**TCEQ DOCKET NO. 2025-0700-UIC**

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|---|---|---|
| **APPLICATION BY** | **§** | **BEFORE THE TEXAS** |
| **URANIUM ENERGY CORP.** | **§** | |
| **FOR RENEWAL AND** | **§** | **COMMISSION ON** |
| **AMENDMENT OF CLASS III** | **§** | |
| **INJECTION WELL AREA** | **§** | **ENVIRONMENTAL QUALITY** |
| **PERMIT NO. UR03075** | **§** | |
| | **§** | |

# APPLICANT'S RESPONSE TO HEARING REQUESTS

COMES NOW, Uranium Energy Corp. ("Applicant") and files the Responses to Hearing Requests, and states as follows:

This is a unique permitting case that warrants unique evaluation. The permit at issue in this matter—including every issue posed by the hearing requestors—has been extensively litigated and resolved, such that there is nothing left to be decided through a contested case hearing nor anything that could provide the requestors a possible justiciable interest in the application. As such, this Commission should deny the requests for hearing in full. In the alternative, if a hearing is granted, it should be limited to two issues: (1) whether the permit range table may be updated to provide *additional* water data, and (2) whether the redundant total dissolved solids ("TDS") control parameter may be replaced with a more-informative alkalinity control parameter (while maintaining the existing conductivity control parameter).

## RELEVANT BACKGROUND

On August 7, 2007, the Applicant submitted its application for UR03075 to authorize Applicant to operate Class III injection and production wells for recovery of uranium from a certain portion of the Goliad Formation within the permit area. Before UR03075 was issued, the permit

was heavily litigated, extensively probed, and thoroughly validated.[1] In fact, the Commission addressed twenty-one separate issues before granting the permit that is the subject of this renewal:

- Whether the use and installation of the injection wells are in the public interest under Texas Water Code § 27.051(a). Public interest in regard to this issue includes whether UEC's mining operation or restoration activities will adversely impact the public interest by unreasonably reducing the amount of groundwater available for permitting by the Goliad County Groundwater Conservation District ("GCGCD").
- Does the Applicant's compliance history require denial of the application under Texas Water Code § 27.051(e) and 30 TAC Chapter 60?
- Does the application adequately and accurately describe baseline conditions of the groundwater in the proposed permitted area under the application requirements of 30 TAC Chapter 331?
- Does the application meet all applicable criteria of 30 TAC § 331.122 related to required consideration by the Commission prior to issuing a Class III Injection Well Area Permit?
- Has the applicant demonstrated that the proposed exempted aquifer meets the applicable criteria of 30 TAC § 331.13?
- Is the application sufficiently protective of groundwater quality?
- Does the application adequately characterize and describe the geology and hydrology in the proposed permit area, including fault lines, under the applicable rules?

[1] *See* TCEQ Docket Number 2008-1888-UIC (SOAH Docket Number 582-09-3064).

- Do the geologic and hydraulic properties of the proposed permit area indicate that the Applicant will be able to comply with rule requirements?
- Does the Applicant meet the applicable requirements for financial assurance under Texas Water Code §§ 27.051 and 27.073 and 30 TAC Chapters 37 and 331?
- Is the application sufficiently protective of surface water quality?
- Are local roadways sufficient to handle traffic to and from the proposed facility?
- Whether the Applicant's proposal for restoration of groundwater to baseline levels as contained in the permit application is reasonable and adequate.
- Will the Applicant's proposed activities negatively impact livestock and wildlife, including endangered species?
- Will the Applicant's proposed activities negatively impact the use of property?
- Will the Applicant's proposed activities adversely affect public health and welfare?
- Whether the proposed mining is in the recharge zone of the Gulf Coast Aquifer.
- Whether the Gulf Coast Aquifer is a confined aquifer in the areas of Goliad County where the Applicant will conduct UIC activities.
- Whether mining fluids will migrate vertically or horizontally and contaminate an underground source of drinking water ("USDW").
- Whether there are any USDWs within the injection zones proposed by the Applicant.
- Whether any USDWs within Goliad County will be adversely impacted by the Applicant's proposed in situ uranium operations.

- Whether there is a "practical, economic and feasible alternative to an injection well reasonably available" within the meaning of that term as set forth in TWC § 27.051(d)(2).

After SOAH conducted a full contested case hearing on these twenty-one issues, TCEQ issued its findings of facts on March 7, 2011, and it ultimately issued the Mine Area Permit, Aquifer Exemption Order and PAA-1 permits on April 29, 2011.[2]

The permit was amended on September 17, 2017, to add the permit range table of pre-mining water quality values in accordance with Texas Water Code § 27.0513(a), to reduce the permit area from 1139.4 acres to 994.9 acres, and to incorporate a reference to the United States Environmental Protection Agency's final approval of the aquifer exemption. In other words, after the initial approval, the permit was amended to add the permit range table (with which, to Applicant's knowledge, no Protestant has raised a concern) to reduce the impact of the operations to a smaller area.

Despite the long history of this permit, ***the Applicant has not yet operated injection wells for the recovery of uranium at the Goliad Project under this permit***. Nothing has changed since this permit was first litigated, and nothing has changed since TCEQ authorized the permit, relying on over 340 Findings of Fact and Conclusions of Law.[3]

Although this permit proceeding is characterized as a renewal and amendment, the only requested amendments seek to: (1) update the permit range table to include water quality data from all baseline and monitor wells completed in the production zones within the mine area, and (2)

[2] The TCEQ Order issued for this permit is attached hereto as Exhibit 1.

[3] The TCEQ Order issued for this permit is attached hereto as Exhibit 1.

remove TDS as an excursion control parameter from the permit and replace it with alkalinity, while also listing sulfate and uranium as additional control parameters where needed.[4]

For the reasons discussed in further detail below, neither of these modest changes can justify a hearing.

## LAW AND APPLICATION

Contested case hearings may not be requested by just anyone, and they should not be ordered lightly.[5] Here, self-proclaimed "affected persons" have requested a hearing, but they have failed to identify a justiciable interest that could provide them with standing to do so.

When determining whether a person has a justiciable interest in an application, such that he or she qualifies as an "affected person" who may request a hearing, the Commission *must* consider (among other things) two very important factors:

- The "likely impact of the regulated activity on the health and safety of the person, and on the use of property of the person";[6] and
- The "likely impact of the regulated activity on use of the impacted natural resource by the person."[7]

The likely impact of the regulated activity has already been determined in this case. As shown by the TCEQ's Order, the Commission has already determined that the likely impact of the regulated activity—whether on health, safety, use of property, or use of natural resources—is not significant. Therefore, because there is no impact of the regulated activity, none of the requesters can show that they are an affected person with a justiciable interest.

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[4] See RTC (attached as Exhibit 2) at 3.

[5] *See* 30 TAC § 55.201(b) (limiting who may request a contested case hearing).

[6] 30 TAC § 55.203(c)(4).

[7] 30 TAC §55.203(c)(5).

Further demonstrating the requestors' lack of standing, 30 TAC §55.203(d) instructs the Commission to consider:

> (1) the merits of the underlying application and supporting documentation in the commission's administrative record, including whether the application meets the requirements for permit issuance;
>
> (2) the analysis and opinions of the executive director; and
>
> (3) any other expert reports, affidavits, opinions, or data submitted by the executive director, the applicant, or hearing requestor.

***The underlying merits.*** The merits of the underlying application have already been litigated and found to be sufficient for issuance. Moreover, "supporting documentation in the commission's administrative record, including whether the application meets the requirements for permit issuance," exists in the form of a complete record of a contested case hearing and a Commission-issued Order granting the permit. Nothing has changed since the permit's issuance that would undermine the merits of the application or necessitate rehearing.

***The executive director's analysis.*** The executive director ("ED") has already determined that the purported issues raised by the requestors have been addressed and resolved.[8] As noted above, the "renewal and amendment" offers only two changes to the permit: (1) adding water quality data to the permit range table; and (2) changing the control parameter from TDS to alkalinity (with sulfate and uranium used as needed).

With respect to the first change, no requestor can possibly demonstrate a personal justiciable interest in the inclusion of additional water quality data, nor have they meaningfully tried. This simply is not a basis for any contested case hearing.

The same is true with respect to the second change, concerning removing TDS from the permit. No requester has shown how they can be affected by this change, as the ED has already

[8] *See* generally RTC, attached as Exhibit 2.

concluded that conductivity is the appropriate control parameter. As the ED stated in the Response to Comments ("RTC"):

> Although total dissolved solids (TDS) has been removed as a control parameter in the draft permit, conductivity remains as a control parameter. The Executive Director determined that conductivity is an appropriate control parameter to detect excursions. Conductivity is directly proportional to TDS content in a specific water sample. TDS can be estimated using conductivity measurements by applying a conversion factor. Both TDS and conductivity are identified as control parameters in the current permit for use in excursion monitoring. Either one or the other is sufficient as a control parameter for determination of dissolved solids content in groundwater samples. Keeping both control parameters in the permit is unnecessary and redundant. Additionally, mining facility and compliance inspectors from TCEQ's Critical Infrastructure Division have indicated that measuring conductivity is a more efficient and practical method for determining TDS in a field environment.

RTC (Exhibit 2) at 10-11. In other words, TDS as a control parameter is redundant because TDS is directly proportional to and can be determined by looking at conductivity — which, as the ED confirms, the Applicant already includes as a control parameter under the permit. The amendment, therefore, eliminates a redundant control parameter, yet adds another (alkalinity), thus providing more protection and controls rather than less.

In short, the ED's analyses and opinions demonstrate that the only changes to the permit do not warrant a contested case hearing—the requestors' purported issues have already been resolved.

***Additional reports and data*.** This very Commission has already issued its opinion (*see* Exhibit 1) that the purported issues raised by the requestors have already been litigated (extensively) and resolved. This opinion speaks for itself in demonstrating that the requestors are not affected persons, as that term is defined by statute, and there is no basis for a hearing.

It is worth noting again: ***The Applicant has not yet operated injection wells for the recovery of uranium at the Goliad Project under this permit***.

The requestors have not identified a change in circumstance, geology, or requirements that could give rise to a justiciable interest or necessitate another hearing. In reality, the requestors are attempting to use this pro forma renewal and amendment process as an unauthorized appellate proceeding to relitigate what has already been decided. In fact, throughout the RTC in this case, the ED repeatedly highlights inquiries that have already been addressed by the Commission, supported by extensive findings of fact and conclusions of law, which were reached only "after considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter."[9]

In short, the Commission has before it a permit that has been heavily litigated, and it has hearing requesters who seek nothing more than to relitigate those same issues. To subject this not-yet-utilized permit to such relitigation would be an enormous waste of time and resources.

If, however, the Commission determines that a hearing is appropriate, such a hearing should be limited to the two new issues that are characterized as an "amendment." Namely, (1) whether the permit range table may be updated to provide *additional* water data, and (2) whether the redundant TDS control parameter may be replaced with a more-informative alkalinity control parameter (while maintaining the existing conductivity control parameter).

## Conclusion

This is primarily a renewal of a permit under which there have never been any operations. Through an exhaustive evidentiary hearing, the initial permit was subjected to thorough evaluation and scrutiny that is recorded in a formal record. None of the Protestants can assert that they have a justiciable interest in the matters that have already been litigated.

[9] *See* Ex. 2.

The amendment aspects of this application simply improve protections — providing additional information for the permit range table and replacing a redundant control parameter with a more informative one. A hearing cannot be justified on such grounds because no requester can show a justiciable interest in the added protections.

Should the Commission determine that a hearing is warranted, the Applicant respectfully requests that the subject of the hearing be limited to the only two new issues, which are characterized as an "amendment" for this application.

Respectfully submitted,

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*/s/ David Tuckfield*

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## CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document was served on the following parties as shown below on this 28th day of July 2025 as follows:

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# EXHIBIT 1

# TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

**AN ORDER** Approving the Applications of Uranium Energy Corp for Issuance of a Class III Injection Well Permit No. UR03075, Aquifer Exemption Order, and Production Area Authorization No. 1 in Goliad County, Texas, TCEQ Docket Nos. 2008-1888-UIC and 2009-1319-UIC, SOAH Docket Nos. 582-09-3064 and 582-09-6184

On December 14, 2010 and February 23, 2011, the Texas Commission on Environmental Quality ("Commission" or "TCEQ") considered the applications of Uranium Energy Corp for a Class III Injection Well Permit No. UR03075, which includes a request for designation of an exempt aquifer ("Mine Application"), and for Production Area Authorization ("PAA") UR03075PAA1 ("PAA-1 Application"). The applications were presented to the Commission with a proposal for decision by the Honorable Richard Wilfong, Administrative Law Judge ("ALJ") with the State Office of Administrative Hearings ("SOAH").

After considering the ALJ's Proposal for Decision ("PFD") and the evidence and arguments presented, the Commission makes the following Findings of Fact and Conclusions of Law:

## FINDINGS OF FACT

### I. Introduction

1. The Applicant in this case is Uranium Energy Corp ("UEC"). UEC's business address is Suite 800N, 500 Shoreline Blvd., Corpus Christi, TX 78471.

2. The proposed facility is located approximately 13 miles north of the city of Goliad, about 0.9 miles east of the intersection of Highway 183 and Farm-to-Market Road 1961 in Goliad County, Texas.

3. UEC filed its Mine Application seeking Class III Underground Injection Control area permit, Permit No. UR03075 (the "Mine Permit").

4. UEC also filed its PAA-1 Application to authorize UEC to construct and operate Class III injection and production wells for the recovery of uranium in proposed Production Area 1 ("PA-1").

5. The applications, if approved, would set the conditions under which UEC would be permitted to conduct the in situ uranium mining.

6. The Executive Director ("ED") reviewed the Mine Application and PAA-1 Application (the "Applications") and concluded that the Applications meet all legal standards.

7. The ED prepared a draft Mine Permit, a draft Aquifer Exemption Order, and a draft PAA for the Commission's approval.

8. After the parties requesting denial ("Protestants") filed their protests, the Commission referred these disputed issues of fact ("Issues") to SOAH for a contested case hearing:

A. Whether the use and installation of the injection wells are in the public interest under TEX. WATER CODE § 27.05 1(a). Public interest in regard to this issue includes whether UEC's mining operation or restoration activities will adversely impact the public interest by unreasonably reducing the amount of groundwater available for permitting by the Goliad County Groundwater Conservation District.

B. Does the applicant's compliance history require denial of the application under TEX. WATER CODE § 27.05 1(e) and 30 TEX. ADMIN. CODE (TAC) Ch. 60?

C. Does the application adequately and accurately describe baseline conditions of the groundwater in the proposed permitted area under applicable requirements of 30 TAC Ch. 331?

