended to correctly state that the surface casing for each of TexCom’s wells will be set to 4,128 feet.

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<sup>10</sup> TexCom Exh. 6, p. 118.

<sup>11</sup> Tr. p. 515, ln. 21-22.

<sup>12</sup> Tr. p. 515, ln. 22 – p. 516, ln. 1.

<sup>13</sup> TexCom Exh. 6, p. 99.

**Finding of Fact No. 57:**

Aligned Protestants object and except to Finding of Fact Number 57 on the grounds that it is not supported by any record evidence. TexCom's application materials make the self-serving statement that the injection well equipment is designed for 30 years of operation.<sup>14</sup> However, as discussed in the exception to Finding of Fact Number 52, and given the corrosive nature of some of the wastes proposed for injection, it is unknown whether the equipment will be compatible with the proposed waste stream. There is no evidence that the casing and cement used by TexCom would ensure proper operation during the anticipated 30-year lifetime of the wells, including the post-closure care period. Finding of Fact Number 57 should be overturned.

**Finding of Fact No. 58 and 59:**

Aligned Protestants object and except to Findings of Fact Numbers 58 and 59 on the grounds that the maximum allowable surface injection pressure and maximum flow of wastewater for the injection wells will change if TexCom is allowed to re-perforate WDW315 and conduct the additional testing recommended by the ALJs. In their PFD, the ALJs acknowledge that the test results could require adjustments to the operating parameters to compensate for adverse results.<sup>15</sup> It is improper to make a Finding based on reservoir modeling and calculations that the ALJs have conceded are incorrect. Finding of Fact Number 58 is also too broad in anticipating a range of surface injection pressure between 0 pounds per square inch (psi) and 1,250 psi. Finding of Fact Number 58 should be amended to state that TexCom has requested that the permitted surface injection pressures be set at 1,250 psi. Finding of Fact Number 59 should be amended to state that TexCom has requested that the rate of injection be set at 350 gallons per minute for each well.

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<sup>14</sup> TexCom Exh. 6, p. 115.

<sup>15</sup> ALJs' PFD, p. 36 and 42.

**Finding of Fact No. 60:**

Aligned Protestants object and except to Finding of Fact Number 60 on the grounds that it is speculative and contrary to the substantial evidence presented by protestants in this case. The ALJs' description of the "new" interval of 6,045 to 6,390 feet to be perforated by TexCom as the "optimal range for injection" is simply not supported by any evidence. This Finding is also wholly inconsistent with the ALJs' statement in the PFD that they are unpersuaded that an average permeability of 500 millidarcies can be achieved for the entire 145-foot injection interval.<sup>16</sup> While the evidence has shown that TexCom does plan to re-perforate WDW315 at both the currently perforated sands and additional sands, there is no substantial evidence that the "new" interval will be the "optimal range." As the ALJs have stated, the additional sands to be used by TexCom would require a permeability factor of 1,400 millidarcies in order to bring the injection interval average up to 500 millidarcies.<sup>17</sup> This Finding should be overturned on the grounds that it is not supported by any evidence. In the alternative, Finding of Fact Number 60 should be amended to delete the reference to "optimal range for injection."

**C. Suitability of Location for Proposed Injection Wells**

**Finding of Fact No. 68:**

The Aligned Protestants object and except to Finding of Fact Number 68 on the grounds that it is contrary to substantial evidence presented by Dr. Hughbert Collier, a Ph.D. in Geosciences who testified extensively as to the geology of the Conroe Oil Field, and in particular as to the current 2.5-mile Area of Review calculated by TexCom. Dr. Collier testified that the

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<sup>16</sup> ALJs' PFD, p. 42.

<sup>17</sup> ALJs' PFD, p. 42.

Conroe Field is a highly faulted and compartmentalized domal uplift.<sup>18</sup> He further testified that the Whitson, Burns and Davies paper of 1975<sup>19</sup> shows the Conroe Field to be highly faulted, with some faults acting as barriers and some being transmissive.<sup>20</sup> Dr. Collier testified that Exxon field data demonstrates communication and fluid movement between the Upper Cockfield Sands and the six main sands, and that fluids have moved from the main Conroe Sand into the Upper Cockfield Sand.<sup>21</sup> Dr. Collier's research and testimony demonstrate that the geology of the area does not allow the accurate prediction of waste fate and transport. Finding of Fact Number 68 is not supported by the great weight of the evidence, and therefore should be overturned.

**Finding of Fact No. 72:**

The Aligned Protestants object and except to Finding of Fact Number 72 on the grounds that it incorrectly characterizes the Cockfield Formation as a "thick marine mudstone section." The witnesses in this case universally described the Cockfield Formation as a sand-shale sequence of strata, with three primary sand intervals, of which the Lower Cockfield is described as containing a higher percentage of clay particles which makes it more shaley, but not to the extent of a mudstone.<sup>22</sup> The term "mudstone" was described by witnesses of TexCom and protestants in this case as a massive shale layer that has less scattered sand lenses, or stringers, than would be exhibited in the Cockfield Formation, more amenable to a description of the Jackson Formation.<sup>23</sup> The description of the Cockfield Formation in this Finding of Fact is not supported by the evidence and should be overturned.

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<sup>18</sup> AP Exh. 1, p. 29, ln. 1-2.

<sup>19</sup> AP Exh. 1-I.

<sup>20</sup> AP Exh. 1, p. 30, ln. 3-15.

<sup>21</sup> AP Exh. 1, p. 31 - 32.

<sup>22</sup> District Exh. 8, p. 16, ln. 25 – p. 17, ln. 25; TexCom Exh. 20, p. 15, ln. 10 – p. 16, ln. 19.

<sup>23</sup> District Exh. 8, p. 14, ln. 1-2; TexCom Exh. 20, p. 16, ln. 23 – p. 17, ln. 2; Tr. p. 933, ln. 24 – p. 934, ln. 13.

**Finding of Fact No. 74**

Aligned Protestants object and except to Finding of Fact Number 74 on the grounds that there is insufficient information in the record to support a statement of fact that there has been no production from the Lower Cockfield.<sup>24</sup> While Aligned Protestants may agree that a vast majority of the oil production from the Conroe Field likely came from the Upper Cockfield, there was no evidence presented by TexCom or others to confirm that no production came from the Lower Cockfield or that the characteristics of the Lower Cockfield was not conducive to oil production. Consequently, Aligned Protestants assert that the Finding of Fact Number 74 should be overturned because it cannot be said with any degree of certainty that there was never any oil production from the Lower Cockfield.

**Finding of Fact No. 76:**

Aligned Protestants object and except to Finding of Fact Number 76 in that it completely ignores considerable testimony presented by protestants in this proceeding to demonstrate that TexCom grossly miscalculated or misrepresented the parameters TexCom used in the reservoir modeling which would be used to judge whether the Lower Cockfield would safely contain injected fluids. TexCom's misrepresentations of thickness, porosity, permeability, and transmissivity of faulting are some of the examples of the failure of TexCom to support this Finding.<sup>25</sup> Presumably in recognition of this evidence, the ALJs have recommended conditions on the UIC permit requiring TexCom to recalculate this data at a later time and submit corrected information to the TCEQ-ED. Since this information must be verified in accordance with the ALJs own recommendation, it cannot be used to declare with any certainty that the data currently before the ALJs supports this Finding. Aligned Protestants urge this Finding be overturned as

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<sup>24</sup> See, e.g., AP Closing Argument, p. 19.

<sup>25</sup> See AP Closing Argument, p. 23-29, AP Reply to Closing, p. 26-30.

inconsistent with the evidence that reservoir modeling thus far provided by TexCom and relied on by the ALJs is based on incorrect parameters and does not provide any assurance that the Lower Cockfield would safely contain any injected fluid.

**Finding of Fact No. 77:**

The Aligned Protestants object and except to Finding of Fact Number 77 on the grounds that it is contrary to substantial clear evidence presented by Dr. Hughbert Collier. Dr. Collier testified that Exxon's field data documented communication between the Upper Cockfield Sands and the six main sands,<sup>26</sup> contradicting TexCom's supposition that "mudstones and shales, especially those of the upper and lower confining zones, have low levels of induration and strength; faults through the mudstones would not be open to fluid flow."<sup>27</sup> Dr. Collier testified that the 1975 Whitson, Burns and Davies report shows that transmissive faults have been identified within the injection interval, and therefore injected fluids have a documented pathway to move from the zone of injection into the upper Cockfield.<sup>28</sup> Dr. Collier's testimony was not opinion. He referenced Exxon's findings in the 1975 report which TexCom conveniently ignored. Given the compelling testimony, Finding of Fact Number 77 is not supported by the great weight of the evidence, and therefore should be overturned.

**Finding of Fact No. 78:**

Aligned Protestants object and except to Finding of Fact Number 78 on the grounds that it completely ignores the evidence presented by prefiled testimony and at the hearing regarding endangerment issues concerning the existence of hundreds of artificial penetrations and faulting not previously identified by TexCom that could provide potential pathways for upward

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<sup>26</sup> AP Exh. 1, p. 31-32.

<sup>27</sup> TexCom Exh. 6, p. 87.

<sup>28</sup> AP Exh. 1, p. 31, ln. 17 – p. 32, ln. 15.

movement of injected wastewater. Even TexCom's own witness acknowledged the existence of two faults in the Area of Review and additional faults with what he termed to be "little vertical lift."<sup>29</sup> As Aligned Protestants pointed out in their Closing Arguments, while geologists testifying in this proceeding have disagreed as to the existence and transmissivity of faulting within the Area of Review, they agree as to the existence of artificial penetrations and the fact that they can provide potential pathways for migration of fluids upward.<sup>30</sup> Consequently, it cannot be said with any degree of confidence that the EW-4400-S fault is the only place that the Cockfield Members could be in communication, and this Finding of Fact should be overturned.

**Finding of Fact No. 80:**

Aligned Protestants object and except to Finding of Fact Number 80 on the grounds that it puts too much weight on the designation by TexCom of the Upper and Lower Confining Zones, ignoring the evidence presented by protestants in this case that the geological suitability of the Area of Review is questionable and that the designated Confining Zones are not infallible. In urging that this Finding of Fact be overturned, Aligned Protestants would reiterate their arguments expressed in Closing Arguments, particularly disagreeing with the ability of the Jackson Formation to confine injected fluids in light of faults, artificial penetrations, and potential pressure build-up.<sup>31</sup>

**Finding of Fact No. 81:**

Aligned Protestants object and except to Finding of Fact Number 81 on the grounds that it is based on a speculative recitation of what was believed to be the practice of the oil and gas industry generally in the 1930s. There was no evidence submitted in this proceeding to confirm

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<sup>29</sup> TexCom Exh. 57, p. 18, ln. 13-21.

<sup>30</sup> See AP Closing Argument, p. 16-21; AP Reply to Closing, p. 22.

<sup>31</sup> See AP Closing Argument, p. 11 (citing TexCom Exh. 76, p. 85-86).

any specific time reference for when the practice of using steel for surface and production casings began or whether the practice of using wood for such casings in the Conroe Field was abandoned in every case of drilling a well during that decade. Aligned Protestants urge this Finding be overturned because additional information would be required to assert this Finding with any degree of certainty.

**Finding of Fact No. 82:**

Aligned Protestants object and except to Finding of Fact Number 82 in that there is insufficient information in the record to confirm that all wells drilled in the Conroe Field during the 1930s were drilled by the same company and completed in the Upper Cockfield, with only a few being drilled into the Wilcox Sands that were dry and plugged. Aligned Protestants direct attention to their Closing Arguments wherein they pointed out TexCom's omission of certain artificial penetrations and incomplete well data for wells that were included in the Application submission.<sup>32</sup> Aligned Protestants urge this Finding be overturned because additional information would be required to assert this Finding with any degree of certainty.

**Finding of Fact No. 83:**

Aligned Protestants object and except to Finding of Fact Number 83. Any testimony concerning what an oil producer from the 1930s and 1940s would "likely" have done with respect to plugging of wells, is nothing but abject speculation. A finding of fact based upon speculation is erroneous and clearly not based upon reliable evidence. Finding of Fact Number 83 should be overturned because on its face it is not based upon evidence of any weight at all, and therefore it is not supported by the great weight of the evidence.

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<sup>32</sup> AP Closing Argument, p. 18-21.

**Finding of Fact No. 84:**

Aligned Protestants object and except to Finding of Fact Number 84 in that it incorrectly refers to the Area of Review as 2.5 miles. In fact, testimony submitted by protestants in this proceeding clearly demonstrated that the Area of Review, when based on a Cone of Influence calculated upon accurate parameters in reservoir modeling, would result in an expanded Area of Review beyond 2.5 miles.<sup>33</sup> The ALJs themselves acknowledged that TexCom's assumptions used in reservoir modeling were not accurate, nor conservative,<sup>34</sup> and proposed that a condition be included in a permit to require new testing and recalculation of the Cone of Influence and Area of Review. Any admission as to an Area of Review based on TexCom assertions thus far would be inconsistent with record evidence and contrary to Conclusion of Law Number 51(e), which would require TexCom to remodel and recalculate the Cone of Influence.

**Finding of Fact No. 85:**

Aligned Protestants object and except to Finding of Fact Number 85 because it is based on speculation and a generalization of industry practices in the early 1930s. A Finding of Fact based on what might have been done decades ago is clearly erroneous and not based on any reliable evidence. Therefore, Finding of Fact Number 85 should be overturned.

**Finding of Fact No. 86:**

Aligned Protestants object and except to Finding of Fact Number 86. Dr. Hughbert Collier testimony and the 1975 Exxon report of Whitson, Burns, and Davies demonstrate that the Jackson Shale is negated as an upper confining unit.<sup>35</sup> TexCom's assertion that the Jackson Shale is a sufficient confining unit is an assumption not supported by Exxon, the primary

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<sup>33</sup> AP Closing Argument, p. 26-30; District Exh. 8, p 56, ln. 15-16 – p. 57, ln. 14-15.

<sup>34</sup> ALJs' PFD, p. 43

<sup>35</sup> AP Exh. 1-I; AP Exh. 1, p. 37, ln. 4-13.

operator of the Conroe Oil Field. Finding of Fact number 86 should be overturned as not supported by the great weight of the evidence.

**Finding of Fact Nos. 88, 89, 90, and 91:**

Aligned Protestants object and except to Findings of Fact Numbers 88, 89, 90, and 91 on the grounds that these Findings call for support of TexCom's erroneous calculations of the Area of Review and Cone of Influence and because they call for admissions of the numbers and conditions of artificial penetrations in those areas. Aligned Protestants have presented evidence to show that there is incomplete information regarding the artificial penetrations in the Area of Review and the Cone of Influence and the general deterioration of those wells, casting grave doubt as to the assertions by TexCom regarding the number, depth, plugging or cementing, and the current condition of wells drilled into the areas of concern.<sup>36</sup> TexCom itself admitted doubt on its own well information by recognizing inconsistencies in Texas Railroad Commission ("RRC") records, but sweeping that doubt under the rug by stating what would probably have happened anyway.<sup>37</sup> As stated previously in objection to Finding of Fact Number 84, protestants demonstrated in this proceeding that TexCom miscalculated the Cone of Influence and, thus, the Area of Review. The ALJs acknowledged TexCom's miscalculations and thereby proposed recalculation after re-perforation and re-testing. Any admission as to an Area of Review based on TexCom assertions thus far would be inconsistent with record evidence and contrary to Conclusion of Law Number 51(e), which would require TexCom to remodel and recalculate the Cone of Influence.

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<sup>36</sup> See AP Closing Argument, p. 18-21.

<sup>37</sup> TexCom Closing Argument, p. 28-30.

**Finding of Fact No. 94 and 95:**

Aligned Protestants object and except to Findings of Fact Numbers 94 and 95 because they are not supported by the great weight of the evidence. Dr. Hughbert Collier testified as to the contents of the Whitson, Burns and Davies, Exxon report of 1975 which describes the Conroe Field as highly faulted which communication and fluid movement between sands.<sup>38</sup> TexCom ignored this report because it demonstrates the instability of the Conroe Field. This is not Dr. Collier's opinion. It constitutes the prior field operator's findings and shows that fluid movement across fault lines has occurred. The description of the Jackson Formation as "impermeable" is a gross overstatement, based on TexCom's self-serving characterization of the properties of the mudstone that make up that formation.<sup>39</sup> Findings of Fact Numbers 94 and 95 are simply not supported by the great weight of the evidence and should be overturned.

**Finding of Fact No. 96:**

Aligned Protestants object and except to Finding of Fact Number 96 on the grounds that the assertion is speculation and is absolutely inconsistent with the findings of the 1975 Exxon report by Whitson, Burns and Davies, referenced by Dr. Collier, and included with his pre-filed testimony. The opinion that the mudstone nature of the Jackson Formation would be resealing is not universally shared by all geologists, but merely propounded by the geologist representing TexCom, without supporting documentation for that opinion or whether the resealing had actually occurred in this instance.<sup>40</sup> It cannot be said with any certainty that the Jackson Formation would have collapsed into and sealed any improperly cased, abandoned boreholes

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<sup>38</sup> AP Exh. 1-I.

<sup>39</sup> Tr., p. 1000, ln. 3-18; See AP Reply to Closing, p. 7-8.

<sup>40</sup> See AP Reply to Closing, p. 7-8.

drilled into the Upper Cockfield. Finding of Fact Number 96 is not supported by the great weight of the evidence and should be overturned.

**Finding of Fact No. 97:**

Aligned Protestants object and except to Finding of Fact Number 97 because of the gross overstatement of the characterization of the Jackson Formation being “impermeable.” There is no evidence in the record other than conjecture of a TexCom witness that the nature of the mudstone that constitutes the Jackson Formation would be impermeable in every instance. This Finding should be overturned because it is unsupported by the evidence.

**Finding of Fact No. 98:**

Aligned Protestants object and except to Finding of Fact Number 98 in that it ignores the weight of the evidence supporting additional faulting unidentified by TexCom which can also serve as a potential pathways for migration of injected fluids from the waste plume.<sup>41</sup> Improperly plugged artificial penetrations in the area are a major concern that an underground source of drinking water (“USDW”) will be endangered, but they are not the only mechanism that threatens the USDW.<sup>42</sup> In Finding of Fact Number 123, the ALJs have recognized that the existence of a fault could provide a means for communication between formations and migration of injected liquids. Finding of Fact Number 98 should be overturned because it is overbroad and not supported by the weight of the evidence.

**Finding of Fact No. 99:**

Aligned Protestants object and except to Finding of Fact Number 99 because it is mere speculation expressed by TexCom’s witness. It cannot be said with any certainty that the fact of production from the Conroe Field demonstrates that the Jackson Formation acts as an intact

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<sup>41</sup> See AP Closing Argument, p. 10-11.

<sup>42</sup> See AP Exh. 1, p. 11, ln. 1-7.

trapping feature and has not been breached. Dr. Collier, on cross-examination, specifically testified that in his expert opinion, a Finding such as stated here would be inaccurate.<sup>43</sup> Therefore, this Finding should be overturned as speculation unsupported by record evidence.

**Finding of Fact No. 100:**

Aligned Protestants object and except to Finding of Fact Number 100 on the grounds that it clearly conflicts with evidence presented in this proceeding to indicate the likely presence of additional faults not previously identified by TexCom, and applies additional criteria for the identification of faults that would unreasonably limit the requirements of the Texas Administrative Code requiring the identification of all known and suspected faults.<sup>44</sup> Aligned Protestants have provided considerable evidence to support the existence of additional faults not identified by TexCom in its Application, and direct attention to their prior arguments.<sup>45</sup> Suggesting that only two faults are “relevant” and that other faults are not relevant unless they have at least 78 feet of offset actually adds a qualifying condition that waters down the requirements of the Texas Administrative Code that all known or suspected faults be identified.<sup>46</sup> This Finding should be overturned as inconsistent with record evidence and contrary to statutory requirements.

**Finding of Fact No. 101, 102, 103, and 104:**

Aligned Protestants object and except to Findings of Fact Numbers 101, 102, 103 and 104 on the grounds that these statements ignore evidence regarding the instability of the Conroe Field. The testimony of Dr. Hughbert Collier concerning the contents of the Whitson, Burns and

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<sup>43</sup> Tr. p. 978, ln. 17 – p. 979, ln. 7.