D. Does the application meet all applicable criteria of 30 TAC § 331.122, related to required consideration by the Commission prior to issuing a Class III Injection Well Area Permit?

E. Has the applicant demonstrated that the proposed exempted aquifer meets the applicable criteria of 30 TAC § 331.13?

F. Is the application sufficiently protective of groundwater quality?

G. Does the application adequately characterize and describe the geology and hydrology in the proposed permit area, including fault lines, under the applicable rules?

H. Do the geologic and hydraulic properties of the proposed permit area indicate that the applicant will be able to comply with rule requirements?

I. Does the applicant meet the applicable requirements for financial assurance under

TEX. WATER CODE §§ 27.051 and 27.073, and 30 TAC Ch.37 and 331?

J. Is the application sufficiently protective of surface water quality?

K. Are local roadways sufficient to handle traffic to and from the proposed facility?

L. Whether UEC's proposal for restoration of groundwater to baseline levels as contained in the permit application is reasonable and adequate?

M. Will the applicant's proposed activities negatively impact livestock and wildlife, including endangered species?

N. Will the applicant's proposed activities negatively impact the use of property?

O. Will the applicant's proposed activities adversely affect public health and welfare?

P. Whether the proposed mining is in the recharge zone of the Gulf Coast Aquifer (Evangeline component)?

Q. Whether the Gulf Coast Aquifer is a confined aquifer in the areas of Goliad County where UEC will conduct UIC [underground injection control] activities?

R. Whether mining fluids will migrate vertically or horizontally and contaminate an USDW [underground source of drinking water]?

S. Whether there are any USDWs within the injection zones proposed by UEC?

T. Whether any USDWs within Goliad County will be adversely impacted by UEC's proposed *in situ* uranium operations?

U. Whether there is a practical, economic and feasible alternative to an injection well reasonably available within the meaning of that term as set forth in TEX. WATER CODE § 27.051(d)(2)?

9. In addition, the Commission referred UEC's PAA-1 Application directly to SOAH. The issue in that referral was whether the application complies with all applicable statutory and regulatory requirements.

## II. Parties and Procedural History

10. On August 9, 2007, UEC filed its Mine Application.

11. On August 29, 2007, TCEQ declared the Mine Application to be administratively complete.

12. Following a technical review of the Mine Application, during which the ED requested and received additional information from UEC, the ED made a preliminary determination

that the Mine Application meets all applicable statutory and regulatory requirements for issuance of a mine permit and aquifer exemption order.

13. The ED prepared UEC's compliance history and determined that UEC's compliance classification is average by default.

14. On January 24, 2008, the ED held a public meeting in Goliad to receive public comment regarding the Mine Application.

15. On June 4, 2008, the ED issued a draft Mine Permit and a draft Aquifer Exemption Order.

16. On September 4, 2008, UEC filed its PAA-1 Application with TCEQ.

17. On September 19, 2008, the ED made an official determination that the PAA-1 Application was administratively complete.

18. On October 31, 2008, the ED issued written responses to public comments regarding the Mine Application ("RTC Regarding Mine Application").

19. On February 25, 2009, TCEQ held an open meeting at which the Commissioners evaluated requests for a contested case hearing on the Mine Application (TCEQ Docket No. 2008-1888-UIC).

20. On March 3, 2009, TCEQ issued an Interim Order by which it:

a) granted the requests for a contested case hearing filed by Goliad County (the "County"), Goliad County Groundwater Conservation District (the "District"), Ander-Weser Volunteer Fire Department, St. Peter's Lutheran Church, Mary and Tom Anklam, Raymond and Karon Arnold, Aldon and Brenda Bade, Mickey and Elizabeth Beard, Richard and Catherine Bettge, Otto and Ruth Bluntzer, Matt and Erika Bochat, Gene and Reta Brown, John and Pearl Caldwell, Lynn and Ginger Cook, Luann and Craig Duderstadt, Darwyn and Waynell Duderstadt, Wilburn and Doris Duderstadt, Douglas and Wanda Franke, Mary Kathryn Bluntzer Gray, Joel and Jana Grieser, Brenda Jo Hardt, Ernest and Frances Hausman, Gaylon and Barbara Kornfuehrer, Ted and Pam Long, Mr. and Mrs. Jason Mikeska, Ricki McKinney, Susan and Weldon Orr, Margaret Rutherford, Wayne and Margie Smith, and Dorian and Carol Thurk;

b) referred the matter to SOAH;

c) directed the ED to participate in the contested case hearing;

d) established a one year maximum duration of the hearing from the first day of the preliminary hearing to the date the proposal for decision is issued by SOAH; and

e) referred the twenty-one Issues, which had been raised in public comments, to SOAH.

21. On May 14, 2009, the SOAH ALJ held a preliminary hearing in Goliad, Texas during which he admitted the following parties:

| PARTY | REPRESENTATIVE |
|---|---|
| Uranium Energy Corp (Applicant) | Monica Jacobs, Attorney |
| The Executive Director of the Texas Commission on Environmental Quality | Shana Horton, Staff Attorney |
| Office of Public Interest Counsel | Garrett Arthur, Attorney |
| Goliad County | James B. Blackburn, Attorney |
| Goliad County Groundwater Conservation District | Rob Baiamonte, Attorney |
| Goliad County Farm Bureau, individually and as representative of specified entities and landowners who are aligned parties[1] | P.T. Calhoun, President |
| Raymond V. Carter, Jr., aligned with Applicant | Aligned Property Owners |
| Tom E. Stockton, aligned with Applicant | Aligned Property Owners |
| Mona Samford and brother, Sidney Braquet, aligned with Applicant | Aligned Property Owners |

22. On May 27, 2009, by SOAH Order No. 2, and on May 28, 2009, by SOAH Order No. 3, the ALJ established a procedural schedule, and set a hearing on the merits to be commenced on January 4, 2010. The procedural schedule was later extended based on agreed or unopposed motions filed by the parties and granted by the ALJ pursuant to 30 TAC § 80.4(c)(17).

23. Following a technical review of the PAA-1 Application, during which the ED requested and received additional information from UEC, the ED made a preliminary determination that the PAA-1 Application meets all applicable statutory and regulatory requirements for issuance of a PAA.

24. On June 2, 2009, the ED issued a Technical Summary and ED's Preliminary Decision.

25. On June 9, 2009, the ED issued a draft PAA.

26. On August 14, 2009, UEC filed a request for the direct referral of the PAA-1 Application to SOAH for a contested case hearing pursuant to 30 TAC § 55.210.

27. On August 18, 2009, UEC filed an Unopposed Motion to Abate Procedural Schedule for Purposes of Consolidating Production Area Authorization.

[1] Those entities and landowners are: Ander-Weser Volunteer Fire Department, St. Peter's Lutheran Church, Mary and Tom Anklam, Raymond and Karon Arnold, Aldon and Brenda Bade, Mickey and Elizabeth Beard, Richard and Catherine Bettge, Otto and Ruth Bluntzer, Matt and Erika Bochat, Gene and Reta Brown, John and Pearl Caldwell, Lynn and Ginger Cook, Luann and Craig Duderstadt, Darwyn and Waynell Duderstadt, Wilburn and Doris Duderstadt, Douglas and Wanda Franke, Mary Kathryn Bluntzer Gray, Joel and Jana Grieser, Brenda Jo Hardt, Ernest and Frances Hausman, Gaylon and Barbara Kornfuehrer, Ted and Pam Long, Mr. and Mrs. Jason Mikeska, Ricki McKinney, Susan and Weldon Orr, Margaret Rutherford, Wayne and Margie Smith, and Dorian and Carol Thurk.

28. On August 24, 2009, by SOAH Order No. 4, the ALJ abated the procedural schedule and adopted a revised schedule.

29. On September 11, 2009, by SOAH Order No. 5, the ALJ confirmed the location for hearing on the merits.

30. On September 29, 2009, by SOAH Order No. 6, the ALJ ordered a portion of the hearing to be held in Goliad, Texas.

31. On September 29, 2009, UEC filed an Agreed Motion to Consolidate for Purposes of Hearing its PAA-1 Application with its Mine Application (the "Motion to Consolidate").

32. On October 5, 2009, the ED held a public meeting in Goliad to receive public comment regarding the PAA-1 Application.

33. On October 6, 2009, SOAH held a preliminary hearing in Goliad, Texas and designated parties.

34. On October 8, 2009, the ALJ issued SOAH Order No. 7, by which he granted the Motion to Consolidate.

35. On October 26, 2009, UEC filed an unopposed motion to abate this proceeding to allow it to make minor amendments to its Mine Application and PAA-1 Application. On October 26, 2009, the ALJ issued SOAH Order No. 8, by which he granted the abatement.

36. On November 6, 2009, UEC filed amendments to its Mine Application and its PAA-1 Application to reflect changes to its plans for the uranium processing facility. The amendments reflect that the final stages of uranium recovery would occur at an off-site location, rather than at the proposed Goliad facility. These amendments result in a smaller footprint of the Goliad processing facility.

37. By a Joint Status Report filed on December 15, 2009, the parties proposed a date of May 3, 2010, for the hearing on the merits and proposed a procedural schedule leading up to that hearing date.

38. On December 18, 2009, the ALJ issued SOAH Order No. 9, by which he set the hearing on the merits for May 3, 2010, and established a procedural schedule as proposed by the parties. The parties also reached an agreement regarding the location of the hearing.

39. On January 20, 2010, the ALJ issued SOAH Order No. 10, which in accordance with the parties' agreement provided that if the hearing on the merits continued into a second week (*i.e.*, into the week of May 10th), that portion of the hearing would be held in Goliad.

40. On January 28, 2010, the ED issued written responses to public comments regarding the PAA-1 Application ("RTC Regarding PAA-1 Application").

41. On April 30, 2010, the ALJ held a prehearing conference.

42. The hearing on the merits was conducted by ALJ Richard Wilfong on May 3 through 11, 2010. From May 3 through May 7, 2010, the hearing was held in Austin, Texas at the State Office of Administrative Hearings, William Clements State Office Building, 4th Floor. On May 10 and 11, the hearing was held in Goliad County at the Goliad County Courtroom, 127 North Courthouse Square, Goliad, Texas 77963.

43. The Parties and their representatives who participated in the hearing of this case were:[2]

| PARTY | REPRESENTATIVE |
|---|---|
| UEC | Monica Jacobs and Diana Nichols, Attorneys, Austin, Texas |
| ED | Shana Horton, Staff Attorney, TCEQ |
| Office of Public Interest Counsel ("OPIC") | Garrett Arthur, Attorney |
| Goliad County | James B. Blackburn and Adam M. Friedman, Attorneys, Houston, Texas |
| Goliad County Groundwater Conservation District | Rob Baiamonte, Attorney, Goliad, Texas |

44. The Parties filed Closing Argument Briefs on July 9, 2010.

45. The Parties filed Replies to Closing Argument Briefs on July 30, 2010, and the record closed.

## III. Notice and Jurisdiction

46. Notice of Receipt of Application and Intent to Obtain a New Underground Injection Control Permit was mailed to the application mailing list on September 5, 2007, and was published in the *Victoria Advocate* on September 19, 2007 and the *Texan Express* on September 26, 2007.

47. Notice of Application and Preliminary Decision for Class III Injection Well, including notice of the request for designation of an exempt aquifer, was mailed to the application mailing list on June 17, 2008 and was published in the *Victoria Advocate* on June 20, 2008 and the *Texan Express* on June 25, 2008.

48. Notice of Receipt of Application and Intent to Obtain a New Production Area Authorization (PAA) was mailed to the application mailing list on September 26, 2008 and

[2] These persons were designated as parties but did not participate in the hearing: Raymond V. Carter, Tom E. Stockton, Mona Samford and Sidney Braquet, aligned with UEC; and Goliad County Farm Bureau, individually and as representative of the following aligned protestant entities and land owners: Ander-Weser Volunteer Fire Department, Mary and Tom Anklam, Raymond and Karon Arnold, Aldon and Brenda Bade, Mickey and Elizabeth Beard, Richard and Catherine Bettge, Otto and Ruth Bluntzer, Matt and Erika Bochat, Gene and Reta Brown, John and Pearl Caldwell, Lynn and Ginger Cook, Luann and Craig Duderstadt, Darwyn and Waynell Duderstadt, Wilburn and Doris Duderstadt, Douglas and Wanda Franke, Mary Kathryn Bluntzer Gray, Joel and Jana Grieser, Brenda Jo Hardt, Ernest and Frances Hausman, Gaylon and Barbara Kornfuehrer, Ted and Pam Long, Ricki McKinney, Mr. and Mrs. Jason Mikeska, Susan and Weldon Orr, Margaret Rutherford, Wayne and Margie Smith, St. Peter's Lutheran Church, and Dorian and Carol Thurk.

published in the *Victoria Advocate* on September 26, 2008 and the *Texan Express* on October 1, 2008.

49. The Amended Notice of Hearing on the Class III area application and the request for designation of an exempt aquifer was mailed to the application mailing list and applicant contacts on April 3, 2009. The Amended Notice of Hearing was mailed to the adjacent and permit area landowners on April 7, 2009, as required by 30 TAC § 39.651(f). The Amended Notice of Hearing was published in the *Victoria Advocate* in Victoria County on April 7, 2009; *The Countywide* in Karnes County, *Texan Express* in Goliad County, *Cuero Record/Yorktown News-View* in DeWitt County, and *Beeville Bee-Picayune* in Bee County on April 8, 2009; and The *Refugio County Press* in Refugio County on April 9, 2009.

50. On May 14, 2009, the ALJ held a preliminary hearing in Goliad, Texas during which he established jurisdiction over the Mine Application.

51. Revised Notice of Application and Preliminary Decision for New Production Area Authorization was mailed to the application mailing list on June 18, 2009 and published in the *Victoria Advocate* on June 23, 2009 and the *Texan Express* on June 24, 2009.

52. On October 6, 2009, SOAH held a preliminary hearing in Goliad, Texas and established jurisdiction over the PAA-1 Application.

53. All public notices were in proper form and given to the required notice recipients in the required manner.

## IV. Background

54. Before beginning operations, a mine operator must receive an underground injection permit to establish a mine, an aquifer exemption to conduct mining activities within an aquifer, and at least one PAA, which is an administrative designation of a production area within the boundary of the approved mining area.

*Mine Permit*

55. The Mine Permit authorizes UEC to construct and operate Class III injection and production wells for recovery of uranium from a certain portion of the Goliad Formation.

56. The area within the boundary of the proposed Mine Permit is approximately 1,139.4 contiguous acres, including a 100-foot buffer zone (the "Mine Permit Area").