<sup>44</sup> 30 Tex. Admin. Code § 331.121(a)(2)(A).

<sup>45</sup> See AP Closing Argument, p. 14-17; AP Reply to Closing, p. 10-21.

<sup>46</sup> 30 Tex. Admin. Code § 331.121(a)(2)(A).

Davies report of 1975<sup>47</sup> and Dr. Collier's research regarding the characteristics of the Area of Review reveal compelling evidence as to the instability of the Conroe oil field. This instability is documented by Exxon.<sup>48</sup> The Exxon report of 1975 is conveniently ignored by TexCom and their expert Dr. Langhus. The report is ignored because it dramatically disputes TexCom's estimates and assumptions concerning the geological suitability of the site. The Exxon report is compelling, and if given objective consideration, demonstrates that Findings of Fact Numbers 101, 102, 103, and 104 are not supported by the great weight of the evidence and should be overturned.

**Finding of Fact No. 108 and 109:**

Aligned Protestants object and except to Findings of Fact Numbers 108 and 109 in that they are based on an erroneous misrepresentation by TexCom that only 26 water wells have been drilled into the current 2.5-mile Area of Review calculated by TexCom. In fact, Dr. Collier presented evidence that he had identified 137 water wells in the Area of Review.<sup>49</sup> Unless all water wells in the Area of Review are identified and complete information is gathered on each, there can be no fact statement as to the depths of the water wells in the Area of Review. Consequently, these Findings should be overturned for inaccuracy.

**Finding of Fact No. 111:**

Aligned Protestants object and except to Finding of Fact Number 111 in that it leads to a blatant disregard for statutory requirements. TexCom failed to prove there is a layer of protection between the confining zone and the lowermost USDW and, thereby, failed to satisfy one of the criteria set out for proving geologic suitability as set out in the Texas Administrative

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<sup>47</sup> AP Exh. 1-I.

<sup>48</sup> *Id.*

<sup>49</sup> AP Exh. 1, p. 22, ln. 7-15.

Code.<sup>50</sup> Instead, TexCom manipulates the evidence to satisfy that criteria by declaring the Catahoula Formation as a further isolating element. The ALJs should have required strict compliance with the criteria of the Texas Administrative Code. To prove that criteria, the Applicant must prove there is a layer of protection between the confining zone and the lowermost USDW.<sup>51</sup> TexCom's own witness testified that the Catahoula Formation is within the statutory definition of USDW,<sup>52</sup> and that fact has been recognized in Finding of Fact Number 121. Acceptance of this Finding would be contrary to Finding Number 121. Consequently, Finding of Fact Number 111 should be overturned as unsupported by record evidence.

**Finding of Fact No. 117, 123 and 124:**

Aligned Protestants object and except to Findings of Fact Numbers 117, 123, and 124 for the same reasons previously stated in excepting to Findings of Fact Numbers 78 and 80. Finding of Fact Number 84 states that there are 505 artificial penetrations through the Jackson Formation within the 2.5-mile Area of Review. These 505 old abandoned oil wells date back to the 1930's. The Jackson Formation is a pin cushion. The 1975 Exxon report states that the Conroe field is an unstable multi-faulted field.<sup>53</sup> The combination of the 505 penetrations through the Jackson Formation and the findings of the Exxon report defeat any notion that upward migration of waste fluids will never happen. These facts dictate that USDW's will be at risk, and to conclude otherwise is irresponsible. The Jackson Formation cannot be said to be impermeable, and there are clear pathways for communication between the Cockfield Sand Members and the Jackson

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<sup>50</sup> 30 Tex. Admin. Code § 331.121(c)(2).

<sup>51</sup> 30 Tex. Admin. Code § 331.121(c)(4)(A).

<sup>52</sup> Tr., p. 403, ln. 3-15.

<sup>53</sup> AP Exh. 1-I.

Formation. Consequently, Findings of Fact Numbers 117, 123, and 124 are not supported by the great weight of the evidence, and should be overturned.

#### **D. Reservoir Modeling**

##### **Finding of Fact No. 130:**

Aligned Protestants object and except to Finding of Fact Number 130 on the grounds that it is an incorrect statement. The ALJs have admitted that TexCom's modeling was based on faulty input parameters for permeability and transmissivity of the EW-4400-S fault.<sup>54</sup> To include a Finding that the values "will be verified by actual testing" (emphasis added) gives the impression that the input parameters were conservative assumptions, when in fact the values used by TexCom were simply not correct. What the ALJs have proposed is an opportunity for TexCom to attempt to correct the record outside the jurisdiction of the contested case hearing. It is not an opportunity to verify the parameters used in TexCom's reservoir modeling, but a second chance to re-calculate the Cone of Influence which was incorrectly calculated in the Application. TexCom had available the best science and data from the original fall-off test conducted on WDW315 in 1999, but chose to input faulty parameters into its reservoir modeling. This Finding should be overturned as contrary to the purpose of 30 Texas Administrative Code Section 331.65, which requires subsequent testing based on completion of a new well instead of a second chance at testing based on re-perforation of an existing well.

##### **Finding of Fact No. 131:**

Aligned Protestants object and except to Finding of Fact Number 131 on the grounds that it is improper. Finding of Fact Number 131 suggests that it is unknown whether or not the presently calculated Cone of Influence and Area of Review are accurate. This finding states that

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<sup>54</sup> ALJs' PFD, p. 32.

remodeling and recalculation may dictate the need for further investigation by TexCom, outside the jurisdiction of the contested case hearing and without any opportunity by protestants to verify such testing. If the Cone of Influence in fact expands, and the Area of Review in fact expands, then additional artificial penetrations come into play, meaning that additional conduits for upward migration of waste come into play. All of this uncertainty should shout out loud that the Conroe Field is a bad choice for an injection well. Finding of Fact Number 131 is no finding at all. It is a revelation that this permit should be denied based upon geological uncertainty of the site, and the fact that TexCom has not demonstrated that USDW's will be protected. Finding of Fact Number 131 should be overturned.

**Finding of Fact No. 132:**

Aligned Protestants object and except to Finding of Fact Number 132 on the grounds that it incorrectly uses the term "conservative" to describe TexCom's prediction of pressure increase at the wellbore. This Finding is inconsistent with the ALJs' determination in their PFD that TexCom should have used more conservative assumptions regarding permeability and the transmissivity of the EW-4400-S fault in its modeling.<sup>55</sup> It is unclear how a "conservative" estimate of pressure increase can be based on non-conservative input parameters. Finding of Fact Number 132 should be overturned as contrary to the great weight of the evidence.

**Finding of Fact No. 134:**

Aligned Protestants object and except to Finding of Fact Number 134 on the grounds that the extent of the waste plume over the life of the well's injection activities will likely change if the permit is granted and the special conditions allowing re-testing and re-calculation of the Cone of Influence are allowed. The ALJs have determined that TexCom should have used more

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<sup>55</sup> ALJs' PFD, p. 32.

conservative assumptions regarding permeability and the transmissivity of the EW-4400-S fault in its modeling.<sup>56</sup> The same reservoir modeling results were used to predict the estimated lateral extent of the injected effluent into the Lower Cockfield through volumetric analysis. If TexCom re-perforates the well, and it is determined that its reservoir modeling was based on incorrect assumptions, then TexCom's analysis regarding the waste plume will also change. As the ALJs stated, if the EW-4400-S fault is not transmissive, the injected wastewater would compress the existing fluid, which would then exert pressure backward toward the well and cause the waste plume to extend a greater distance in other directions.<sup>57</sup> Finding of Fact Number 134 should be overturned because it will change if TexCom is given the opportunity to reopen the record and re-test the existing well.

**Finding of Fact No. 135:**

Aligned Protestants object and except to Finding of Fact Number 135 on the grounds that it incorrectly uses the term "conservative" to describe TexCom's prediction of fracture pressure for its proposed project. This Finding is inconsistent with the ALJs' determination in their PFD that TexCom should have used more conservative assumptions regarding permeability and the transmissivity of the EW-4400-S fault in its modeling.<sup>58</sup> It is unclear how a "conservative" estimate of fracture pressure can be based on non-conservative input parameters. Finding of Fact Number 135 should be overturned as contrary to the great weight of the evidence.

**Finding of Fact No. 136:**

Aligned Protestants object and except to Finding of Fact Number 136 on the grounds that it incorrectly uses the term "conservative" to describe TexCom's calculation of maximum

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<sup>56</sup> ALJs' PFD, p. 32.

<sup>57</sup> ALJs' PFD, p. 38.

<sup>58</sup> ALJs' PFD, p. 32.

allowable surface pressure for its proposed project. This Finding is inconsistent with the ALJs' determination in their PFD that TexCom should have used more conservative assumptions regarding permeability and the transmissivity of the EW-4400-S fault in its modeling.<sup>59</sup> It is unclear how a "conservative" calculation of maximum allowable surface pressure can be based on non-conservative input parameters. Finding of Fact Number 136 should be overturned as contrary to the great weight of the evidence.

**Finding of Fact No. 137:**

Aligned Protestants object and except to Finding of Fact Number 137 on the grounds that it is an incorrect statement of fact. Because TexCom's input parameters regarding permeability and transmissivity of the EW-4400-S fault were incorrect, the maximum allowable surface pressure will likely change if TexCom is allowed to re-perforate and re-test the existing well. The ALJs cannot state as a fact that an injection pressure of 1,250 psi "should not" cause sufficient pressure in the Injection Zone to initiate any new fractures or propagate existing fractures. Finding of Fact Number 137 should be overturned as contrary to the record evidence.

**E. Permeability Used in Reservoir Modeling**

**Finding of Fact No. 139:**

Aligned Protestants object and except to Finding of Fact Number 139 on the grounds that it is an incorrect and misleading statement. Finding of Fact Number 60 states that TexCom will be required to re-perforate WDW315 from 6,045 to 6,390 in order to re-position the injection interval. The depths of the whole core taken from the injection zone when WDW315 was drilled were from 6,070 feet to 6,084 feet.<sup>60</sup> Mr. Grant testified that the results of the core sample were taken from a single sand within a 14-foot section of a shallower part of the injection interval, and

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<sup>59</sup> ALJs' PFD, p. 32.

<sup>60</sup> District Exh. 8, p. 27, ln. 6-7.

that core sampling does not provide as realistic an indication of permeability as fall-off testing.<sup>61</sup> It is misleading for the ALJs to provide as a Finding that the core analysis indicated a higher permeability range than should have been provided by TexCom. It is also incorrect to find that the whole core was taken from the section planned for re-perforation by TexCom, as it is unknown whether TexCom would actually re-perforate in the same section. Finding of Fact Number 139 should be overturned as it is not supported by record evidence.

**Finding of Fact No. 140:**

Aligned Protestants object and except to Finding of Fact Number 140 on the grounds that it is misleading. The “literature review” referenced in this Finding was referenced in TexCom application materials<sup>62</sup> as an attempt to lend credibility to its higher permeability value of 800 millidarcies. The passing reference to a “literature review” in the application did not describe the contents of the literature or provide the citations to the literature reviewed. This Finding is simply not supported by any credible evidence, is improperly slanted in favor of the Applicant, and should be overturned.

**Finding of Fact No. 144:**

Aligned Protestants object and except to Finding of Fact Number 141 on the grounds that it is unsupported by record evidence. Finding of Fact Number 143 correctly states that the results of the fall-off test administered on WDW315 provide the most reliable information available on the permeability of the current perforated interval. Similarly, Finding of Fact Number 147 states that although TexCom plans to re-perforate WDW315, it should have used the 80.9 mld permeability measured by the 1999 fall-off test in its reservoir modeling to conservatively calculate the Cone of Influence.” As the ALJs have stated, the additional sands to

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<sup>61</sup> District Exh. 8, p. 27, ln. 17-28.

<sup>62</sup> TexCom Exh. 6, p. 126.

be used by TexCom would require a permeability factor of 1,400 millidarcies in order to bring the injection interval average up to 500 millidarcies (mD).<sup>63</sup> There is no record evidence that TexCom will be able to improve its previous assumption regarding permeability by re-perforating an additional 45 feet of sands. Finding of Fact Number 144 should be overturned.

**Finding of Fact No. 145:**

Aligned Protestants object and except to Finding of Fact Number 145 on the grounds that it is speculative and contrary to the substantial evidence presented by protestants in this case. The ALJs' description of the "new" interval of 6,045 to 6,390 feet to be perforated by TexCom as the "optimal range for injection" is simply not supported by any evidence. This Finding is also wholly inconsistent with the ALJs' statement in the Proposal for Decision that they are unpersuaded that an average permeability of 500 millidarcies can be achieved for the entire 145-foot injection interval.<sup>64</sup> While the evidence has shown that TexCom does plan to re-perforate WDW315 at both the currently perforated sands and additional sands, there is no substantial evidence that the "new" interval will be the "optimal range." As the ALJs have stated, the additional sands to be used by TexCom would require a permeability factor of 1,400 millidarcies in order to bring the injection interval average up to 500 millidarcies.<sup>65</sup> This Finding should be overturned on the grounds that it is not supported by any evidence. In the alternative, Finding of Fact Number 60 should be amended to delete the reference to "optimal range for injection."

**Finding of Fact No. 149(a) and (b):**

Aligned Protestants object and except to Finding of Fact Number 149(a) and (b) on the grounds that it is contrary to the evidence presented in this contested case. Aligned Protestants

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<sup>63</sup> ALJs' PFD, p. 42.

<sup>64</sup> ALJs' PFD, p. 42.

<sup>65</sup> ALJs' PFD, p. 42.

strongly disagree that a permit should be granted for WDW410 and request that Finding of Fact Number 149(a) and (b) be overturned.

**F. Transmissivity of Fault Located 4,400 Feet South of Facility**

**Finding of Fact No. 150:**

Aligned Protestants object and except to Finding of Fact Number 150 on the grounds that it is not supported by the record evidence. This Finding is a statement offered by a TexCom witness during the hearing to lend support to TexCom's inappropriately high permeability value of 500 mD. Even though the treating the EW-4400-S as horizontally transmissive caused the wastewater plume to spread farther,<sup>66</sup> it is only TexCom's argument that it was a "conservative assumption with respect to determining the extent of the wastewater plume." This argument is not supported by the evidence. Further, this Finding conflicts with Finding of Fact Number 154, which states that to be conservative and protective of USDWs, TexCom should have assumed that the EW-4400-S fault was not horizontally transmissive for purposes of determining the extent of the Cone of Influence. The EW-4400-S fault cannot be treated as both horizontally transmissive and not horizontally transmissive depending on the results TexCom requires to receive its permits. The EW-4400-S fault is either transmissive or nontransmissive. Finding of Fact Number 150 should be overturned.

**Finding of Fact No. 151:**

Aligned Protestants object and except to Finding of Fact Number 151 on the grounds that it is speculative and not supported by the evidence. This Finding is a statement attributed to a TexCom witness during the hearing, and conflicts with Finding of Fact Number 154. It is improper for the ALJs to include one incorrect finding that the two sides of the EW-4400-S are

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<sup>66</sup> ALJs' PFD, p. 42.

in communication and that the fault is horizontally transmissive, and then include another finding that TexCom should have assumed that the EW-4400-S fault was not horizontally transmissive. Finding of Fact Number 151 is inconsistent and misleading, and should be overturned.

**Finding of Fact No. 152, 153 and 155:**

Aligned Protestants object and except to Findings of Fact Numbers 152, 153, and 155. These Findings of Fact demonstrate that the Cone of Influence and the Area of Review are uncertain. In the absence of 500 artificial penetrations, and in the absence of an unstable multi-faulted site,<sup>67</sup> the further investigation and calculation would be helpful and would likely not cause a substantive change to the possibility of endangering USDW's. However, this location is penetrated over 500 times and is multi-faulted according to Exxon.<sup>68</sup> These four findings demonstrate that the current application does not and cannot protect USDW's from contamination. It is unknown whether USDW's will be endangered. How can this application, as it stands, employ proper safeguards to protect ground and surface fresh water from pollution? It is unknown how far the waste plume will extend and unknown how many artificial penetrations will be encountered. That is what these four findings tell us. These findings dictate that the permit should be denied.

**Finding of Fact No. 156:**

Aligned Protestants object and except to Finding of Fact Number 156 on the grounds that it is speculative and not based on any credible evidence presented in this case. There is insufficient information in the record to support a statement of fact that even an abandoned well that was not properly plugged would have been left with a column of drilling mud. This statement is based on a speculative recitation of what was believed to be the practice of the oil

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<sup>67</sup> AP Exh. 1-I.

<sup>68</sup> AP Exh. 1-I.

and gas industry generally in the 1930s. There was no evidence submitted in this proceeding to confirm whether mud plugs were left in each and every abandoned well within the Area of Review. Aligned Protestants urge this Finding be overturned because additional information would be required to assert this Finding with any degree of certainty.

**Finding of Fact No. 163, 164, 165, and 166:**

Aligned Protestants object and except to Findings of Fact Numbers 163, 164, 165, and 166. Findings of Fact Numbers 163, 164, 165, and 166 are inconsistent with Conclusion of Law 51(d) and 51(e), which require TexCom to determine the permeability of the injection interval and to determine whether fault EW-4400-S is laterally transmissive, and to then remodel and recalculate the Cone of Influence. Findings of Fact Numbers 163, 164, 165, and 166 must not be true if Conclusion of Law 51(d) and 51(e) are required. If it is a fact that wastewater will not reach the EW-4400-S fault then there is no need to complete another fall-off test to recalculate and remodel the Cone of Influence. Further, if TexCom recalculates the Cone of Influence and the radius is larger than 750 feet, there could be additional artificial penetrations within that new Cone of Influence that extend into the Lower Cockfield. Findings of Fact Numbers 163, 164, 165, and 166 are not supported by the great weight of the evidence and should be overturned.

**Finding of Fact No. 167:**

Aligned Protestants object and except to Finding of Fact Number 167 on the grounds that it is speculative. Because TexCom's reservoir modeling is based on faulty input parameters, it is impossible for the ALJs to state as fact that the maximum operating surface injection pressure of 1,250 psi will not cause movement of fluid out of the injection zone and subsequent contamination of USDWs and fresh or surface water. The maximum operating surface injection pressure will change if TexCom re-perforates existing well WDW315 and conducts additional

fall-off testing. Finding of Fact Number 167 should be overturned as speculative and not supported by any evidence, since the ALJs have recommended that TexCom be allowed to remodel and recalculate the Cone of Influence and adjust operating parameters, including the maximum operating surface injection pressure.

**Finding of Fact No. 169(a)-(c):**

Aligned Protestants object and except to Finding of Fact Number 169 on the grounds that it is not supported by the weight of the evidence. The permit conditions outlined in Finding of Fact Number 169(a)-(c) indicate that TexCom failed to meet its burden of proof that its operations will be protective of both ground and surface freshwater. The permit should be denied because TexCom's reservoir modeling was based on faulty input parameters which cannot be supported by subsequent testing post-permit. The ALJs had an opportunity to require TexCom to retest the existing well before the conclusion of the hearing, which would allow the protestant parties to examine the results of the new testing and contest the results if necessary. However, Finding of Fact Number 169(c) effectively precludes any meaningful participation by protestants in the re-completion of the well, the completion of the new fall-off test, and the remodeling and recalculation of the Cone of Influence recommended by the ALJs. If the ALJs believe that it will not be possible for wastewater injected by TexCom to travel upward through existing artificial penetrations into a USDW,<sup>69</sup> then they should not find that permit conditions should be added to allow TexCom to continue trying to (a) determine (not "verify") the permeability of the injection interval and determine whether the EW-4400 fault is horizontally transmissive, and (b) remodel and recalculate the Cone of Influence based on the new

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<sup>69</sup> ALJs' Finding of Fact Number 165, p. 21.

information. These two permit conditions could lead to the need for altered operating parameters or corrective action. Finding of Fact Number 169(a)–(c) should be overturned.

#### **G. Well Closure and Post-Closure**

Aligned Protestants take no exception to the ALJ's PFD or findings of fact on this issue.