*Aquifer Exemption*

57. The Mine Application includes a request for an aquifer exemption.

58. An exempted aquifer is an aquifer or a portion of an aquifer which meets the criteria for fresh water but which has been designated an exempted aquifer by the Commission after notice and opportunity for public hearing. The Commission's administrative order

designating the aquifer exemption requested in the Mine Application ("Aquifer Exemption Order") is attached as Exhibit B.

59. The requested aquifer exemption covers approximately 423.8 acres within the larger Mine Permit Area and applies from a depth of 45 to 404 feet within the Goliad Formation (the "Aquifer Exemption Area").

*PAA Application*

60. UEC also filed its PAA-1 Application to authorize UEC to construct and operate Class III injection and production wells for the recovery of uranium in proposed PA-1 within the Mine Permit Area.

61. The requested PAA is issued under the terms of the proposed Mine Permit. The area within the boundary of proposed PA-1 is approximately 36.1 acres within a 94.2-acre mine area in the southern portion of the proposed Mine Permit Area.

62. The draft PAA includes: a mine plan with estimated schedules for mining and aquifer restoration, a baseline water quality table, a restoration table, control parameter upper limits, monitor well locations, and cost estimates for aquifer restoration and well plugging and abandonment.

## V. Issues Referred to SOAH Regarding the Mine Application

**A. Whether the use and installation of the injection wells are in the public interest under Texas Water Code §27.051(a). Public interest in regard to this issue includes whether UEC's mining operation or restoration activities will adversely impact the public interest by unreasonably reducing the amount of groundwater available for permitting by the Goliad County Groundwater Conservation District.**

63. UEC's proposed installation and use of Class III injection wells for in situ mining of uranium are in the public interest, in accordance with the criteria in TEX. WATER CODE § 27.051(a).

64. Uranium, in contrast with oil and gas, is a very scarce natural resource that exists in commercially mineable concentrations in only a few areas of the United States, including Goliad County, Texas.

65. It is in the public interest for this natural resource to be produced to meet the energy needs of the United States, and for the mineral owners to realize the economic benefits of uranium production on their property.

66. A review of the ED's RTC Regarding Mine Application shows that the ED considered a wide range of issues regarding public interest, including: economic impacts and quality of life, health and welfare, groundwater quality, geology/hydrology of the aquifer, monitoring, control of migration of mining fluids, aquifer restoration, financial assurance, and compliance history.

67. The ED undertook a balancing approach and considered potential negative impacts in making a determination of public interest.

68. The ED also reviewed the Mine Application to ensure that UEC would meet all regulatory requirements.

69. UEC's projected water consumption is between 133 and 206 acre-feet per year.

70. The District's Management Plan anticipated the need to plan for groundwater usage for uranium mining purposes. The Plan projects 800 acre-feet per year of groundwater usage for such purposes, which is almost four times the amount that UEC projects it will use on an annual basis.

71. UEC's estimated water use over the life of the project and projected maximum monthly water use are also projected to fall within the limits of the District's current water usage rule.

72. UEC's mining operation and restoration activities will not unreasonably reduce the amount of groundwater available for permitting by the District.

73. UEC's compliance history does not show that granting the Mine Application would be against the public interest. The findings set forth in Section V.B below are incorporated by reference herein.

74. UEC's ability to meet applicable financial assurance requirements does not show that granting the Mine Application would be against the public interest. The findings set forth in Section V.I below are incorporated by reference herein.

75. UEC's restoration proposal and past groundwater restoration efforts by other operators do not show that granting the Mine Application would be against the public interest. The findings set forth in Section V.L below are incorporated by reference herein.

76. There is no practical, economic and feasible alternative to an injection well reasonably available within the meaning of that term as set forth in TEX. WATER CODE § 27.051(d)(2). The findings set forth in Section V.U below are incorporated by reference herein.

**B. Does the Applicant's compliance history require denial of the application under TEX. Water Code § 27.051(e) and 30 TAC Chapter 60?**

77. The ED prepared a compliance history summary in accordance with Tex. Water Code § 27.051(e) and 30 TAC Chapter 60.

78. In the compliance history summary, UEC received a rating of 3.01, which is an average classification by default since UEC has no history of operations in Texas.

**C. Does the application adequately and accurately describe baseline conditions of the groundwater in the proposed permitted area under applicable requirements of 30 TAC Chapter 331?**

79. Local water quality was established by sampling all existing wells within the Mine Permit Area and by sampling nearly all the existing wells within 1 kilometer of the permit area boundary. In addition, UEC completed and sampled 20 baseline wells.

80. The locations of the 20 baseline wells largely correspond to the area where UEC anticipates mining (*i.e.*, areas of high uranium mineralization).

81. The Mine Application contains the water quality results for the 20 baseline wells and the 47 area wells located inside the permit area boundary or within 1 kilometer of the permit area boundary.

82. Groundwater quality data from the 20 baseline wells is remarkably similar to the data from the 47 wells for all constituents with the exception of uranium and radium-226, which are significantly higher in the baseline wells.

**D. Does the application meet all applicable criteria of 30 TAC § 331.122, related to required consideration by the Commission prior to issuing a Class III Injection Well Area Permit?**

83. UEC described the list of the items that the Commission is required to consider in its administrative and technical review under 30 TAC § 331.122 before issuing an area permit, as well as the location of each such item in the Mine Application.

84. UEC submitted all of the data and each of the items for the applicable criteria listed in 30 TAC § 331.122, and the Commission considered each of these items.

**E. Has the Applicant demonstrated that the proposed exempted aquifer meets the applicable criteria of 30 TAC § 331.13?**

85. There are no water wells that are used for human consumption within the proposed Aquifer Exemption Area.

86. UEC demonstrated that the area of the exempted aquifer is uranium-bearing with production capability.

87. In addition, the groundwater in the proposed exempted aquifer is contaminated due to the uranium mineralization such that it would be economically or technologically impractical to render the water fit for human consumption.

88. The proposed aquifer exemption area was properly delineated.

**F. Is the application sufficiently protective of groundwater quality?**

89. In accordance with 30 TAC § 331.102, UEC is or will be required to:

- Identify existing wells that could serve as a conduit for mining solutions to move outside the production zone or the production area (30 TAC § 331.42);

- Construct wells in accordance with construction requirements (30 TAC § 331.82);

- Maintain mechanical integrity of all Class III wells (30 TAC § 331.4);

- Implement corrective action standards to prevent or correct pollution of a USDW (30 TAC § 331.44);

- Obtain ED approval of construction and completion of wells (30 TAC § 331.45);

- Operate wells in accordance with operation requirements (30 TAC § 331.83);

- Monitor wells in accordance with monitoring requirements (30 TAC § 331.84);

- Submit reports in accordance with reporting requirements (30 TAC § 331.85); and

- Close wells in accordance with a plugging and abandonment plan in a manner which will not allow the movement of fluids through the well, out of the injection zone, or to the land surface (30 TAC §§ 331.46 and 331.86).

90. The geologic and hydraulic properties of the Mine Permit Area indicate that UEC will be able to comply with rule requirements. The findings stated under Section V.H below are incorporated by reference herein.

91. Data in the Mine Application shows that mining fluids will not migrate vertically or horizontally and contaminate an USDW (underground source of drinking water). The findings stated under Section V.R below are incorporated by reference herein.

92. UEC's proposal for restoration of groundwater to baseline levels as contained in the Mine Application is reasonable and adequate. The findings stated under Section V.L below are incorporated by reference herein.

93. The Mine Application is sufficiently protective of groundwater quality.

**G. Does the application adequately characterize and describe the geology and hydrology in the proposed permit area, including fault lines, under the applicable rules?**

94. The application adequately characterizes and describes the geology and hydrology in the Mine Permit Area, including fault lines, under the applicable rules.

95. The Mine Application contains: a narrative description of the hydrology in the proposed Mine Permit Area; a narrative description of the geology in the proposed Mine Permit Area; permit-area cross sections (and a cross section index map); structure and isopach

maps for each of the four sands (Sands A-D); and potentiometric surface maps—both within each sand and for the region—that show the direction of groundwater flow.

96. UEC presented a wealth of information about the geology and hydrology of the area, including the areas within and surrounding the proposed Mine Permit Area.

97. Two faults exist within the proposed Mine Permit Area: the Northwest Fault and the Southeast Fault.

98. The Northwest Fault is the larger of the two and runs along the northwest portion of the proposed Mine Permit Area, near the perimeter of proposed production areas A and C and very near the perimeter of proposed production area D.

99. Further characterization of the Northwest Fault is not required for the Mine Permit. Where applicable, future PAA applications will include the results of hydrologic testing and an interpretation of those results with respect to any faults to determine the hydrologic connection both across the fault and vertically along the fault.

100. The Southeast Fault transects only a small part of the southeast corner of the proposed Mine Permit Area and touches none of the proposed production areas.

101. The Mine Application accurately and adequately describes all faults in the proposed Mine Permit Area.

102. The Mine Application meets all applicable criteria of 30 TAC § 331.122, related to required consideration by the Commission prior to issuing a Class III Injection Well Area Permit. The findings set forth in Section V.D above are incorporated by reference herein.

**H. Do the geologic and hydraulic properties of the proposed permit area indicate that the Applicant will be able to comply with rule requirements?**

103. The geologic and hydraulic properties of the proposed Mine Permit Area indicate that UEC will be able to comply with rule requirements.

104. Sands B, C and D in the Mine Permit Area are confined aquifers. They are saturated with groundwater.

105. Sand A in the Mine Permit Area is hydraulically unconfined, but still isolated from the deeper sands by a low permeability confining layer throughout the Mine Permit Area.

106. Throughout the Mine Permit Area, each of the sands (Sands A—D) is separated from one another by continuous confining layers consisting largely of low permeability clay.

107. These confining layers average between thirty and forty-five feet in thickness in the Mine Permit Area.

108. For the most part, the hydraulic gradient within the Mine Permit Area is relatively flat, resulting in a slow rate of groundwater flow.

109. Regionally, the direction of groundwater flow is typical of coastal plain aquifers, that is, coastward. Thus, groundwater flow in the Mine Permit Area is generally to the southeast.

110. Mining fluids will not migrate vertically or horizontally and contaminate an USDW (underground source of drinking water). The findings set forth and/or incorporated by reference in Section V.R below are incorporated by reference herein.

**I. Does the Applicant meet the applicable requirements for financial assurance under Texas Water Code §§ 27.051, 27.073, and 30 TAC Chapters 37 and 331?**

**111.** UEC presented evidence showing its compliance with the detailed specifications and requirements about financial assurance that are prescribed by the TCEQ rules.

112. UEC's application does not lack specificity regarding the form and quality of financial assurance.

113. UEC meets the applicable requirements for financial assurance under Texas Water Code §§ 27.051, 27.073, and 30 TAC Chapters 37 and 331.

114. The Mine Application sets out a total preliminary estimated cost for the plugging of the wells in the four planned production areas. The estimate was derived by multiplying the total estimated footage for all wells by a cost per foot that reflects all costs, *i.e.,* labor, equipment, per diem, and materials, and specifics that the plugging material will be cement.

115. The Mine Application contains a description of the plugging method—cementing from bottom to top—that will be used to ensure that there will be no movement of fluid through the wells after abandonment, and a description of the restoration process that will ensure that no movement of contaminants will move from the production zone into a USDW.

116. The Mine Application contains a commitment that UEC will follow the requirements of 30 TAC § 331.86 in plugging the wells.

117. The ED reviewed the submitted cost estimates and determined that the coverage will be sufficient for the financial assurance that must be submitted after the permits and licenses are issued.

**J. Is the application sufficiently protective of surface water quality?**

118. Class III area permit applications address protection of surface water only in a general sense. The specific regulatory requirements for containment of surface fluids are included in a radioactive material license ("RML"). An in situ uranium mine operator is required to have a RML.

119. UEC's Mine Application contains operational measures to comply with the Draft Mine Permit's prohibition against discharge of fluids into surface waters.

120. No impacts to wetlands are anticipated as a result of UEC's proposed operations.

121. The Mine Application describes design features related to the management of flooding and runoff. These features will prevent and/or minimize contact of mining fluids with the ground surface.

122. With proper construction practices, mining activities will not impact the quality of runoff caused by flooding.

123. Accidental spills at the plant, in the field, and at the Class I waste disposal well areas will be minimized. by automated monitoring equipment, daily visual inspections and reporting, and by UEC's corrective action program.

124. UEC has adopted Operating, Safety and Emergency Procedures that establishes safety protocols for transporting shipments, including shipments of loaded resin or solid byproduct waste. It also establishes emergency response protocols to be implemented in the event of an accident.

125. Any concerns regarding possible migration of constituents from a production area in Sand A to Fifteen Mile Creek can be appropriately addressed in connection with the PAA application process for Sand A.

126. The Mine Application is sufficiently protective of surface water quality.

**K. Are local roadways sufficient to handle traffic to and from the proposed facility?**

**127.** Local roadways are sufficient to handle traffic to and from the proposed facility.

128. UEC's site access plan provides that UEC will construct a new road so that the main entrance to the proposed site will be directly onto US Highway 183.

129. US Highway 183 is designed for higher volume traffic and larger vehicles than local county roadways.

130. The local roadways will not be adversely affected by the traffic created by the proposed *in situ* uranium mining operation.

**L. Whether UEC's proposal for restoration of groundwater to baseline levels as contained in the permit application is reasonable and adequate.**

131. UEC's proposal for restoration of groundwater to baseline levels as contained in the Mine Application is reasonable and adequate.

132. The Mine Application contains a description of UEC's proposed restoration procedures, plans for a restoration demonstration and report to TCEQ regarding the demonstration.

133. UEC's restoration proposal incorporates improvements as compared to past restoration efforts in Texas. These include: 1) the use of reverse osmosis on a commercial scale during mining to provide a jump start on restoration; 2) the initiation of restoration as soon as mining ends in a production area; and 3) the continued use of the ion exchange (IX) columns to remove residual uranium during restoration instead of only during mining.

134. In addition, UEC's restoration efforts will benefit from technological advancements. The membranes that are used in the reverse osmosis process are now specifically designed to function with a longer life span and higher performance in the particular water quality in which they will be used.

135. Even though no restoration model is required, UEC does have a state-of-the-art hydrogeological model that it can use to increase its restoration success in its first production area.

136. Within 18 months after initiation of mining in the first production area (PA-1), UEC will conduct a restoration demonstration. If the results of that demonstration indicate the assumed number of pore volumes required for aquifer restoration is inadequate, the ED will require the amount of financial assurance for aquifer restoration to be adjusted accordingly.

137. Specific requirements for restoration of groundwater after the completion of mining are addressed in PAAs rather than in Class III injection well area permits.

**M. Will the Applicant's proposed activities negatively impact livestock and wildlife, including endangered species?**

138. The proposed uranium mining activities will not negatively impact livestock and wildlife, including endangered species.