#### **H. Draft Permits**

##### **Finding of Fact No. 175 and 176:**

Aligned Protestants object and except to Findings of Fact Numbers 175 and 176 because there is no record evidence to support any kind of comparison of the Draft Permit with other UIC permits. Although, TCEQ Staff may have testified to their information as to the standard practices for UIC permits, there was no record evidence presented regarding other UIC permits or applications and no evidence with which to make any kind of comparison of TexCom's Application or action on that with action on others.

#### **I. Traffic**

##### **Finding of Fact No. 177:**

Aligned Protestants object and except to Finding of Fact Number 177 on the grounds that it is incomplete and misleading. This finding does not reference the permit condition proposed by the ALJs that the facility entrance be moved to TexCom's 72 feet of frontage on F.M. 3083, and that the Creighton Road entrance be closed. This finding also does not reference the fact that TexCom's Application shows the entire facility designed around this entrance, or that an exit must be provided within that 72 feet for trucks leaving the facility, or that an employee gate must be provided as shown on the application. Finding of Fact Number 177 should be overturned as misleading, or in the alternative, amended to reflect that TexCom's current proposal indicates an entrance to the facility be located on Creighton Road.

## J. Public Interest

### Finding of Fact No. 204:

Aligned Protestants object and except to Finding of Fact Number 204 on the grounds that TexCom did not present sufficient evidence for an analysis of whether any other alternative methods of disposal were feasible. TexCom and the TCEQ Staff narrowly interpreted the Texas Water Code<sup>70</sup> to require that, in satisfying the public interest test for the injection well whether a suitable alternative exists, an applicant must merely state an opinion whether injection is the “best method” for disposal of wastewater. On the contrary, the provisions of the Texas Water Code go beyond that determination and state that the TCEQ “shall consider, but shall not be limited to the consideration of: ... (2) whether there is a practical, economic, and feasible alternative to an injection well reasonably available.”<sup>71</sup> While Aligned Protestants may agree that injection may be the best method of disposal, there exist other reasonable alternatives to injection of wastewater at the site proposed by TexCom. The ALJs recognized in Finding of Fact Number 207 that two other disposal sites exist within 100 miles of the proposed UIC site. Aligned Protestants also pointed out in their Response to Closing Arguments that TexCom’s demonstration of the existence of a multitude of wastewater generators in Montgomery County and surrounding counties, without one shred of evidence that any of those wastewater generators were in need of an additional disposal services, is an obvious indication that there are reasonable alternatives to TexCom’s injection well already in existence.<sup>72</sup> Those alternatives are likely practical, economical, and feasible or else some one of those hundreds of wastewater generators

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<sup>70</sup> Tex. Water Code § 27.051(d)(2).

<sup>71</sup> *Id.*

<sup>72</sup> AP Response to Closing, p. 45-46.

would surely have shown some sign of support of TexCom's Application. None did.<sup>73</sup> Another key factor in assessing whether there are any practical alternatives to the injection well proposed by TexCom is whether alternative locations would be more appropriate, given the geological and demographic circumstances. The factor was totally ignored by TexCom and the TCEQ Staff.<sup>74</sup> Because of the failure of TexCom or the TCEQ Staff to analyze alternatives to the proposed injection well, Finding Number 204 should be overturned.

**Finding of Fact No. 206:**

Aligned Protestants object and except to Finding of Fact Number 206 in that it is completely irrelevant to any kind of analysis of TexCom's Application. While TexCom insinuated that Huntsman Chemical's physical proximity to the proposed injection well site provided some kind of indication that Huntsman Chemical would be a major customer for its operations, there was absolutely no evidence that any business in Montgomery County, including Huntsman Chemical, had any intention or desire to contract with TexCom for wastewater disposal.<sup>75</sup> Consequently, Finding Number 206 must be overturned as irrelevant and misleading.

**Finding of Fact No. 208:**

Aligned Protestants object and except to Finding of Fact Number 208 in that it is unsupported by any record evidence. As pointed out in Aligned Protestants' exception and objection to Findings of Fact Numbers 204 and 206, TexCom included in its Application a list of wastewater generators in Montgomery County and other surrounding counties, but it did not provide any evidence that the needs of those wastewater generators were not being met nor that TexCom's proposed injection well was the only practical, economic and feasible alternative.

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<sup>73</sup> See Tr., p. 834, ln. 24 – p. 835, ln.6.

<sup>74</sup> See AP Response to Closing, p. 46-47.

<sup>75</sup> See AP Closing Argument, p. 43-44.

Moreover, Finding of Fact Number 208 is inconsistent with Findings of Fact Numbers 205 and 207, which acknowledge the existence of hundreds of wastewater generators in Montgomery County and two alternative disposal sites in close proximity to the proposed TexCom injection well site. There was no evidence provided at the hearing to suggest that these two sites cannot accept sufficient waste to effectively serve the Gulf Coast region. There was no evidence presented that waste disposal needs are exceeding the capacity of the two sites which are 100 miles away. There was no evidence submitted at the hearing to suggest that there were unmet waste disposal needs in Montgomery County. As a matter of fact, Judge Alan B. Sadler testified that he is not aware of any business in Montgomery County that has requested a non-hazardous waste disposal facility be sited in Montgomery County.<sup>76</sup> The two sites mentioned in Finding of Fact Number 207 are practical options or alternatives to the granting of a permit in Montgomery County. Given Judge Sadler's testimony and Finding of Fact Number 207, it is clear the Finding of Fact Number 208 is not supported by the great weight of the evidence, and therefore should be overturned.

**Finding of Fact No. 210:**

Aligned Protestants object and except to Finding of Fact Number 210 on the same grounds and for the same reasons as expressed in their objection and exception to Finding of Fact Number 204. There simply was no analysis of other waste disposal options in this case. The TCEQ-ED apparently accepted at face value the representation by TexCom that there are no reasonable alternatives to TexCom's proposed injection project,<sup>77</sup> despite the fact that the same TexCom witness that testified to that representation also admitted that he did not do a thorough

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<sup>76</sup> AP Exh. 5, p. 16, ln. 11-13.

<sup>77</sup> TCEQ-ED Closing Argument, p. 18.

examination of alternatives.<sup>78</sup> Further, Finding of Fact Number 210 is wholly inconsistent with Finding of Fact Number 207, which states that two other disposal sites which can accept non-hazardous wastewater are located within 100 miles of the proposed site. There was no evidence provided at the hearing to suggest that these two sites cannot accept sufficient waste to effectively serve the Gulf Coast region. There was no evidence that waste disposal needs are exceeding the capacity of the two sites which are located 100 miles away. There was no evidence submitted at the hearing to suggest that there were unmet waste disposal needs in Montgomery County. As a matter of fact, Judge Alan B. Sadler testified that he is not aware of any business in Montgomery County which has requested that a non-hazardous waste disposal facility be sited in Montgomery County.<sup>79</sup> Obviously, Finding of Fact Number 210 is not true in light of Finding of Fact Number 207. The two sites mentioned in Finding of Fact Number 207 are practical options or alternatives to the granting of a permit in Montgomery County. Given Judge Sadler's testimony and Finding of Fact Number 207, it is clear the Finding of Fact Number 210 is not supported by record evidence, and therefore should be overturned.

**Finding of Fact No. 211:**

Aligned Protestants object and except to Finding of Fact Number 211 because it is misleading and untrue on its face without qualification. It cannot be said that injection via UIC well is the "only" method of disposal that permanently isolates the wastewater without an admission providing that geological circumstances of the injection site are such that there are no potential pathways for migration of the injected wastewater. To be permanently isolated, the wastewater must be completely contained in the formation into which it is injected. Therefore, Finding 211 must be overturned.

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<sup>78</sup> Tr., p. 268, ln. 9 – p. 269, ln. 20.

<sup>79</sup> AP Exh. 5, p. 16, ln. 11-13.

**Finding of Fact No. 213:**

Aligned Protestants object and except to Finding of Fact Number 213 because it is untrue and unsupported by record evidence. Although TexCom would have the TCEQ believe its proposed injection well operation would provide some local economic stimulation, there is no evidence to support that proposition. TexCom's Application does not require that TexCom employees who will be operating the proposed operation, or construction companies that will be contracted to build the facility, or drilling companies that will be contracted to perform the drilling operations, will be hired from the local pools. Nor does TexCom provide any information as to any projected economic stimulus that could result from spending by companies and employees involved in the business operations conducted in the local area. Aligned Protestants assert that any economic stimulation that might be felt will be small and short-lived, and certainly would not offset the chilling effect on the local economy that local officials believe would ultimately result from TexCom's proposed operation.<sup>80</sup> Consequently, this Finding cannot be supported and must be overturned.

**Finding of Fact No. 217:**

Aligned Protestants object and except to Finding of Fact Number 217 on the grounds that it is unsupported by record evidence. Aligned Protestants cannot point to any record evidence that would substantiate an assertion that TexCom has the required resources to operate the proposed facility. A payment bond filed by TexCom pursuant to provide financial assurance of costs for plugging and abandoning<sup>81</sup> would not be sufficient to establish that TexCom has all the financial resources to conduct a flawless operation. While the ALJs argued that TexCom was

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<sup>80</sup> AP Exh. 6, p. 16, ln. 14-22 – p. 17, ln. 1-3.

<sup>81</sup> As required by 30 Tex. Admin. Code § 331.142(a).

not required to provide financial information about Foxborough nor about any other “investor,”<sup>82</sup> they completely missed the testimony by Dr. Ross, President of TexCom, that Foxborough would actually have a say in TexCom’s operations through management rights and control of a part of the TexCom Board as a result of acquisition of their membership interest.<sup>83</sup> Foxborough will be more than just an investor. The record does not contain financial assurance from all of the controlling and responsible factions of TexCom. Consequently, Finding Number 217 should be overturned.