139. If there is no contamination of the air, soil, surface water, or groundwater outside the production area, then animals are not impacted. The Mine Application complies with the rules designed to eliminate these possible pathways for contamination of animals.

140. The Mine Application is sufficiently protective of surface water quality. The findings of fact set forth and/or incorporated by reference in Section V.J above are incorporated by reference herein.

141. Groundwater is adequately protected from pollution. The findings set forth in and/or incorporated by reference into Sections V.F, V.H., and V.L above and Section V.R below are incorporated by reference herein.

142. UEC has adopted an Operational Monitoring Program, which is set forth in its RML Application. Pursuant to the RML, UEC will be required to conduct regular sampling of air, vegetation (including a grazing crop), soil, sediment, surface water and groundwater at pre-determined locations on a quarterly and annual basis throughout its operations.

This monitoring will enable UEC to detect any potential breach of the controls required by the RML.

**N. Will the Applicant's proposed activities negatively impact the use of property?**

143. UEC's proposed activities will not negatively impact the use of property.

144. Existing land uses adjacent to the Mine Permit Area include low density, scattered rural residential, cattle ranching, cropland, and oil and gas production.

145. UEC has demonstrated its compliance with the TCEQ regulatory scheme governing in situ uranium mining. Fresh water and air are adequately and sufficiently protected from pollution, soil and vegetation are adequately and sufficiently protected from contamination, and UEC's proposed activities will not negatively impact livestock and wildlife, including endangered species. The findings set forth in Sections V.F, V.H., V.J., V.L, V.M above and in Section V.R below are incorporated by reference herein.

146. The proposed mining operations and restoration activities will not adversely impact the public interest by unreasonably reducing the amount of groundwater available for permitting by the District. The findings set forth in Section V.A above are incorporated by reference herein.

**O. Will the Applicant's proposed activities adversely affect public health and welfare?**

147. UEC's proposed activities will not adversely affect public health and welfare.

148. UEC's proposed installation and use of Class III injection wells for in situ mining of uranium are in the public interest, in accordance with the criteria in TEX. WATER CODE § 27.051(a). The findings set forth in Section V.A above are incorporated by reference herein.

149. Fresh water and air are adequately and sufficiently protected from pollution; soil and vegetation are adequately and sufficiently protected from contamination; and UEC's proposed activities will not negatively impact livestock and wildlife, including endangered species. The findings set forth in Sections V.F, V.H., V.J., V.L, V.M above and in Section V.R below are incorporated by reference herein.

150. Local roadways are sufficient to handle traffic to and from the proposed facility. The findings set forth in Section V.K above are incorporated by reference herein.

**P. Whether the proposed mining is in the recharge zone of the Gulf Coast Aquifer (Evangeline component).**

151. The proposed mining is not in the recharge zone of the Gulf Coast Aquifer (Evangeline component).

**Q. Whether the Gulf Coast Aquifer is a confined aquifer in the areas of Goliad County where UEC will conduct UIC activities.**

152. Sands B, C and D in the Mine Permit Area are confined aquifers.

153. Sand A in the Mine Permit Area is hydraulically unconfined, but still isolated from the deeper sands by a low permeability layer throughout the Mine Permit Area and thus confined in a geologic sense.

**R. Whether mining fluids will migrate vertically or horizontally and contaminate an USDW (underground source of drinking water).**

General

154. Data in the Mine Application shows that mining fluids will not migrate vertically or horizontally and contaminate an USDW (underground source of drinking water).

155. UEC's proposed methods of confinement have long been supported by the ED and accepted by the Commission.

156. TCEQ rules require the confinement of mining solutions and monitor wells in and above the production zone.

157. The use of a bleed is well-established as a method of confining mining fluids in a production area. The mine will be monitored carefully by UEC and will be subject to scrutiny by the ED during the initial phases of its development.

158. The geologic and hydraulic properties of the proposed Mine Permit Area indicate that UEC will be able to comply with rule requirements. The findings of fact set forth in Section V.H above are incorporated by reference herein.

159. PA-1 is not involved with the Northwest Fault. Prior to commencing mining operations near the Northwest Fault, UEC will have to apply for, and the Commission will have to issue a production area authorization for at least one of the other proposed production areas. To obtain such a PAA, UEC will have to design and conduct a hydrologic testing program for the production area in which it seeks authorization to mine and submit the results of such hydrologic testing as a part of its PAA application. The PAA application will also include an interpretation of those results with respect to any faults to determine the hydrologic connection both across the fault and vertically along the fault.

160. The Southeast Fault is located well outside the proposed Aquifer Exemption Area and over 1,500 feet downgradient from the closest proposed production area, which is PA-1.

Horizontal Containment

161. Maintaining a cone of depression during mining operations prevents the horizontal migration of mining fluids.

162. Water levels in monitor wells are monitored regularly and pumping is adjusted where and when needed to provide horizontal confinement.

163. UEC's proposal for restoration of groundwater to baseline levels as contained in the permit application is reasonable and adequate. The findings of fact set forth and/or incorporated by reference in Section VI.L above are incorporated by reference herein.

Vertical Containment

*Clay Confining Layers*

164. The findings of fact set forth in Sections V.H and V.Q above (regarding confinement and confining layers) are incorporated by reference herein.

*Boreholes*

165. Boreholes will not serve as a conduit for vertical migration.

166. All exploration boreholes drilled by UEC were plugged with cement from total depth to at least 3 feet below ground surface and no closer than 1.5 feet from the surface. The remainder of the hole between the top of the plug and the surface was filled with cuttings or non-toxic soil.

167. In the early 1980s, Moore Energy Corporation ("Moore Energy") drilled about 487 boreholes throughout its entire exploratory permit area, which covered 17,635 square acres of land surface (some of which overlaps with UEC's exploratory permit area, but much of which does not).

168. Only three of the boreholes drilled by Moore Energy were logged before May 7, 1982 (the effective date of the Texas Railroad Commission's ("TRC") plugging regulation in effect at the time of the contested case hearing). All of the other boreholes were logged after March 15, 1983, and were likely drilled shortly before that. Thus, assuming compliance with the TRC's plugging regulation, these boreholes were plugged in a manner that prevented the mixing of water from different sand units within the hole.

169. Even if not plugged in accordance with the TRC's plugging regulation in effect at the time of the contested case hearing, the Moore Energy boreholes would not serve as conduits for vertical migration.

a. At a minimum, the drilling mud would have been left in the boreholes.

b. Uncased boreholes will typically collapse, and the thick sequence of clays will move across the borehole, further sealing and preventing migration. Even a few centimeters of clay will substantially retard fluid movement.

c. Even in the absence of clay from a collapsed borehole wall, drilling mud in a borehole, in and of itself, constitutes a significant barrier to groundwater flow, particularly after it has been allowed to gel for a time.

**S. Whether there are any USDWs within the injection zones proposed by UEC.**

170. There are USDWs within the injection zones proposed by UEC.

171. Each of the four proposed production zones is a USDW.

**T. Whether any USDWs within Goliad County will be adversely impacted by UEC's proposed in situ uranium operations.**

172. Data in the Mine Application shows that USDWs within Goliad County will not be adversely impacted by UEC's proposed in situ uranium operations.

173. The geologic and hydraulic properties of the proposed permit area indicate that the Applicant will be able to comply with rule requirements. The findings set forth in Section V.H above are incorporated by reference herein.

174. Mining fluids will not migrate vertically or horizontally and contaminate an USDW (underground source of drinking water). The findings set forth in Section V.R above are incorporated by reference herein.

175. UEC's proposal for restoration of groundwater to baseline levels as contained in the Mine Application is reasonable and adequate. The findings set forth in Section V.L above are incorporated by reference herein.

**U. Whether there is a "practical, economic and feasible alternative to an injection well reasonably available" within the meaning of that term as set forth in TWC § 27.051(d)(2).**

176. There are no practical, economic and feasible alternatives to the use of injection wells for uranium mining in the Mine Permit Area.

177. The available alternative methods for recovering uranium are underground and open pit (surface) mining, both of which involve de-watering the production zone sands, removing huge quantities of surface and subsurface material (*i.e.*, the overburden), and creating substantial amounts of solid waste (*i.e.*, tailings).

178. The in situ mining process is a more environmentally-protective means of uranium mining. As compared to the available alternatives, in situ uranium mining greatly minimizes physical damage to the land and subsurface and results in much less solid waste.

## VI. PAA-1 Application

### A. Mine Plan

179. UEC submitted an updated mine plan as part of its PAA-1 Application. The draft PAA, UR03075PAA1 (PAA1), includes the updated mine plan.

180. The updated mine plan includes a map of the proposed production areas and an updated estimated schedule for production and restoration.

181. According to UEC's mine plan, UEC will begin restoration operations in PA-1 promptly after mining.

**B. Restoration Table**

182. UEC's proposed restoration table for PA-1 is contained in the PAA-1 Application and in the draft PAA, UR03075PAA1 (PAA1), as Attachment 6.

Parameters

183. UEC's proposed restoration table includes all parameters in the suite established in accordance with the requirements of 30 TAC § 331.104(b).

a. UEC requested that ammonia, cadmium, lead and mercury be excluded from the restoration table.

b. Ammonia, cadmium, lead and mercury are not suitable restoration parameters because (1) they do not occur in the production zone; (2) these elements are not included in the proposed injection solution; (3) they are not subject to being dissolved by mining solutions (because they are not in the production zone), and (4) extensive water quality sampling indicates that these elements are not in the aquifer in general.

Values

184. TCEQ's application form instructs applicants to base the restoration table on the required groundwater analysis report summary. The format of the groundwater analysis report summary is dictated by Figure 3, which is attached to the application form.

185. The values in UEC's restoration table included in its PAA-1 Application consist of the column headed production area average for parameters shown on the production area baseline water quality table, which is included in the draft PAA as Attachment 4A.

186. The values in UEC's restoration table included in its PAA-1 Application were derived from groundwater samples collected at the eighteen baseline wells for PA-1, consisting of PTW-1 through PTW-14 and RBL Wells 1, 3, 4 and 5.

187. When UEC sampled PTWs 7-14, the PAA-1 Application was still in the technical review phase.

188. The restoration values in UEC's restoration table included in its PAA-1 Application are the mean concentration or value for each parameter based on all measurements from groundwater samples collected from baseline wells at the time that the draft PAA was issued. After issuance of the draft PAA, UEC took and analyzed additional groundwater samples (referred to as rounds 2 and 3) from its baseline wells in PA-1.

189. The restoration values in the restoration table attached hereto as Attachment 6 in Exhibit D are the mean concentration or value for each parameter based on all measurements from groundwater samples collected from the PA-1 baseline wells, including (a) those collected at the time that the draft PAA was issued and (b) those collected in rounds 2 and 3.

## C. Baseline Table

190. UEC's baseline groundwater summary table for PA-1 is contained in Chapter 6 of its PAA-1 Application and in Attachments 4A and 4B of the draft PAA, UR03075PAA1 (PAA1).

191. The findings of fact set forth in and/or incorporated into Section V.C. are incorporated by reference herein.

The Groundwater Quality Data from Which the Baseline Table in the PAA-1 Application Was Derived (First Round)

192. The baseline groundwater summary table in the PAA-1 Application contains values derived from (a) 22 mine area monitor wells completed in the production zone (BMW-1 through BMW-22); (b) 18 baseline wells completed in the production zone within the production area (PTW-1 through PTW-14; RBLB-1; RBLB-3 through RBLB-5); and (c) nine mine area monitor wells completed in the nonproduction zone (OMW-1 through OMW-9).

193. The baseline groundwater summary table contains: a) the averages and ranges of the parameter values determined for the designated production zone monitor wells (BMW-1 through BMW-22), which are monitor wells completed in the production zone; (b) the averages and ranges of the parameter values determined from eighteen designated production zone wells in the production area (PTW-1 through PTW-14; RBLB-1; RBLB-3 through RBLB-5), which are baseline wells completed in the production zone within the production area; and (c) the averages and ranges by zone of the parameter values determined for designated nonproduction zone monitor wells (OMW-1 through OMW-9), which are monitor wells completed in nonproduction zone.

194. The water samples from which the baseline table in the PAA-1 Application was derived are representative of groundwater quality in the areas where they were collected.

The Values in the Baseline Table in the PAA-1 Application

*Production Zone Monitor Wells (BMW-1 through BMW-22)*

195. The water samples obtained from the designated production zone monitor wells (BMW-1 through BMW-22) and used to derive the data included in the baseline groundwater summary table are representative of groundwater quality in the area of the monitor well ring surrounding PA-1.

196. This data establishes an average value for radium-226 of 12.1 pCi/l, which exceeds the EPA drinking water standard for radium-226 (5 pCi/l).

*Nonproduction Zone Monitor Wells (OMW-1 through OMW-9)*

197. The water samples obtained from the designated nonproduction zone monitor wells (OMW-1 through OMW-9) and used to derive the data included in the baseline groundwater summary table are representative of groundwater quality in Sand A overlying the PA-1 production area.

198. This data establishes an average value for arsenic of .018 mg/l, which exceeds the EPA drinking water standard for that constituent (.010 mg/l). With the exception of one well, all of the OMWs have arsenic values in excess of the .010 mg/l standard.

*Production Zone Baseline Wells (PTW-1 through PTW-14; RBLB-1; RBLB-3 through RBLB-5)*

199. The water samples obtained from the eighteen baseline wells (PTW-1 through PTW-14; RBLB-1; RBLB-3 through RBLB-5) and used to derive the data included in the baseline groundwater summary table are representative of groundwater quality in the areas where UEC plans to mine.

200. This data establishes an average value for radium-226 of 1684.0, which greatly exceeds the EPA drinking water standard of 5 pCi/l for radium-226. Every one of the baseline wells has a radium-226 value in excess of the 5 pCi/l standard. The lowest value is 10 pCi/l.

201. This data establishes an average value for uranium of .804 mg/l, which exceeds the EPA drinking water standard of .03 mg/l for uranium.

Later Sampling (Second and Third Rounds)

202. Constituent values in groundwater (including values for uranium and radium-226) naturally vary over time, even in the same location.

203. The variance in uranium levels between the sampling rounds is consistent with natural conditions and natural variability.

204. The variance in radium-226 levels between the sampling rounds is consistent with natural conditions and natural variability.

205. The baseline groundwater summary tables attached hereto as Attachments 4A and 4B in Exhibit D include values from all groundwater samples collected from baseline wells, including those collected at the time that the draft PAA was issued and those collected in rounds 2 and 3.

206. The water samples collected in rounds 2 and 3 are representative of groundwater quality in the areas where they were collected.

## D. Control parameter upper limits

207. UEC's proposed upper limits control parameters are contained in Table 6.5 in the PAA-1 Application and Attachment 5 of the draft PAA, UR03075PAA1 (PAA1).