**Finding of Fact No. 218:**

Aligned Protestants object and except to Finding of Fact Number 218 because it is an incorrect statement. There is no information in the record to substantiate that TexCom’s proposed operation would attract enough wastewater disposal business to provide a “centralized” disposal operation, nor that it is desirable or in any way in the public interest to have a centralized operation in the proposed location. Moreover, there is no evidence that disposal operations by a company dedicated solely to that function would be preferable to operations by a company with other interests. In fact, TexCom admits, and the ALJs state in Finding Number 199, that its parent company’s core business is in the biodiesel market and Class II injection well disposal.<sup>84</sup> How can it be said that TexCom, as an affiliate of a multi-faceted parent company is somehow more focused on wastewater injection than another company “whose disposal operations are secondary or tertiary to their core business?” Finding of Fact Number 218 is not correct and must be overturned.

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<sup>82</sup> ALJs’ PFD, p. 62-63.

<sup>83</sup> Tr., p. 138, ln. 15 – p. 139, p. 3.

<sup>84</sup> Tr. p. 36, ln. 18 – p. 37, ln. 6.

**Finding of Fact No. 219:**

Aligned Protestants object and except to Finding of Fact Number 219 on the grounds that there is no record evidence to support any such proposition that risks are reduced with centralized waste disposal. While this proposition may have some common sense logic to it, there is no record evidence that centralized waste disposal as proposed by TexCom would decrease any of the risks of endangerment of the public water supply, or any other risks, over risks faced with disposal methods currently in use by the hundreds of wastewater generators in Montgomery County, or the surrounding area. Given an ideal geological environment for wastewater injection, centralized disposal may be more efficient and provide an overall reduction of risks; but, Aligned Protestants assert that the record in this proceeding does not provide necessary assurances that the public's water supply in Montgomery County will be protected and the risks imposed by TexCom's proposed injection operation would far exceed any advantage that could be obtained by centralizing any disposal operations at the proposed site. Consequently, Finding of Fact Number 219 must be overturned.

**Finding of Fact No. 220:**

Aligned Protestants object and except to Finding of Fact Number 220. Finding of Fact number 220 is not supported by the great weight of the evidence and is inconsistent with Conclusion of Law number 52, requiring relocation of the entrance of the facility from Creighton Road to F.M. 3083. Finding of Fact Number 220 is also inconsistent with Finding of Fact number 185. Finding of Fact number 185 states that Creighton Road is not adequate for heavy truck traffic and that such traffic will pose a safety hazard to the public. Conclusion of Law Number 52 requires that the entrance to the facility be shifted to F.M. 3083, a roadway maintained by TxDOT. Finding of Fact Number 190 states that TexCom will be required to

obtain a permit from TxDOT before an entrance to the site will be constructed, a procedure that puts TexCom in the hands of another state regulatory agency before any proposed injection operations could commence. Further, there is absolutely no assurance that TxDOT will grant such a permit. Should TexCom not be able to obtain a permit from TxDOT, then the only entrance to the site which would be available would be the Creighton Road entrance. Use of the Creighton Road entrance will endanger the public, as concluded in Finding of Fact number 185; therefore TexCom's proposed well will in fact encroach upon other existing rights in the area. Should Creighton Road be the only entrance, the safety of neighboring individual land owners and users of Creighton Road will be endangered. Therefore Finding of Fact Number 220 is not supported by the great weight of the evidence, and should be overturned.

#### **K. Reporting and Transcription Costs**

Aligned Protestants take no exception to the ALJs' PFD or findings of fact on this issue.

#### **L. Other Remaining Issues**

##### **Finding of Fact No. 227:**

Aligned Protestants object and except to Finding of Fact Number 227 on the grounds that it is not supported by the great weight of the evidence. Aligned Protestants cannot agree to a finding that states the UIC wells' design and operation satisfy all applicable statutory and regulatory requirements, as this finding is contrary to the substantial evidence presented by protestants during the contested case.

### **III. EXCEPTIONS TO SPECIFIC CONCLUSIONS OF LAW**

##### **Conclusion of Law No. 4:**

Aligned Protestants object and except to Conclusion of Law Number 4 on the grounds that TexCom's Application was insufficient and failed to contain all of the information required

by the regulatory requirements for UIC permit applications. TexCom's missing information, and the misleading calculations contained in its permit application, were addressed extensively in closing arguments and responses filed by Aligned Protestants and other protestants, and will not be reiterated herein. Conclusion of Law Number 4 should be stricken as false and unsupported by record evidence.

**Conclusion of Law No. 6:**

Aligned Protestants object and except to Conclusion of Law Number 6. The record evidence is in fact not sufficient to meet the requirements of applicable law for issuance of a permit. There is substantial evidence in the record that the proposed injection well site is not geologically suitable for injection operations, and that ground and surface fresh water will be endangered by TexCom's proposed operations.<sup>85</sup> Further, there is substantial evidence in the record that operation of the injection well is not in the public interest of the citizens of Montgomery County.<sup>86</sup> County Judge Alan B. Sadler testified clearly and adamantly that the injection well is contrary to the public interest of the citizens and businesses of Montgomery County.<sup>87</sup> Dr. Paul Pearce testified in clear and unambiguous tones that the proposed injection well is not in the best public interest of the citizens of Montgomery County.<sup>88</sup> Dr. Pearce testified that the cost to Montgomery County, should its groundwater be contaminated, would be virtually insurmountable.<sup>89</sup> Dr. Hughbert Collier, after a thorough and detailed examination of the geology of the Conroe Oil Field and the current 2.5-mile Area of Review calculated by

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<sup>85</sup> See, e.g., Closing Arguments of the District, AP, and Individual Protestants concerning TexCom's failure to meet its burden of proof that it satisfied all aspects of 30 Tex. Admin. Code Chapter 331.

<sup>86</sup> Tex. Water Code § 27.051.

<sup>87</sup> AP Exh. 5, p. 16, ln. 17 – p. 17, ln. 3.

<sup>88</sup> AP Exh. 2, p. 31, ln. 9-11.

<sup>89</sup> AP Exh. 2, p. 30, ln. 22 – p. 31, ln. 4.

TexCom, testified that the combination of multiple faults and the presence of numerous old abandoned oil wells in the Area of Review, made the use of an injection well as proposed in TexCom's application in fact, not in the public interest.<sup>90</sup>

The ALJs have themselves demonstrated, in their Findings of Fact, that existing rights will be impaired if TexCom is forced to use Creighton Road as the entrance to the facility. Finding of Fact number 185 states without equivocation that Creighton Road is not adequate for heavy truck traffic, and that use of Creighton Road will pose a safety hazard to the public. Should the public's safety be impaired, then their rights will be impaired. Conclusion of Law Number 52 requires the relocation of the truck entrance to the proposed facility from Creighton Road to F.M. 3083, which is a highway maintained by the State of Texas. As such, TxDOT must grant permission before an entrance to the proposed facility could be constructed on F.M. 3083. There is absolutely no assurance that TxDOT will grant such permission, and there is thus no assurance at all that public safety will not be impaired. Should an entrance not be allowed on F.M. 3083, then Creighton Road is the only alternative, and its use will endanger the public. Such a result will violate Texas Water Code Section 27.051(a)(2).

**Conclusion of Law No. 7:**

Aligned Protestants object and except to Conclusion of Law Number 7 because TCEQ Staff failed to address all matters required by law, particularly the public interest aspect of granting such permits. The TCEQ Staff admitted that they were not trained to analyze what constitutes a public nuisance<sup>91</sup> and that their review of the Application was more of a technical

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<sup>90</sup> AP Exh. 1, p. 38, ln. 19.

<sup>91</sup> Tr., p. 1267, ln. 9-12.

checklist review rather than a qualitative analysis of public interest issues.<sup>92</sup> The State Legislature mandated that the TCEQ make a finding that the use or installation of an injection well be in the public interest,<sup>93</sup> which requires more than a cursory technical review by its Staff. Consequently, Conclusion of Law Number 7 cannot be supported by the record evidence and must be overturned.

**Conclusion of Law Nos. 8 and 9:**

Aligned Protestants object and except to Conclusions of Law Numbers 8 and 9 for the same reasons stated in the exception to Conclusion of Law Number 6. TexCom's proposed operation cannot satisfy applicable law given the grave concerns with the chosen location and the evidence that the proposed operation will pose a danger to Montgomery County's sole water supply and to the local environment. Further, as stated in the exception to Conclusion of Law Number 6, there is no assurance that F.M. 3083 will be available for a facility entrance, and if Creighton Road is used as an entrance, the public will be endangered (as the ALJs have themselves concluded). Consequently, it cannot be said that issuance of the permits and proceeding with TexCom's injection project despite the concerns raised could in any way be done without adversely affecting public health or welfare, and Conclusions of Law Numbers 8 and 9 should be overturned.

**Conclusion of Law No. 10:**

Aligned Protestants object and except to Conclusion of Law Number 10 on the same grounds as stated in Aligned Protestants' exceptions to Findings of Fact Numbers 204, 206, 208, 210, 211, 213, 217, 218, 219, and 220, and the exceptions to Conclusions of Law Numbers 6, 7, 8, and 9. The record evidence presented by protestants in this case show that the findings and

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<sup>92</sup> TCEQ-ED Exh. 1, p. 10, ln. 4-13.

<sup>93</sup> Tex. Water Code Ann. § 27.051(a)(1).

conclusions excepted to herein are erroneous and do not support a conclusion that the draft permits meet the requirements of Texas Water Code § 27.051. Further, Conclusion of Law Number 10 is an incorrect statement of the law, in that it states that the permits would be issued to the Facility, instead of to the proposed operator of the site, which is TexCom.

**Conclusion of Law No. 17**

Aligned Protestants object and except to Conclusion of Law Number 17 on the grounds that it incorrectly states the casing depth for the proposed wells as 4,110 feet, when TexCom's application states that WDW315 was drilled to approximately 4,128 feet, per TexCom's Application.<sup>94</sup>

**Conclusion of Law No. 18:**

Aligned Protestants object and except to Conclusion of Law Number 18 on the grounds that it is an incorrect statement. While TCEQ-ED witness Katherine Hoffman did personally visit the site,<sup>95</sup> Ms. Hoffman did not "physically inspect the TexCom site to determine the local conditions and the probable effect of the well" as required by Texas Water Code § 27.016. Ms. Hoffman admitted that the TCEQ Staff does not have specific criteria they use when interpreting that section of the Texas Water Code.<sup>96</sup> Ms. Hoffman further testified that in the UIC program, the underground injection well applies only from the wellhead down.<sup>97</sup> The TCEQ-ED staff simply focused only on the second requirement of Texas Water Code § 26.016, which is to determine the requirements for the setting of casing and the drilling of the well.<sup>98</sup>

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<sup>94</sup> TexCom Exh. 6, p. 99.

<sup>95</sup> ED Exh. 5.

<sup>96</sup> Tr. p. 1203, ln. 6-7.

<sup>97</sup> Tr. p. 1204, ln. 1-4.

<sup>98</sup> Tr. p. 1204, ln. 5-12.

The evidence does not support any finding that the TCEQ physically inspected the proposed site to determine local conditions and the probable effect of the well.

**Conclusion of Law No. 20:**

Aligned Protestants object and except to Conclusion of Law Number 20 on the grounds that it is an incorrect statement of the law and impermissibly allows TexCom to conduct required testing after the permit is granted. 30 Texas Administrative Code § 331.65(a)(1) applies to new wells whose permit applications have met the threshold requirements under TCEQ rules. The rule does not apply to an existing well whose geologic data, based a completion report, does not support that well's viability or the suitability of the injection zone for the proposed operation.

**Conclusion of Law No. 22:**

Aligned Protestants object and except to Conclusion of Law Number 22 in that there is compelling evidence that the site chosen by TexCom is absolutely unsuitable geologically. The proposed injection site is surrounded by over 500 old abandoned oil wells dating back to the 1930s. We are not talking about 20 or 30 old wells, but 500 wells, the integrity of which is unknown, and to a great extent cannot be determined since many of these old wells have no records which could be reviewed. Additionally, the geography of Conroe Oil Field has been described as unstable by Exxon, the company which developed the field.<sup>99</sup> TexCom and the TCEQ Staff have chosen to ignore Exxon's characterization of the oil field. However, the lack of geological suitability is corroborated by the lack of certainty of TexCom's reservoir modeling, and by the ALJs' directive that a new fall-off test should be completed to determine the true Cone of Influence for injected waste. The ultimate extent of the waste plume is unknown, partly due to the uncertainty as to the transmissivity of at least one major subterranean fault, located

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<sup>99</sup> AP Exh. 1-I.

southeast of the wellbore. How can a site be determined to be geologically suitable when it is unknown whether a major fault is going to radically affect the spread of the waste plume? The fact that further testing is directed to determine the nature of the fault, and its effect, is strong evidence that the geology cannot now be concluded to be suitable. Therefore, Conclusion of Law Number 22 should be overturned.

**Conclusion of Law No. 23:**

Aligned Protestants object and except to Conclusion of Law Number 23 on the grounds that the Findings of Fact excepted to herein are erroneous and therefore cannot support a conclusion that TexCom's proposed wells comply with the requirements of 30 Texas Administrative Code § 331.121(c)(3)(A). This Conclusion impermissibly assumes facts that are contrary to the record, as TexCom incorrectly assumed the permeability of the injection zone to be 500 mD. As discussed above, protestants have presented compelling evidence that the injection zone does not have sufficient permeability to prevent the migration of fluids into USDWs or freshwater aquifers.

**Conclusion of Law No. 24:**

Aligned Protestants object and except to Conclusion of Law Number 24 for the same reasons stated in the exception to Conclusion of Law Number 22.

**Conclusion of Law No. 25:**

Aligned Protestants object and except to Conclusion of Law Number 25 on the grounds that the Findings of Fact excepted to herein are erroneous and therefore cannot support a conclusion that TexCom's proposed wells comply with the requirements of 30 Texas Administrative Code § 331.121(c)(3)(B)(ii). This Conclusion impermissibly assumes facts that are contrary to the record, as there is insufficient evidence that the Jackson Formation would

prevent the initiation and/or propagation of fractures. As discussed above, protestants have presented compelling evidence concerning the ability of the Jackson Formation to confine injected fluids in light of faults, artificial penetrations, and potential pressure build-up.<sup>100</sup>

**Conclusion of Law No. 29:**

Aligned Protestants object and except to Conclusion of Law Number 29 for the same reasons stated in the exception to Conclusion of Law Number 22. Additionally, it should be noted that it is unknown how many abandoned boreholes will be encountered by the waste plume, since the extent of the waste plume is uncertain at this time. TexCom's entire project, in East Texas terms, is "betting on the come." TexCom is assuming, predicting, and speculating that USDWs will not be endangered, because their estimates suggest such. The drinking water of 400,000 citizens should not be subjected to unknown probabilities. The Exxon report of 1975<sup>101</sup> dictates that fluid migration will reach collapsed boreholes, yet the ALJs are unwilling to acknowledge the information gleaned from the primary Conroe Oil Field operator, Exxon. Conclusion of Law Number 29 should be overturned.

**Conclusion of Law No. 38:**

Aligned Protestants object and except to Conclusion of Law Number 38 on the grounds that the evidence does not support a conclusion that the ambient monitoring is not required based on the "nature of the proposed activity and the local geology." Ambient monitoring as contemplated by 30 Texas Administrative Code § 331.64(g) is based on a site-specific assessment of the potential for fluid movement from the well or injection zone. As discussed above, protestants have presented compelling evidence concerning the geologic unsuitability of

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<sup>100</sup> See AP Closing Argument, p. 11 (citing TexCom Exh. 76, p. 85-86).

<sup>101</sup> AP Exh. 1-I.

the injection zone for TexCom's proposed activities, and concerning the potential that USDWs will be endangered by TexCom's proposed activities.

**Conclusion of Law No. 42:**

Aligned Protestants object and except to Conclusion of Law Number 42 on the grounds that the Findings of Fact excepted to herein are erroneous and therefore cannot support a conclusion that "use of existing Well WDW315 and installation of the three additional wells proposed by TexCom is in the public interest." Ample evidence has been provided in this case that Well WDW-315 and three additional prospective wells are in fact not in the public interest of the citizens of Montgomery County. County Judge Alan B. Sadler has testified clearly and specifically that the wells are not in the best interest of the citizens of Montgomery County.<sup>102</sup> Dr. Paul Pearce testified that the wells are not in the best interest of the citizens of Montgomery County,<sup>103</sup> and Dr. Hughbert Collier testified that an injection well is not in the best interest of Montgomery County.<sup>104</sup> It is apparent that the ALJs have chosen to overlook the public interest of the citizens of Montgomery County in favor of some generic, amorphous public interest criteria. If the UIC wells at issue are contrary to the public interest of 400,000 citizens who live in Montgomery County, then how could any other "public interest" matter?

Additionally, the issue of the facility entrance is totally unresolved. The ALJs have declared Creighton Road to be unsuitable as a facility entrance.<sup>105</sup> This leaves TexCom's only entrance option as F.M. 3083, a state highway that is controlled by TxDOT. A facility entrance located on F.M. 3083 may, in fact, not be approved by TxDOT. Should TxDOT deny access to

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<sup>102</sup> AP Exh. 5, p. 16, ln. 14 – p. 17, l. 4.

<sup>103</sup> AP Exh. 2, p. 31, ln. 5-12.

<sup>104</sup> AP Exh. 1, p. 38, ln. 15-19.

<sup>105</sup> See ALJs' Finding of Fact Number 185.

F.M. 3083, then the only facility entrance will be on Creighton Road, which the ALJs have determined to be hazardous to the public safety. Should this happen, then the UIC well site will be contrary to the public interest, because use of the entrance will constitute a public safety hazard. Therefore, Conclusion of Law Number 42 should be overturned.

**Conclusion of Law No. 43:**

Aligned Protestants object and except to Conclusion of Law Number 43 on the grounds that it is an incorrect, speculative statement that ignores Finding of Fact Number 169(a) and (b). That finding would require that TexCom remodel and recalculate the Cone of Influence based on the “new information” determined by the “new” fall-off test, and determine whether any artificial penetrations extend into the injection interval of the recalculated Cone of Influence. The PFD proposes to allow TexCom to potentially expand its Cone of Influence and include an unknown additional number of old abandoned wells, the condition of which is unknown. Therefore, a conclusion cannot be made that “no corrective actions are needed with respect to any known artificial penetrations in the area,” because the “known” artificial penetrations in the area are subject to change.

**Conclusion of Law No. 44:**

Aligned Protestants object and except to Conclusion of Law Number 44 on the grounds that the evidence does not support any conclusion that TexCom’s wells will not cause or allow the movement of fluid that would result in the pollution of a USDW. As discussed above, protestants have presented compelling evidence concerning the geologic unsuitability of the injection zone for TexCom’s proposed activities, and concerning the potential that USDWs will be endangered by TexCom’s proposed activities.

**Conclusion of Law No. 45:**

Aligned Protestants object and except to Conclusion of Law Number 45 on the grounds that the evidence does not support any conclusion that abandoned boreholes or other conduits will not cause endangerment of USDWs, and fresh or surface water. As discussed above, protestants have presented compelling evidence concerning the geologic unsuitability of the injection zone for TexCom's proposed activities, and concerning the potential that USDWs will be endangered by TexCom's proposed activities. Additionally, Conclusion of Law Number 45 is a speculative statement that ignores Finding of Fact Number 169(a) and (b). That finding would require that TexCom remodel and recalculate the Cone of Influenced based on the "new information" determined by the "new" fall-off test, and determine whether any artificial penetrations extend into the injection interval of the recalculated Cone of Influence. It is unknown whether any abandoned boreholes in a larger Cone of Influence would cause endangerment of USDWs, and fresh or surface water.

**Conclusion of Law No. 46:**

Aligned Protestants object and except to Conclusion of Law Number 46 on the grounds that the evidence does not support any conclusion that TexCom's wells will not cause pollution of fresh water. As discussed above, protestants have presented compelling evidence concerning the geologic unsuitability of the injection zone for TexCom's proposed activities, and concerning the potential that USDWs will be endangered by TexCom's proposed activities.