208. The control parameters proposed by UEC and set forth in the draft PAA are chloride and conductivity.

209. The control parameter upper limits for the production zone monitor wells (BMWs) were calculated by adding 25% to the highest recorded values for chloride and conductivity from those wells, BMW-1 through BMW-22.

210. The control parameters for the nonproduction zone monitor wells (OMWs) were calculated by adding 25% to the highest value recorded for chloride and conductivity from the those wells, OMW-1 through OMW-9.

211. Chloride and conductivity will provide timely detection of any migration of mining fluids.

    a. Because of the production process, the mining fluid will contain elevated levels of chlorides.

    b. Conductivity and chloride are conservative parameters in that they move with the groundwater without undergoing retardation.

212. As shown on Attachment 5 in Exhibit D, the highest values for the control parameters—chloride and conductivity—are different than the values listed in the draft PAA-1 and the PAA-1 Application due to the incorporation of the additional two sample sets, rounds 2 and 3. The upper limits control parameters contained in Attachment 5 in Exhibit D hereto are based upon the revised tables attached hereto as Attachments 4A and 4B in Exhibit D, and thus incorporate those differences.

## E. Monitor wells

213. The monitor wells for PA-1 are described in the PAA-1 Application and the draft PAA, UR03075PAA1 (PAA1).

214. The hydrologic test results and interpretation are included in the PAA-1 Application.

Production Zone Monitor Wells (BMW-1 through BMW-22; GW-1; GW-2)

215. UEC has installed twenty-two production zone monitoring wells, BMW-1 through BMW-22. These wells form a ring around the outside of the production area for PA-1, and each one is completed in Sand B, where the mining is proposed to occur.

216. Each of the BMWs was installed in accordance with the applicable TCEQ standards. Each well was properly cased and cemented from bottom to top.

217. Each of the BMWs are located within 400 feet from the production area for PA-1.

218. The angle formed by lines drawn from any one of the BMWs to the nearest BMW is not greater than 75 degrees. The spacing of the monitor wells is adequate to intercept excursions.

219. The hydrologic test results demonstrate that the BMWs are hydraulically connected to the production area.

220. Pursuant to the draft PAA-1, UEC will also install two additional production zone monitoring wells, GW-1 and GW-2, prior to the commencement of mining operations in PA-1. GW-1 and GW-2 will be located approximately 80 feet inside the monitor well ring and will provide additional monitoring protection. An excursion in this location would be detected in the GWs before it would hit the monitor ring wells.

Nonproduction Zone Monitor Wells (OMW-1 through OMW-9)

221. UEC has installed nine (9) nonproduction zone monitor wells, OMW-1 through OMW-9.

222. Each of the OMWs was installed in accordance with applicable TCEQ standards.

223. Each of these wells is located inside the production area for PA-1 and is completed in Sand A.

224. The PA-1 production area is approximately 36 acres. Thus, there is one OMW per every four acres of production area.

Buffer Zone

225. All designated monitoring wells (BMWs, GWs and OMWs) are located at least 100 feet inside the boundary of the Mine Permit Area.

**F. Cost estimates for aquifer restoration and well plugging and abandonment**

226. UEC meets the applicable requirements for financial assurance under TEX. WATER CODE §§ 27.051, 27.073, and 30 TAC Chapters 37 and 331.

227. UEC's cost estimates for aquifer restoration and well plugging and abandonment for PA-1 are contained in the PAA-1 Application and in the draft PAA, UR03075PAA1 (PAA1), and they comply with all applicable regulatory requirements.

228. The cost estimate covers the plugging of monitor wells, baseline wells and injection/production wells in accordance with the closure plan, including all costs related thereto. The cost estimate accounts for the quantity of cement needed to cement each well from bottom to top, which will prevent movement of fluids through the wells out of the injection zone or to the land surface.

229. The cost estimate also includes a detailed estimate for the cost of restoration of groundwater in PA-1, including all costs related thereto. The estimate accounts for pumping and electrical costs, treatment costs, repairs and maintenance, labor, laboratory analysis, and operating expenses, while taking into account number and size of well patterns, screen lengths, effective porosity and a flare factor.

**G. Other information required to evaluate the application**

230. UEC included all applicable information required by the ED in its PAA-1 Application and its response to the ED's notice of deficiency.

231. UEC included all applicable information required by the instructions on the PAA application form promulgated by the Commission.

a. UEC provided a map that locates and identifies the lease area, permit area, and existing and proposed production areas with respect to easily identifiable landmarks such as towns or main roads. This information is contained in Chapter 1.0 and Figure 1-3, Mine Location Map.

b. UEC provided an oriented drawn to scale map locating all monitor wells, production wells, and baseline wells, and indicating acreage of the permit area, mine area, depth to the top of the production zone, and elevation of the production zone. This information is contained in Chapter 1.0 and Figure 1-4, Production Area Map.

c. UEC provided detailed cross-sections along the dip and strike accurately identifying all overlying aquifers, the first underlying aquifer, and the geologic interval to be mined. The geologic interval identified as the "production zone" will be the zone authorized for production by the proposed authorization. The lithologic columns are supported with electric logs, and the piezometric levels are indicated. This information is contained in Chapter 3.0 and Figures 3-1 through 3-5a.

d. UEC provided a written description of the geology and hydrology of the mine area, which is supported with maps, cross-sections showing geologic units, lithology, structural features, and other pertinent information. For hydrologic verification, a description of the major aquifer, hydraulic gradient, water quality indicators (*i.e.*, TDS, Na, SO4) for the mine area, and other pertinent information are included. This information is contained in Chapters 3.0 and 5.0.

e. UEC provided maps showing piezometric levels and TDS contours for production and non-production zone aquifers with baseline wells located and identified. This information is contained in Chapter 5.0 and associated contour maps showing TDS and piezometric levels.

f. UEC provided all required information regarding each of the monitor wells and the baseline wells completed in the production and non-production aquifers. This information is contained in Chapters 5.0 and 6.0.

g. UEC provided a Restoration Progress Report:
   1) A description of restoration procedures or restoration demonstration procedures, proposed, in progress, or completed.
   2) A description of the restoration progress that currently has been achieved.
   3) A description of the fluid handling capacity of the disposal facilities required to accomplish restoration using the proposed restoration procedure within the time frame specified in the mine plan. This information is contained in Chapter 7.0.

h. UEC provided a detailed calculation and tabulation of the volume of fluids to be handled by storage and disposal facilities at their maximum, and comparative capacity of the facilities that will be available. This information is contained in Chapter 7.0 and Table 7.2, Updated Fluid Handling Requirements vs. Capacity.

**H. Whether the application for PAA-1 complies with all applicable statutory and regulatory requirements.**

232. The PAA-1 Application complies with all applicable statutory and regulatory requirements.

**VII. Other Findings**

233. Based on the above findings of fact, the use or installation of the injection wells is in the public interest.

234. Based on the above findings of fact, no existing rights, including, but not limited to, mineral rights, will be impaired.

235. Based on the above findings of fact, both groundwater and surface fresh water can be adequately protected from pollution with proper safeguards. The draft Mine Permit and draft PAA-1 impose terms and conditions reasonably necessary to protect fresh water from pollution.

236. Based on the above findings of fact, UEC has made a satisfactory showing of financial responsibility to the extent required by Section 27.073 of the Texas Water Code.

237. Any Finding of Fact more appropriately considered a Conclusion of Law is hereby adopted as such.

## CONCLUSIONS OF LAW

**VIII. Jurisdiction**

238. The Commission has jurisdiction over UEC's application for Class III UIC area permit UR03075, its request for an aquifer exemption, and its application for production area authorization UR03075PAA1 as part of the Commission's authority to permit Class III injection wells, pursuant to TEX. WATER CODE §§ 5.013(a)(8) and 27.011.

239. Based on the above Findings of Fact, public notice of UEC's application for Class III UIC area permit UR03075 and request for aquifer exemption and application for production area authorization UR03075PAA1 were provided as required by the TEX. WATER CODE and Title 30 of the Texas Administrative Code (TAC), and affected persons were provided an opportunity to request a hearing on UEC's Applications in the manner required by law.

240. The Commission has authority to hold hearings concerning UEC's Applications, pursuant to the provisions of TEX. WATER CODE §§ 5.102(b) and 27.018.

241. Proper notice of the hearing and the preliminary hearings was provided to affected persons pursuant to TEX. GOV'T CODE §§ 2001.051 and 2001.052 and TEX. WATER CODE § 27.018.

242. SOAH has jurisdiction to conduct a hearing and to prepare a PFD in this matter. TEX. GOV'T CODE § 2003.047.

## IX. Burden of Proof

243. As to the Applications referred by the Commission to SOAH, UEC has the burden of proving that its application for Class III UIC area permit UR03075, its request for an aquifer exemption, and its application for production area authorization UR03075PAA1 comply with applicable law by a preponderance of the evidence. 30 TAC § 80.17(a).

## X. Mine Application

**A. Whether the use and installation of the injection wells are in the public interest under Texas Water Code §27.051(a). Public interest in regard to this issue includes whether UEC's mining operation or restoration activities will adversely impact the public interest by unreasonably reducing the amount of groundwater available for permitting by the Goliad County Groundwater Conservation District.**

244. Based on the findings of fact set forth in and incorporated into Section V.A above, UEC's Mine Application is in the public interest consistent with the policy of the state as defined by the Legislature under TEX. WATER CODE § 27.051(a).

245. TCEQ rules require TCEQ to implement Chapter 27 of the Texas Water Code in a manner consistent with the policy of this state to: maintain the quality of fresh water in the state to the extent consistent with the public health and welfare and the operation of existing industries, taking into consideration the economic development of the state; prevent underground injection that may pollute fresh water; and require the use of all reasonable methods to implement this policy.

246. The scope of the public interest consideration must be appropriately limited so that it does not conflict with other law.

247. It is contrary to legislative intent and principles of statutory interpretation to interpret a more general statutory requirement, like the public interest requirement, to override more specific law--such as the rule of capture and the exemption from groundwater conservation district regulation of groundwater used for *in situ* mining.

248. The Class III injection well requirements that apply to in situ mining do not regulate the volume of fresh water used by a permittee.

249. In Texas, groundwater law is based upon the "rule of capture."

250. Texas Water Code Section 36.117(l) specifically states that Chapter 36 of the Texas Water Code does not apply to production or injection wells drilled for uranium.

**B. Does the Applicant's compliance history require denial of the application under TEX. WATER CODE § 27.051(e) and 30 TAC Chapter 60?**

251. Based on the findings of fact set forth in Section V.B above, UEC's compliance history does not require denial of the Mine Application under TEX. WATER CODE § 27.051(e) and 30 TAC Chapter 60.

252. Section 60.2 sets forth the method by which a person's compliance history is classified – i.e., as "high," "average" or "poor." Section 60.2 provides that "[i]f there is no compliance information about the site at the time the executive director develops the compliance history classification, then the classification shall be designated as 'average performer by default.'"

253. The compliance history prepared by the ED was prepared in accordance with Texas Water Code § 27.051(e) and 30 TAC Chapter 60.

**C. Does the application adequately and accurately describe baseline conditions of the groundwater in the proposed permitted area under applicable requirements of 30 TAC Chapter 331?**

254. Based on the findings of fact set forth in Section V.C above, the Mine Application adequately and accurately describe baseline conditions of the groundwater in the proposed Mine Permit Area under applicable requirements of 30 TAC Chapter 331.

255. There are no TCEQ rule requirements for establishing baseline conditions as part of the Class III application, but baseline quality is defined as "[t]he parameters and their concentrations that describe the local groundwater quality of an aquifer prior to the beginning of injection operations." 30 TAC § 331.2(12).

**D. Does the application meet all applicable criteria of 30 TAC § 331.122, related to required consideration by the Commission prior to issuing a Class III Injection Well Area Permit?**

256. Based on the findings of fact set forth in Section V.D above, the Mine Application meets all applicable criteria of 30 TAC § 331.122, related to required consideration by the Commission prior to issuing a Class III Injection Well Area Permit.

257. Section 331.122 provides a list of items the Commission shall consider in its administrative and technical review before issuing an area permit.

**E. Has the Applicant demonstrated that the proposed exempted aquifer meets the applicable criteria of 30 TAC § 331.13?**

258. Based on the findings of fact set forth in Section V.E above, UEC has demonstrated that the proposed exempted aquifer meets the applicable criteria of 30 TAC § 331.13. This conclusion is further supported by the holding in *Western Nebraska Resources Council v. United States Environmental Protection Agency*, 943 F.2d 867, 870 (8th Cir. 1991).

259. For a portion of an aquifer to be exempted, Section 331.13 requires that the portion of the aquifer (1) not currently serve as a source of drinking water for human consumption; and (2) will not in the future serve as a source of drinking water for human consumption for one or more specified reasons. 30 TAC § 331.13(c)(1),(2).

260. The test for the first subpart (*i.e.*, that the portion of the aquifer not currently serve as a source of drinking water) is whether or not anyone is "currently using water for human consumption from the [aquifer] in the specific lateral boundary" of the proposed exemption area. 50 Fed. Reg. 5253 (February 7, 1985), at 5253; 55 Fed. Reg. 21191 (May 23, 1990), at 21192.

261. The second subpart under Section 331.13 is that the portion of the aquifer sought to be exempt will not in the future serve as a source of drinking water for human consumption for one or more specified reasons. Those reasons include:

> (A) It is mineral, hydrocarbon or geothermal energy bearing with production capability;
> ... or
> (C) It is so contaminated that it would be economically or technologically impractical to render the water fit for human consumption.

30 TAC § 331.13(c)(2)(A), (C).

262. No designation of an exempted aquifer shall be final until approved by the EPA as part of the delegated Underground Injection Control Program.

**F. Is the application sufficiently protective of groundwater quality?**

263. Based on the findings of fact set forth in and/or incorporated into Section V.F above, the Mine Application is sufficiently protective of groundwater quality.

**G. Does the application adequately characterize and describe the geology and hydrology in the proposed permit area, including fault lines, under the applicable rules?**

264. Based on the findings of fact set forth in and/or incorporated into Section V.G above, the Mine Application adequately characterizes and describes the geology and hydrology in the proposed permit area, including fault lines, under the applicable rules.

265. Section 331.122(2)(A) requires a map showing "faults, if known or suspected. Only information of public record is required to be on this map . . . ." 30 TAC § 331.122(2)(A).

**H. Do the geologic and hydraulic properties of the proposed permit area indicate that the Applicant will be able to comply with rule requirements?**

266. Based on the findings of fact set forth in and/or incorporated into Section V.H above, the geologic and hydraulic properties of the proposed permit area indicate that the Applicant will be able to comply with rule requirements.