**Conclusion of Law No. 47:**

Aligned Protestants object and except to Conclusion of Law Number 47 on the grounds that the findings of fact excepted to herein are erroneous and therefore cannot support a conclusion that "both ground and surface fresh water can be adequately protected from

pollution.” Substantial credible evidence was submitted during the contested case hearing by Aligned Protestants and by Lone Star Groundwater Conservation District which clearly refutes and destroys any basis for concluding that both ground and surface fresh water can be adequately protected from pollution if TexCom’s proposed permit application is granted. The Exxon report of 1975 demonstrates that subterranean fluids have moved upward along collapsed casing in abandoned wellbores in the Conroe Field.<sup>106</sup> This finding by the Conroe Field’s major operator describes the condition of the Field. There are in excess of 500 abandoned wellbores in the current 2.5-mile Area of Review calculated by TexCom. How can these abandoned wellbores be summarily ignored simply because TexCom chooses to ignore them, and TCEQ employees blithely agree?

The Conroe Field is a multi-faulted area according to the Exxon report.<sup>107</sup> One major fault which is located southeast of WDW-315 poses a problem. No one knows whether it is laterally transmissive or not. If it is not, then the Cone of Influence will extend thousands of feet farther than TexCom has estimated. Should the Cone of Influence extend thousands of feet further than TexCom has estimated, then many more abandoned wellbores come into play. What is their condition? No one knows! Are these abandoned wellbores conduits for upward migration of injected waste? TexCom estimates and hopes they will not be; but they do not know. How can a Conclusion of Law that both ground and surface fresh water will be protected, be based upon the calculations and assumptions of a company motivated by pecuniary profit? These calculations themselves are mere estimates and are based on faulty input parameters. The Jackson Formation, the so-called confining zone, has been perforated over 500 times within the current 2.5-mile Area of Review, by old abandoned well bores. The ALJs, in the face of all of

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<sup>106</sup> AP Exh. 1-I.

<sup>107</sup> *Id.*

the above-described uncertainty, have concluded that precious drinking water will be protected, as a matter of law. This conclusion is no conclusion at all. It is at best a disputed, contentious, uncertain possibility which cannot be safely predicted by anyone. Conclusion of Law Number 47, therefore must be overturned.

**Conclusion of Law No. 49:**

Aligned Protestants object and except to Conclusion of Law Number 49 on the grounds that it is an incorrect statement and the evidence does not support any finding that existing rights will not be impaired by operation of the proposed wells. The ALJs have themselves demonstrated, in their Findings of Fact, that existing rights will be impaired if TexCom is forced to use Creighton Road as the entrance to the facility. Finding of Fact number 185 states without equivocation that Creighton Road is not adequate for heavy truck traffic, and that use of Creighton Road will pose a safety hazard to the public. Should the public's safety be impaired, then their rights will be impaired. Conclusion of Law Number 52 requires the relocation of the truck entrance to the proposed facility from Creighton Road to F.M. 3083, which is a highway maintained by the State of Texas. As such, TxDOT must grant permission before an entrance to the proposed facility could be constructed on F.M. 3083. There is absolutely no assurance that TxDOT will grant such permission, and there is thus no assurance at all that public safety will not be impaired. Should an entrance not be allowed on F.M. 3083, then Creighton Road is the only alternative, and its use will endanger the public. Such a result will violate Texas Water Code Section 27.051(a)(2).

**Conclusion of Law No. 50:**

Aligned Protestants object and except to Conclusion of Law Number 50 on the grounds that it is an incorrect statement. The evidence does not support any finding that TexCom's UIC Application satisfies all applicable statutory and regulatory requirements.

**Conclusion of Law No. 51(a) – (i):**

Aligned Protestants object and except to Conclusion of Law Number 51(a)-(i) on the grounds that neither the facts nor the law support the granting of TexCom's permit applications, as set forth above. Further, the ALJs' attempt to expand 30 Texas Administrative Code § 331.65 to include "Recompletion Requirements" is an improper extension of the permitting process beyond the jurisdiction of the contested case. Under Conclusion of Law Number 51(g), protestant parties have no opportunity to verify, contest, or challenge the results of the new fall-off test and the new reservoir modeling. Aligned Protestants submit that the ALJs' recommendation that TexCom be allowed to recomplete the existing well and subsequently remodel and recalculate the Cone of Influence would set a dangerous precedent for the UIC program in this state by allowing UIC permit applicants to wholly circumvent their burden of proof to meet all applicable statutory and regulatory requirements.

**IV. CONCLUSION**

The ALJs have recommended that the Commission completely disregard substantial evidence presented by protestants in this contested case that TexCom failed to meet its burden of proof that its Application complies with all legal requirements. By stretching the regulatory provisions found in 30 Texas Administrative Code §§ 331.65 and 331.45 that specifically deal with post-permitting testing for new wells, the PFD has abrogated the requirement that a UIC permit applicant demonstrate geologic suitability for a proposed site before a UIC permit is

issued. The special conditions recommended by the ALJs have essentially relieved TexCom of its burden of proof. Further, the special conditions suggest that the ALJs themselves are uncertain as to the validity of TexCom's assertions and the quality of its evidence. For the reasons stated above, the ALJs' recommendation that the Commission grant this permit application is factually and legally flawed and should not be accepted.

It is clear that both the history of the Conroe Oil Field, and the threat of extreme damage to the aquifers if the proposed injection wells fail, warrant denial of the permits. No one, not even TexCom can guarantee that the injected chemicals will not penetrate old oil well casings and percolate into the aquifers that supply drinking water for hundreds of thousands of people. In a climate where conservation of water is at the forefront of discussion, and given the concerns over how our state will supply water for future generations, the Commission should not allow a for-profit company the opportunity to contaminate the drinking water forever.

WHEREFORE, PREMISES CONSIDERED, Aligned Protestants Montgomery County and the City of Conroe respectfully request that their Exceptions to the PFD be granted, that the Commission order TexCom's UIC permit applications be denied, and that Aligned Protestants be granted such other relief as it may be entitled.

Respectfully submitted,

**DAVID K. WALKER**  
**MONTGOMERY COUNTY ATTORNEY**

By:   
David K. Walker  
Montgomery County Attorney  
Texas Bar No. 20696200

Julie B. Stewart  
Assistant Montgomery County Attorney  
Texas Bar No. 24013924  
207 West Phillips, First Floor  
Conroe, Texas 77301  
Telephone: (936) 539-7828  
Fax: (936) 539-7997

**ATTORNEYS FOR ALIGNED  
PROTESTANTS MONTGOMERY COUNTY  
AND CITY OF CONROE**

**CERTIFICATE OF SERVICE**

I hereby certify that on May 15, 2008, a true and correct copy of Aligned Protestants Montgomery County and City of Conroe's Exceptions to the Proposal for Decision was served on all parties of record as indicated below by electronic mail, first class mail, or facsimile delivery:

Catherine C. Egan  
Administrative Law Judge  
State Office of Administrative Hearings  
300 W. 15<sup>th</sup> Street, Suite 502  
Austin, Texas 78701  
(512) 475-4993 (PH)  
(512) 475-4994 (FAX)

Thomas H. Walston  
Administrative Law Judge  
State Office of Administrative Hearings  
300 W. 15<sup>th</sup> Street, Suite 502  
Austin, Texas 78701  
(512) 475-4993 (PH)  
(512) 475-4994 (FAX)

TCEQ Docket Clerk  
Office of Chief Clerk  
P.O. Box 13087, MC 105  
Austin, Texas 78711-3087  
(512) 239-3300 (PH)  
(512) 239-3311 (FAX)

Patrick W. Lee  
Vinson & Elkins  
The Terrace 7, 2801 Via Fortuna, Ste. 100  
Austin, Texas 78746-7568  
(512) 542-8709 (PH)  
(512) 236-3272 (FAX)  
[plee@velaw.com](mailto:plee@velaw.com)

John A. Riley  
Vinson & Elkins  
The Terrace 7, 2801 Via Fortuna, Ste. 100  
Austin, Texas 78746-7568  
(512) 542-8400 (PH)  
(512) 542-8812 (FAX)  
[jriley@velaw.com](mailto:jriley@velaw.com)

Michael A. Gershon  
Lloyd Gosselink Rochelle & Townsend, P.C.  
816 Congress Avenue, Suite 1900  
Austin, Texas 78701  
(512) 322-5800 (PH)  
(512) 472-0532 (FAX)  
[mgershon@lglawfirm.com](mailto:mgershon@lglawfirm.com)

TEXAS  
COMMISSION  
ON ENVIRONMENTAL  
QUALITY  
2008 MAY 15 PM 4:35  
CHIEF CLERKS OFFICE

Emily Collins  
Texas Commission on Environmental Quality  
Office of Public Interest Counsel  
P.O. Box 13087 MC-103  
Austin, Texas 78711-3087  
(512) 239-6823 (PH)  
(512) 239-6377 (FAX)  
[ecollins@tceq.state.tx.us](mailto:ecollins@tceq.state.tx.us)

Jason Hill  
Lloyd Gosselink Rochelle & Townsend, P.C.  
816 Congress Avenue, Suite 1900  
Austin, Texas 78701  
(512) 322-5800 (PH)  
(512) 472-0532 (FAX)  
[jhill@lglawfirm.com](mailto:jhill@lglawfirm.com)

John E. Williams  
Staff Attorney  
Texas Commission on Environmental Quality  
Litigation Division MC-173  
P.O. Box 13087  
Austin, Texas 78711  
(512) 239-0606 (FAX)  
[johwilli@tceq.state.tx.us](mailto:johwilli@tceq.state.tx.us)

Kevin A. Forsberg  
The Forsberg Law Firm, P.C.  
15949 Highway 105 W., Suite 59  
Montgomery, Texas 77316  
(936) 588-6226 (PH)  
(936) 588-6229 (FAX)  
[forsberglaw@earthlink.net](mailto:forsberglaw@earthlink.net)  
[kevin@forsberglaw.net](mailto:kevin@forsberglaw.net)

J. Diane Goss  
Staff Attorney  
Texas Commission on Environmental Quality  
Environmental Law Division  
P.O. Box 13087  
Austin, Texas 78711  
(512) 239-5731 (PH)  
[dgoss@tceq.state.tx.us](mailto:dgoss@tceq.state.tx.us)

Richard Ward  
16015 Creighton Road  
Conroe, Texas 77302  
(936) 520-5314 (PH)  
(936) 756-8102 (FAX)  
[mike.ward@nov.com](mailto:mike.ward@nov.com)

  
David K. Walker