267. Hydrologic testing is not required for a Class III Underground Injection Control permit, although an applicant must provide a description of the proposed hydrologic testing program. 30 TAC § 331.122(2)(G).

268. Prior to conducting any mining operations near the Northwest Fault, UEC will have to apply for, and the Commission will have to issue one or more PAAs in addition to the PAA for PA-1.

269. The results of the hydrologic testing program must be submitted with an application for a PAA, which is needed to mine an ore body within an area permit. 30 TAC § 305.49(b)(6).

**I. Does the Applicant meet the applicable requirements for financial assurance under Texas Water Code §§ 27.051, 27.073, and 30 TAC Chapters 37 and 331?**

270. Based on the findings of fact set forth in Section V.I above, the Applicant meets the applicable requirements for financial assurance under Texas Water Code §§ 27.051, 27.073, and 30 TAC Chapters 37 and 331.

271. Applicable law does not require UEC to include estimated restoration costs for all production areas, and the assertion to the contrary is not supported by the plain meaning of the applicable TCEQ rules.

272. Section 27.051(a)(4) of the Texas Water Code provides that a permit may be issued if the Commission finds that the applicant has made a satisfactory showing of financial responsibility if such showing is required by Section 27.073.

273. Section 27.073(a-1), in turn, requires a person to whom an in situ uranium mining injection, monitoring or production well permit is issued to maintain financial security to ensure that each abandoned well is properly plugged.

274. Chapter 37 of the TCEQ rules describes acceptable forms of financial assurance, specifies the precise wording of the various instruments that may be used, and imposes requirements to insure that the issuer or trustee of the instrument is solvent and financially and otherwise qualified to perform if called upon. 30 TAC §§ 37.71, 37.201, 37.231, 37.211, 37.301, 37.321, 37.331.

275. In addition, Section 37.7021 of Chapter 37 addresses the timing of the provision of financial assurance. It provides that financial assurance for well plugging and abandonment must "be in effect before commencement of drilling operations." 30 TAC § 37.7021(c).

276. Section 331.143 of the TCEQ rules requires (a) the preparation of a written cost estimate of plugging the wells; (b) that this cost estimate take into account all applicable costs and be kept at the facility for the life of the project; and (c) that this cost estimate be reviewed and updated as necessary on an annual basis, including adjustments for inflation.

277. Section 331.143 also incorporates by reference the requirements listed in Sections 331.46 and 331.86. Section 331.46 contains requirements that well plugs shall not allow the movement of fluids through the wells, out of the injection zone or to the land surface and shall consist of cement or an equally protective material; closure plans must demonstrate that no movement of contaminants that will cause pollution from the production zone into a USDW will occur; and lists factors for consideration in determining the adequacy of plugging and abandonment plans.

278. Section 331.86 lays out the timeframe for effectuating plugging and abandonment and requires written acknowledgment from the ED after the fact. Under Section 331.144, financial assurance cannot be released without the written approval of the ED.

**J. Is the application sufficiently protective of surface water quality?**

279. Based on the findings of fact set forth in Section V.J above, the Mine Application is sufficiently protective of surface water quality.

280. In the context of in situ uranium mining, an RML is a license that authorizes the possession, receipt, processing, and temporary storage of natural uranium prior to transfer to authorized recipients. 30 TAC §§ 336.1, 336.211. An RML also authorizes temporary storage of byproduct material (waste) prior to transfer to authorized recipients and authorized disposal facilities. *Id.* at § 336.1101.

281. The RML application process focuses on facility design and standard operating procedures that ensure the safety of workers, the environment and members of the public from radiation exposure. 30 TAC § 336.304.

282. Applicants for an RML must examine levels of radiological exposure to facility workers and members of the public via various pathways, including surface water. 30 TAC §§ 336.301 – 336.368 (Subchapter D, Standards for Protection Against Radiation).

283. An integral part of an RML application includes Operational Safety and Emergency Procedures to specifically address potential exposure to employees and the public; it also provides procedures for ensuring that potential exposures are minimized to the lowest extent possible. 30 TAC § 336.210.

**K. Are local roadways sufficient to handle traffic to and from the proposed facility?**

284. Based on the findings of fact set forth in Section V.K above, local roadways are sufficient to handle traffic to and from the proposed facility.

**L. Whether UEC's proposal for restoration of groundwater to baseline levels as contained in the permit application is reasonable and adequate.**

285. Based on the findings of fact set forth in Section V.L above, UEC's proposal for restoration of groundwater to baseline levels as contained in the permit application is reasonable and adequate.

**M. Will the Applicant's proposed activities negatively impact livestock and wildlife, including endangered species?**

286. Based on the findings of fact set forth in and/or incorporated into Section V.M above, the Applicant's proposed activities will not negatively impact livestock and wildlife, including endangered species.

287. Applicants for an RML must examine levels of radiological exposure to facility workers and members of the public via various pathways such as air, soils, surface water, and food chain (crops, cattle, etc.). 30 TAC §§ 336.301 – 336.368 (Subchapter D, Standards for Protection Against Radiation).

**N. Will the Applicant's proposed activities negatively impact the use of property?**

288. Based on the findings of fact set forth in and/or incorporated into Section V.N above, the Applicant's proposed activities will not negatively impact the use of property.

289. TCEQ does not have jurisdiction to consider effects on property values when determining whether to approve or deny a Class III injection well application.

290. The issuance of an injection well permit "does not convey any property rights of any sort" and "does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of state or local law or regulations." 30 TAC § 305.122 (b)-(c); *see also id.* § 305.125(16) (providing that all injection well permits must include a condition stating that it "does not convey any property rights of any sort, or any exclusive privilege").

**O. Will the Applicant's proposed activities adversely affect public health and welfare?**

291. Based on the findings of fact set forth in and/or incorporated into Section V.O above, the Applicant's proposed activities will not adversely affect public health and welfare.

**P. Whether the proposed mining is in the recharge zone of the Gulf Coast Aquifer (Evangeline component).**

**292.** There is no statute or rule prohibiting in situ mining within an aquifer recharge zone.

**Q. Whether the Gulf Coast Aquifer is a confined aquifer in the areas of Goliad County where UEC will conduct UIC activities.**

293. There is no statutory or regulatory prohibition against conducting in situ uranium mining in an unconfined aquifer.

**R. Whether mining fluids will migrate vertically or horizontally and contaminate an USDW (underground source of drinking water).**

294. Based on the findings of fact set forth in and/or incorporated into Section V.R above, mining fluids will not migrate vertically or horizontally and contaminate an USDW.

295. The version of TRC's plugging rule in effect at the time of the contested case hearing, 16 TAC § 11.139, became effective on May 7, 1982, and required that boreholes be plugged in a manner that prevents the mixing of water from different sand units within the hole.

296. Prior to commencing mining operations in any additional production area(s), UEC will have to apply for, and the Commission will have to issue a production area authorization. To obtain a production area authorization, an applicant must design and conduct a hydrologic testing program for the production area in which it seeks authorization to mine and must submit the results of such hydrologic testing as a part of its PAA application.

**S. Whether there are any USDWs within the injection zones proposed by UEC.**

297. Under the TCEQ rules, a USDW is an aquifer or its portions (A) which supplies drinking water for human consumption; or (B) in which the groundwater contains fewer than 10,000 milligrams per liter total dissolved solids; and (C) which is not an exempted aquifer. 30 TAC § 331.2(107).

**T. Whether any USDWs within Goliad County will be adversely impacted by UEC's proposed in situ uranium operations.**

298. Based on the findings of fact set forth in and/or incorporated into Section V.T above, no USDWs within Goliad County will be adversely impacted by UEC's proposed in situ uranium operations.

299. Once an aquifer exemption is issued, the exempted aquifer is no longer a USDW.

**U. Whether there is a "practical, economic and feasible alternative to an injection well reasonably available" within the meaning of that term as set forth in TWC § 27.051(d)(2).**

300. Based on the findings of fact set forth in Section V.U above, there is no "practical, economic and feasible alternative to an injection well reasonably available" within the meaning of that term as set forth in TEX. WATER CODE § 27.051(d)(2).

301. Section 27.051(d) of the Texas Water Code provides that in determining if the use or installation of an injection well is in the public interest, the Commission must consider whether there is an alternative to "an injection well," not whether there is an alternative to the proposed injection well location.

## XI. PAA-1 Application

### A. Mine Plan

302. Based on the findings of fact set forth in and/or incorporated into Section VI.A above, the PAA-1 Application's mine plan complies with all applicable regulatory requirements.

303. A mine plan is defined as a plan for operations at a mine, consisting of: (A) a map of the permit area identifying the location and extent of existing and proposed production areas; and (B) an estimated schedule indicating the sequence and timetable for mining and any required aquifer restoration. 30 TAC § 331.2(63).

### B. Restoration Table

304. Based on the findings of fact set forth in and/or incorporated into Section VI.B above, the PAA-1 Application's restoration table complies with all applicable regulatory requirements.

305. A restoration table must include all parameters in the suite established in accordance with the requirements of 30 TAC §331.104(b). 30 TAC § 331.107(a)(1).

306. Under 30 TAC § 331.104(b), any of the parameters in the suite, except for uranium and radium-226, may be removed from the list of restoration parameters if an applicant can demonstrate that a parameter or parameters is not a suitable restoration parameter.

307. When UEC filed its PAA-1 Application, the TCEQ regulations required that each production area authorization contain a restoration table developed by using either:

(1) the higher value in either the column headed mine area average or the column headed production area average for parameters shown on the production area baseline water quality form for the production zone; or

(2) predictions of restoration quality that are reasonably certain after giving consideration to the factors specified in §331.107(f) of this title (relating to Restoration).

30 TAC § 331.104(d) (West 2008).

308. Under the current TCEQ regulations, the restoration values shall consist of either:

(a) the mean concentration or value for that parameter based on all measurements from groundwater samples collected from baseline wells prior to mining activities; or
(b) a statistical analysis of baseline well information proposed by the owner or operator and approved by the executive director that demonstrates that the restoration table value is representative of baseline quality.

30 TAC § 331.107(a)(1).

**C. Baseline water quality table**

309. Based on the findings of fact set forth in and/or incorporated into Section VI.C above, the PAA-1 Application's baseline table complies with all applicable regulatory requirements.

310. A baseline water table must be submitted with an application for a production area authorization. 30 TAC § 305.49(b)(3).

311. The baseline water table or groundwater analysis report summary serves as the basis for the restoration table. Figure 3 of the application form promulgated by the Commission sets forth the format of the groundwater analysis report summary.

312. When UEC filed its PAA-1 Application, the TCEQ regulations required one or more samples from each designated monitor well (production and nonproduction zone) and each designated production well in the production area, to be summarized as follows:

(1) mine area baseline-the averages and ranges of the parameter values determined for the designated production zone monitor wells;
(2) production area baseline-the averages and ranges of the parameter values determined from at least five designated production zone wells in the production area; and
(3) nonproduction zone baseline-the averages and ranges by zone of the parameter values determined for designated nonproduction zone monitor wells.

30 TAC § 331.104 (West 2008).

313. The requirements of the current TCEQ regulations are similar in many ways, specifying independent and representative samples from:

(1) mine area monitor wells completed in the production zone;
(2) mine area monitor wells completed in nonproduction zones; and
(3) baseline wells completed in the production zone within the production area.

30 TAC § 331.104(a).

314. Under the current TCEQ regulations, however, the number of wells must be "a minimum of five baseline wells, or one baseline well for every four acres of production area,

whichever is greater . . . completed within the production zone of the production area." 30 TAC § 331.104(c).

315. UEC was not obligated to amend its PAA-1 Application to include water quality data obtained after issuance of the draft PAA.

316. Baseline wells must be completed "in the production zone." 30 TAC § 331.104(a)-(b). The TCEQ regulations do not require that the wells be fully screen across the entire thickness of the sand unit.

**D. Control parameter upper limits**

317. Based on the findings of fact set forth in and/or incorporated into Section VI.D above, the PAA-1 Application's proposed control parameter upper limits comply with all applicable regulatory requirements.

318. The draft PAA, UR03075PAA1 (PAA1), establishes conductivity and chloride as the two control parameters to be used, and prescribes the manner of calculation for the upper limit values to be used in production and non-production zones.

319. Control parameter upper limits for production zone monitor wells are to be derived from pre-mining groundwater sample data from production zone monitor wells, and control parameter upper limits for nonproduction zone monitor wells are to be derived from pre-mining groundwater sample data from nonproduction zone monitor wells. 30 TAC § 331.104(e).

320. The PAA application form promulgated by the Commission instructs applicants to provide a proposed control parameter table based on the groundwater analysis summary table with the control parameter upper limit being either 25% or 5 mg/l above the highest value for each control parameter.

**E. Monitor wells**

321. Based on the findings of fact set forth in and/or incorporated into Section VI.E above, the monitor wells for the proposed production area comply with all applicable regulatory requirements.

322. The number, placement and construction of the monitor wells conforms to the requirements of Sections 331.82, 103 and 104; all applicable requirements have been met.

*Production Zone Monitor Wells (BMW-1 through BMW-22; GW-1; GW-2)*

323. "Designated production zone monitor wells shall be spaced no greater than 400 feet from the production area, as determined by exploratory drilling. ... The angle formed by lines drawn from any production well to the two nearest monitor wells will not be greater than 75 degrees." 30 TAC § 331.103(a).

*Nonproduction Zone Monitor Wells (OMW-1 through OMW-9)*

324. "At a minimum, designated nonproduction zone monitor wells shall be completed in the production area in any freshwater aquifer overlying the production zone. These wells shall be located ..... with a minimum of one per every four acres of production area for wells completed in the first overlying freshwater aquifer ...." 30 TAC § 331.103(b).

325. The applicable regulatory requirements do not require monitoring in Sand C.

*Buffer Zone*

326. Designated monitoring wells must be installed at least 100 feet inside any permit area boundary.

**F. Cost estimates for aquifer restoration and well plugging and abandonment**

327. Based on the findings of fact set forth in and/or incorporated into Section VI.F above, UEC meets the applicable requirements for financial assurance under Texas Water Code §§ 27.051, 27.073, and 30 TAC Chapters 37 and 331.

328. The cost estimates for aquifer restoration and well plugging and abandonment related to the PAA-1 Application comply with all applicable regulatory requirements.

329. Section 331.143 of the TCEQ rules requires (a) the preparation of written cost estimates of plugging and abandonment and aquifer restoration; (b) that these cost estimates take into account all costs related to these activities and be kept at the facility for the life of the project; and (c) that these estimates be reviewed and updated as necessary on an annual basis, including adjustments for inflation.

330. UEC does not have to recalculate cost estimates for aquifer restoration due to the revision of the PAA-1 restoration table, but will be required to update such estimates under 30 TAC § 331.143(c).

331. Section 331.46 of the TCEQ rules contains requirements that well plugs shall not allow the movement of fluids through the wells, out of the injection zone or to the land surface and shall consist of cement or an equally protective material; closure plans must demonstrate that no movement of contaminants that will cause pollution from the production zone into a USDW will occur; and lists factors for consideration in determining the adequacy of plugging and abandonment plans.

**G. Other information required to evaluate the application**

332. Based on the findings of fact set forth in and/or incorporated into Section VI.G above, UEC included all of the additional applicable information required by the ED in its PAA-1 Application and its response to the ED's notice of deficiency.

333. Based on the findings of fact set forth in and/or incorporated into Section VI.G above, UEC included all of the additional applicable information required by the instructions on the PAA application form promulgated by the Commission.

334. Based on the findings of fact set forth in Section VI above, UEC submitted all data, information and items required by the applicable regulatory requirements related to the PAA-1 Application, and the Commission considered all such data, information and items.

**H. Whether the application for PAA-1 complies with all applicable statutory and regulatory requirements.**

335. Based on the findings of fact set forth in Section VI above, the PAA-1 Application complies with all applicable regulatory requirements.

## XII. Transcript Costs

336. The following factors are to be considered in allocating reporting and transcription costs among the parties: (1) the party who requested the transcript, (2) the financial ability of the party to pay the costs, (3) the extent to which the party participated in the hearing, (4) the relative benefits to the various parties of having a transcript, (5) the budgetary constraints of a state or federal administrative agency participating in the proceeding, and (6) any other factor which is relevant to a just and reasonable assessment of costs. 30 TAC § 80.23(d).

337. Reporting and transcript costs shall be apportioned 75% to UEC and 25% to Protestants.

## XIII. Other Conclusions

338. Based on the findings of fact set forth herein, the use or installation of the injection well(s) is in the public interest. TEX. WATER CODE § 27.051(a)(1).

339. Based on the findings of fact set forth herein, no existing rights, including, but not limited to, mineral rights, will be impaired. TEX. WATER CODE § 27.051(a)(2).

340. Based on the findings of fact set forth herein, both groundwater and surface fresh water can be adequately protected from pollution with proper safeguards. TEX. WATER CODE § 27.051(a)(3). The draft Mine Permit and draft PAA-1 impose terms and conditions reasonably necessary to protect fresh water from pollution.

341. Based on the findings of fact set forth herein, UEC has made a satisfactory showing of financial responsibility to the extent required by Section 27.073 of the Texas Water Code. TEX. WATER CODE § 27.051(a)(4).

342. Any Conclusion of Law more appropriately considered a Finding of Fact is hereby adopted as such.

## EXPLANATION OF CHANGES

1. The ALJ's PFD at pages 68 and 136 suggests that UEC's financial assurance may need to be revisited in order to be consistent with the revised restoration table for PAA-1. However, the Commission determined that there is no need to revisit the cost estimates submitted with the applications through this contested case process due to the requirement in 30 TAC § 331.143 that those estimates be revisited on an annual basis. This decision is consistent with the arguments in the Executive Director's Reply to Exceptions as to this issue.

2. The ALJ's PFD at page 128 states that "the ALJ finds that the PAA-1 Application fails to comply with the statutory and regulatory requirements for the baseline water quality table and restoration table unless amended." First, the Commission notes that the baseline water quality and restoration tables have been amended, consistent with the recommendation to amend those tables submitted by the ALJ in his PFD. In addition, the Commission finds that the evidence in the record, including the data submitted for the both the original and amended baseline water quality and restoration tables, met the requirements of applicable TCEQ rules and statutes, for the reasons set forth by the Executive Director in his Exceptions.

3. Although the ALJ finds that "UEC's proposed installation and use of Class III injections wells for *in situ* mining of uranium are in the public interest, in accordance with the criteria in Texas Water Code § 27.051(a)", he also raises the caveat that "if the Northwest Fault is proven to be transmissive" and "the preponderance of the evidence is also negative," it would "tip the public interest scale toward a findings that the proposed *in situ* uranium mining is not in the public interest." *See PFD at pp. 22-23.* The ALJ also recommends remand back to SOAH on the transmissivity of the Northwest Fault. *See PFD at p. 138.* However, the Commission determines that no remand is necessary and finds that the injection wells are in the public interest and characterization of the Northwest Fault is not required with respect to the "proposed permit area", as that information will be provided at such time as the Applicant determines to submit applications for proposed production areas 2 through 4. Production Area No. PAA-1 does not include any permitted area near the Northwest Fault and concerns about the transmissivity of the Northwest Fault are appropriately addressed through any future production area authorizations that implicate, or are closer to, the fault. This decision is consistent with the Executive Director and Applicant's arguments in their respective Exceptions as to this issue.

4. Pursuant to 30 Texas Administrative Code §§ 50.117 and 80.126, the Commission shall consider all public comment in making its decision on an application and shall either adopt the Executive Director's Response to Public Comment or prepare its own response. At the February 23, 2011 Agenda, the Commission adopted the Executive Director's Responses to Public Comment on both the Class III Injection Well Permit/Aquifer Exemption and on Production Area Authorization No. 1. New Order Provision No. 1A is added to this Order to reflect the Commission's decision during its public meeting to adopt both the Executive Director's Responses to Public Comment.

5. For purposes of clarity, the Office of General Counsel has incorporated the adopted changes to the baseline water quality tables, control parameter upper limits table, and restoration table (Attachments 4A, 4B, 5, and 6 to Production Area Authorization 1) into Exhibit C, eliminated the incorrect tables from proposed "Exhibit C", and eliminated what is now a repetitive proposed "Exhibit D." The General Counsel has merged what was previously identified as "Exhibit C" and "Exhibit D" to the Applicant's Proposed Order into one complete Production Area Authorization No. 1 that contains the correct attachments/tables adopted by the Commission. This document is now attached to the Commission's Order as new Exhibit C. Ordering Provision No. 1 was also modified to correctly reference the appropriate Exhibits. The Office of General Counsel makes this change to the Applicant's Proposed Order consistent with the Commission's Resolution in Docket No. 2009-0059-RES dated February 2, 2009, which gives the General Counsel "authority to make clerical and clarification changes to Orders and documents adopted by the Commission, to effectuate the clear intent of the Commission's action taken."

**NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY THAT:**

1. The applications of Uranium Energy Corp for Issuance of a Class III Injection Well Permit No. UR03075, Aquifer Exemption Order, and Production Area Authorization UR03075PAA1 in Goliad County, Texas, TCEQ Docket Nos. 2008-1888-UIC and 2009-1319-UIC, SOAH Docket Nos. 582-09-3064 and 582-09-6184 are approved in accordance with the terms and conditions contained in the attached Permit No. UR03075 (Exhibit A), Aquifer Exemption Order (Exhibit B), and Production Area Authorization UR03075PAA1 (Exhibit C).

1A. The Commission adopts the Executive Director's Responses to Public Comment for both the Class III Injection Well Permit/Aquifer Exemption and the Production Area Authorization in accordance with 30 TEX. ADMIN. CODE §§ 50.117 and 80.126.

2. UEC shall pay 75% ($10,586.33) of the cost of reporting and transcription, and Protestants shall pay 25 % ($3,528.77) of the cost of reporting and transcription of the hearing in this case, no later than thirty (30) days after the effective date of this Order.

3. The Chief Clerk of the TCEQ shall forward a copy of this Order and attached Permit, Aquifer Exemption Order, and Production Area Authorization as changed to conform to this Order to all parties and issue the attached Permit, Aquifer Exemption Order, and Production Area Authorization as changed to conform to this Order.

4. If any provision, sentence, clause or phrase of this Order is for any reason held to be invalid, the invalidity of such portion shall not affect the validity of the remaining portions of the Order.

5. The effective date of this Order is the date the Order is final, as provided by 30 TAC § 80.273 and § 2001.144 of the Administrative Procedure Act.

Issue Date: MAR 07 2011

TEXAS COMMISSION ON

ENVIRONMENTAL QUALITY

Bryan W. Shaw

Bryan W. Shaw, Ph.D, Chairman

# EXHIBIT 2

**UNDERGROUND INJECTION CONTROL**
**PERMIT NO. UR03075**

| | | |
|---|---|---|
| **APPLICATION BY URANIUM ENERGY CORP. FOR RENEWAL AND AMENDMENT OF CLASS III INJECTION WELL AREA PERMIT NO. UR03075** | **§** | **BEFORE THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY** |

## EXECUTIVE DIRECTOR'S RESPONSE TO PUBLIC COMMENTS

The Executive Director of the Texas Commission on Environmental Quality (the Commission or TCEQ) files this Response to Public Comments (Response) on the application by Uranium Energy Corp. (Applicant or UEC) for a Class III injection well area permit renewal and amendment to authorize *in situ* uranium mining. Before an application is approved, Title 30 Texas Administrative Code (30 TAC) Section (§) 55.156 requires that the Executive Director prepare a response to all timely, relevant and material, or significant comments received.

### I. Public Comments Received

The Office of Chief Clerk received timely comments from: Richard J. Abitz, Michael Abrameit, Callie C. Albrecht, Catherine Alstrom, Cara Alstrom, Aldon Bade, Tate Bammert, Dave Barnet, Claire Barnhart, Mike R. Bennett, Jim S. Bluntzer, Harvey G. Brewer, Karen Kneip Brewer, Kirsten Brueggerhoff, Kirby Brumby, Bev Bruns, Pat Bulla, David Arthur Byrd, Annalysa Camacho, Chad Cardosa, Brad Carson, Debra Chapman, Gregory C. Chapman, Pamela Christopher, William Christopher, H. C. Clark, Ginger Cook, Alicia Cowley, Gary Cowley, Carolyn Croom, Art Dohman, Stuart Dornburg, Jed East, Kenneth Edwards, Kevin Fagg, Darren Franke, Renee Franke, Garland R Gloor, Susybelle L. Gosslee, Patricia Lux Graham, Terrell Lee Graham, Eric D Grahmann, Fred Grieder, Gerald A. Griffith, Karen D. Hadden, Beki Halpin, Beverly Havlik, Donna L. Hoffman, Vivian Howard, Heike Jenkins, Wayne Jacobs, Isaac Kimbrough, Kenneth Klanika, Wilfred Korth, Angela Lantz, Ted Long, Anna Lund, Amanda Jo Mamerow, Jesse Manciaz, Delbert McCullough, David Michaelsen, Malcolm Migura, Rosalie Migura, Amy Moreland, Gene Moreland, Elaine Noland, Jesse Ortega, Misty Ortega, Joanna Packard, Rod Packard, Linda Pinsker, Debra Sue Primrose, Leslie Purdue, Greyson Radtke, Karen Migura Radtke, Lance Radtke, Margie Reed, Reagan Sahadi, Travis Schley, Brianna Schrade, Kalyn Schulte, Cody Shearman, Tina Shearman, Michelle Shelton, Jeff Sibley, Barbara Smith, Raymond Starr, Heather Sumpter, Rachel Tyrna, Janie Vondohler, Carol C. Warren, David P. Warren, Cynthia Warzecha, N. Michael Warzecha, Gary Paul Weise, Colt Williams, Katy Williams, Robert Wood, David A. Wright, Bill Yoast, David Young, Dennis Zengerle, Goliad County Groundwater Conservation District (GCGCD), Billy Dornburg on behalf of the congregation of St. Peter's Lutheran Church of Ander, Lon Burnam representing Sierra Club, and Marisa Perales on behalf of Carrizo/Comecrudo Nation of Texas, Inc.

State Representative Geanie Morrison requested a public meeting. A public meeting was held on August 5, 2024, in Goliad, Texas.

## II. Background

### *A. Facility Description*

The facility, referred to herein as the Goliad Project, is located at 14869 North United States Highway 183, Yorktown, Goliad County, Texas 78164. The facility where the proposed activity would take place is located approximately 13 miles north of the city of Goliad, about 0.9 miles east of the intersection of State Highway 183 and Farm-to-Market Road 1961 in Goliad County, Texas. The area within the proposed permit boundary is approximately 994.9 contiguous acres, including a 100-foot buffer zone.

### *B. Application Description*

UEC has applied to the TCEQ for renewal and amendment of Class III underground injection control area permit No. UR03075 to authorize an *in situ* uranium mining operation. TCEQ originally issued permit No. UR03075 to UEC on April 29, 2011. The Commission approved the issuance of permit No. UR03075 after considering an administrative law judge's (ALJ) proposal for decision, evidence, and arguments conducted in a contested case hearing on the application for the Class III injection well permit, UEC's application for Production Area Authorization No. 1 (UR03075PAA1), and UEC's application to designate an exempted aquifer. TCEQ Docket Nos. 2008-1888-UIC and 2009-1319-UIC. The Commission's order with Findings of Fact and Conclusions of Law was issued on Mach 7, 2011. The permit authorizes UEC to operate Class III injection and production wells for recovery of uranium from a certain portion of the Goliad Formation within the permit area. After UEC's submission of an application for a minor amendment, the permit was amended on September 17, 2017, to add the permit range table of pre-mining water quality values in accordance with Texas Water Code § 27.0513(a), to reduce the permit area from 1139.4 acres to 994.9 acres, and to incorporate a reference to the United States Environmental Protection Agency's final approval of the aquifer exemption. UEC has not yet operated injection wells for the recovery of uranium at the Goliad Project.

UEC proposes to mine uranium deposits in the sands of the Goliad Formation using the *in situ* leach recovery method. *In situ* mining is accomplished by use of Class III underground injection control wells operating for both the injection and production of fluids. Class III wells inject fluid (lixiviant) from the surface into underground deposits of uranium ore. The lixiviant oxidizes the uranium and makes it mobile. Class III wells functioning in a production mode lift the solution bearing the uranium to the surface where resin beads remove the uranium from the solution. Reverse osmosis treatment then reconditions the water for reuse as lixiviant for continued mining. Reverse osmosis treatment will also be used to restore water in the mine area after the mining operation ends.

This Response to Comments only addresses relevant and material comments submitted on the application for renewal and amendment of the Class III injection well permit UR03075. The issued Production Area Authorization UR03075PAA1 and the designation of the exempted aquifer are not subject to renewal applications. UEC applied for and obtained Class I injection well permits WDW423 and WDW424 for injection well disposal of wastewaters produced from the mining, operation, and restoration activities. The Commission approved the issuance of the renewal and amendment of the Class I injection well permits WDW423 and WDW424 in an order dated September 4, 2024, on TCEQ Docket No. 2022-1553-WDW. UEC has been licensed

to possess uranium and radioactive by-product under radioactive material license at the Goliad Project under TCEQ license R06064. Any of the additional authorizations UEC may require other than the Class III injection well permit UR03075 are not addressed in this response.

### *C. Procedural Background*

The TCEQ received this application on December 22, 2020, and declared it administratively complete on April 12, 2021. The Notice of Receipt of Application and Intent to Obtain a Class III Injection Well Area Permit Renewal was published in English on April 29, 2021, in the *Goliad Advance-Guard*.

The TCEQ held a public meeting on the application on August 5, 2024, at 7:00 pm at Goliad Memorial Auditorium, 925 S. US HWY 183, Goliad, Texas 77963. Notice of the public meeting was issued on June 27, 2024, and published in English on August 1, 2024, in the *Goliad Advance-Guard*.

On August 12, 2024, UEC revised its application to request amendment of the permit range table by including water quality data from all baseline and monitor wells completed in the production zones within the mine area. UEC also requested that total dissolved solids (TDS) be removed from the permit as an excursion control parameter and replaced with alkalinity, while also listing sulfate and uranium as additional control parameters to be used as needed. The Executive Director completed the technical review of the application on October 17, 2024, and prepared a draft permit. The Combined Revised Notice of Application and Intent to Obtain Permit and Notice of Application and Preliminary Decision for Class III Injection Well Area Permit Renewal and Amendment was issued on October 17, 2024, and published in English on November 14, 2024, in the *Goliad Advance-Guard.* The public comment period ended on December 16, 2024.

The Application was declared administratively complete on or after September 1, 2015; therefore, the Application is subject to the procedural requirements adopted pursuant to House Bill 801, 76th Legislature (1999) and Senate Bill 709, 84th Legislature (2015), both implemented by the Commission in its rules in 30 TAC Chapters 39, 50, and 55.

## III. Access to Rules, Laws, and Information

- The Texas Secretary of State webpage is sos.state.tx.us.
- TCEQ rules in Title 30 of the Texas Administrative Code are available at sos.state.tx.us/tac/ by selecting “View the current Texas Administrative Code” on the right, and then selecting “Title 30 Environmental Quality.”
- Texas statutes are available at statutes.capitol.texas.gov.
- Federal rules in Title 40 of the Code of Federal Regulations are available at the EPA’s public webpage at epa.gov/laws-regulations/regulations.
- Federal environmental laws are available at the EPA’s public webpage at epa.gov/laws- regulations/laws-and-executive-orders.
- Information about this application and the underground injection control permitting process is available from the TCEQ Public Education Program at 1-800-687-4040.

- General information about TCEQ can be found at our website at www.tceq.texas.gov.
- If you would like to receive a hard copy of this RTC, please contact the Office of the Chief Clerk at 512-239-3300.

The permit application is available for viewing and copying at Goliad Public Library, 320 South Commercial, Goliad, Texas 77963. The following link to an electronic map of the site or facility's general location is provided as a public courtesy and is not part of the application or notice (for exact location, refer to application): https://tceq.maps.arcgis.com/apps/webappviewer/index.html?id=db5bac44afbc468bbddd360f8168250f&marker=-97.356944%2C28.865555&level=12.

Certain Commission records for this application and draft permit are available for viewing and copying in the Office of the Chief Clerk (OCC) at the TCEQ main office in Austin at 12100 Park 35 Circle, Building F, 1st Floor. Some documents located in OCC may also be viewed in the Commissioner's Integrated Database at: www14.tceq.texas.gov/epic/eCID/.

## IV. Comments and Responses

*Opposition*

**Comment No. 1:**

The following persons expressed their opposition to issuance of the renewed and amended permit: Wilfred Korth, Terrell Lee Graham, Gregory C. Chapman, Kalyn Schulte, Colt Williams, David P. Warren, Carol C. Warren, Jeff Sibley, Jesse Manciaz, Ted Long, Stuart Dornburg, Angela Lantz, Raymond Starr, Bill Yoast, Leslie Purdue, Beverly Havlik, Donna L. Hoffman, Karen Migura Radtke, Fred Grieder, Rosalie Migura, Malcolm Migura, Gary Paul Weise, Callie C. Albrecht, Gene Moreland, Amy Moreland, Margie Reed, Elaine Noland, Brad Carson, Wayne Jacobs, Delbert McCullough, Greyson Radtke, Chad Cardosa, Lance Radtke, Isaac Kimbrough, Kirsten Brueggerhoff, Dave Barnet, Mike R. Bennett, Kirby Brumby, Kevin Fagg, Kenneth Edwards, David Young, Billy Dornburg on behalf of the congregation of St. Peter's Lutheran Church of Ander, Anna Lund, Tate Bammert, Reagan Sahadi, Barbara Smith, Art Dohman, Eric D. Grahmann, Catherine Alstrom, Lon Burnam representing Sierra Club, and Carrizo/Comecrudo Nation of Texas, Inc.

**Response No. 1:**

The Executive Director acknowledges the comments made in opposition to the application for renewal and amendment of Class III injection well permit UR03075.

*Geology and Hydrology*

**Comment No 2:**

The following commenters expressed concerns about the adequacy of the application in characterizing geology and hydrology, direction and rate of groundwater flow, the identification of faults, and assessing seismicity: GCGCD, Wilfred Korth, Dennis Zengerle, Terrell Lee Graham, Patricia Lux Graham, Garland R. Gloor, Michelle Shelton, Ginger Cook, Colt Williams, Jeff Sibley, Fred Grieder, Dave Barnet, Amanda Jo

Mamerow, H. C. Clark, Tate Bammert, Reagan Sahadi, Barbara Smith, Art Dohman, Eric D. Grahmann, Kenneth Klanika, and Carrizo/Comecrudo Nation of Texas, Inc.

**Response No 2:**

The Executive Director reviewed the application and prepared the draft permit in consideration of the applicable rules under 30 TAC Chapter 331 and Section 331.122. The technical report in the application included: a map indicating the permit area and area of review with all of the features (Attachment D – Figure 1.3); tabulation of wells in the area of review penetrating the injection zone (Tables 5.E-1 and VIII.A.1) ; maps and cross-sections indicating the vertical and lateral limits of the aquifers in the area of review (Figures 5.15 – 5.25); maps and cross-sections detailing the geologic structure of the local area (Figures 5.26 – 5.33); maps and cross-sections illustrating the regional geologic setting (Figures 5.3 – 5.5); proposed operating data (Section VI.D); rates and volumes of fluid to be injected (Section VI.D.1.a); injection pressure (Section VI.D.9); source of injection fluids (Section VI.D.9); formation testing program (Section VI.D.1.b); operation and injection procedures (Section VI.D.1.b); engineering drawings, plans for monitoring requirements (Figures 6.1a, 6.1B, 6.2 and Appendix C); expected changes in pressure, native fluid displacement, and direction of movement of injection fluid (Section VI.D.1.b); contingency plans for shut-ins or well failures (Section VI.D.10); corrective action plan; and a permit range table (Section XII); proposed financial assurance for plugging and abandoning Class III wells (Section III – Attachment F); and the closure plan (Section VI.E). The Executive Director determined that the application adequately characterized the geology and hydrology of the permit area and area of review and adequately assessed faults and seismicity.

After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following findings of fact (FOF):

(FOF 94) The application adequately characterizes and describes the geology and hydrology in the Mine Permit Area, including fault lines, under the applicable rules.

(FOF 95) The [Class III injection well area permit] application contains: a narrative description of the hydrology in the proposed Mine Permit Area; a narrative description of the geology in the proposed Mine Permit Area; permit-area cross-sections (and a cross section index map); structure and isopach maps for each of the four sands (Sands A-D); and potentiometric surface maps—both within each sand and for the region—that show the direction of groundwater flow.

(FOF 97) Two faults exist within the proposed Mine Permit Area; the Northwest Fault and the Southeast Fault

(FOF 98) The Northwest Fault is the larger of the two and runs along the northwest portion of the proposed Mine Permit Area, near the perimeter of the proposed production areas A and C and very near the perimeter of proposed production area D.

(FOF 99) Further characterization of the Northwest Fault is not required for the Mine Permit. Where applicable, future PAA applications will include the results of hydrologic testing and an interpretation of those results with respect to any faults to determine the hydrologic connection both across the fault and vertically along the

fault.

(FOF 100) The Southeast Fault transects only a small part of the southeast corner of the proposed Mine Permit Area and touches none of the proposed production areas.

(FOF 101) The [Class III injection well area permit] application accurately and adequately describes all faults in the proposed Mine Permit Area.

(FOF 102) The [Class III injection well area permit] application meets all applicable criteria of 30 TAC § 331.122, related to required consideration by the Commission prior to issuing a Class III Injection Well Area Permit.

(FOF 108) For the most part, the hydraulic gradient with the Mine Permit Area is relatively flat, resulting in a slow rate of groundwater flow.

(FOF 109) Regionally, the direction of groundwater flow is typical of coastal plain aquifers, that is, coastward. Thus, groundwater flow in the Mine Permit Area is generally to the southeast.

After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following conclusions of law (COL):

(COL 264) Based on the findings of fact set forth in and/or incorporated in Section V.G. above [in the Commission's order], the [Class III injection well area permit] application adequately characterizes and describes the geology and hydrology in the proposed permit area, including fault lines, under the applicable rules.

(COL 265) Section 331.122(2)(A) requires a map showing "faults, if known or suspected. Only information of public record is required to be on this map…."

(COL 266) Based on the findings of fact set forth in and/or incorporated in Section V.H. above [in the Commission's order], the geologic and hydraulic properties of the proposed permit area indicate that the Applicant will be able to comply with rule requirements.

**Comment No. 3:**

GCGCD, Wilfred Korth, Terrell Lee Graham, Patricia Lux Graham, Garland R. Gloor, and Amanda Jo Mamerow expressed concerns about differing application representations in UEC's application for Class I and Class III injection well permits.

**Response No. 3:**

Class I injection wells are generally deep wells used for injection of large volumes for disposal of waste in formations situated below underground sources of drinking water. Class III injection wells inject fluids for the purpose of extracting minerals, such as uranium. UEC's applications for Class I and Class III injection well permits require different information as they focus on different injection zones, have different design and construction requirements, and have different operational requirements. Under 30 TAC § 305.49, applications for Class I injection well permits must address the information required in 30 TAC § 331.121 and applications for Class III injection well permits must address the information required in 30 TAC § 331.122.

Comments on the Class I injection well permit application are not relevant or

material to the Commission's or the Executive Director's consideration of the Class III injection well permit application.

**Comment No. 4:**

GCGCD, Wilfred Korth, and Amanda Jo Mamerow expressed concerns about conducting mining activities in an unconfined aquifer.

**Response No. 4:**

TCEQ rules do not contain a prohibition of *in situ* mining in an unconfined aquifer. UEC's application indicates that groundwater in the designated Sand A is unconfined, and the groundwater in Sands B, C, and D is under confined conditions. After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following findings of fact:

(FOF 103) The geologic and hydraulic properties of the proposed Mine Permit Area indicate that UEC will be able to comply with rule requirements.

(FOF 104) Sands B, C, and D in the Mine Permit Area are confined aquifers. They are saturated with groundwater.

(FOF 105) Sand A in the Mine Permit Area is hydraulically unconfined but still isolated from the deeper sands by a low permeability confining layer throughout the Mine Permit Area.

After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following conclusion of law:

(COL 293) There is no statutory or regulatory prohibition against conducting *in situ* uranium mining in an unconfined aquifer.

**Comment No. 5:**

GCGCD, Wilfred Korth, Amanda Jo Mamerow, Art Dohman, Robert Wood, and Eric D. Grahmann expressed concerns about reliance on groundwater quality data from the original application or assert that water quality has changed since the original application was submitted.

**Response No. 5:**

Pre-mining baseline groundwater quality data was collected and provided to TCEQ as part of the original mine area permit application. No mining activities have been conducted at the site. Although multiple monitor wells and baseline wells have been installed within the mine permit area, these are considered "passive" devices and will only be used for groundwater assessment. No injection has been, or will be, allowed into or through these devices. Additionally, no chemicals or other elements, such as oxygen or carbon dioxide, have actively been injected into or through these wells that could potentially result in changes to chemistry of the native groundwater (i.e., pH or dissolved oxygen changes that could potentially dissolve or mobilize certain elements).

According to hydrogeologic information provided in the permit renewal

application, the groundwater flow rate for the Goliad Sands in the mine area is approximately 6.7 feet/year toward the southeast. This would result in approximately 94 feet of displacement, or movement, during the 14 years since original permit issuance. Based upon information provided in the original and renewal permit applications, there do not appear to be any sources of potential groundwater contaminant introduction within or immediately adjacent to the mine area, and it is unlikely that groundwater movement of 94 feet would significantly change the water quality since the original application was submitted.

**Comment No. 6:**

Wilfred Korth, Terrell Lee Graham, Colt Williams, Tate Bammert, Reagan Sahadi, Barbara Smith, Art Dohman, Rod Packard, and Carrizo/Comecrudo Nation of Texas, Inc., expressed concerns that oil and gas wells in the area have not been adequately assessed.

**Response No. 6:**

The requirements for reviewing artificial penetrations in the area of review for Class I and Class III injection well permit applications differ. Class III injection wells have a ¼ mile area of review surrounding the permit area under 30 TAC § 331.42(a)(4). Because Class III injection involves lower pressure and volumes and the permittee is required to confine injected mining solutions within the production zone of a production area surrounded by production zone monitor wells, no off-site migration of injected fluids is expected. The Executive Director reviewed the application and description of artificial penetrations in the area of review and does not consider that any corrective action is necessary to address the condition of any particular oil and gas well in the area of review.

**Comment No. 7:**

Wilfred Korth, Terrell Lee Graham, David Michaelsen, Linda Pinsker, Colt Williams, Tate Bammert, Reagan Sahadi, Barbara Smith, Art Dohman, and Kenneth Klanika expressed concerns that hydraulic testing or pump testing has not been conducted to determine transmissivity of faults.

**Response No. 7:**

The Executive Director reviewed the application and prepared the draft permit in consideration of the applicable rules under 30 TAC Chapter 331. TCEQ rules do not specifically require hydraulic testing of faults. Nevertheless, the Commission's previous order issuing Class III injection well permit UR03075 addresses hydraulic testing. After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following finding of fact:

(FOF 99) Further characterization of the Northwest Fault is not required for the Mine Permit. Where applicable, future PAA applications will include the results of hydrologic testing and an interpretation of those results with respect to any faults to determine the hydrologic connection both across the fault and vertically along the fault.

After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for

parties to submit evidence on the matter, the Commission issued an order adjudicating the following conclusions of law:

(COL 267) Hydrologic testing is not required for a Class III Underground Injection Control permit, although an applicant must provide a description of the proposed hydrologic testing program.

(COL 268) Prior to conducting any mining operations near the Northwest Fault, UEC will have to apply for, and the Commission will have to issue one or more PAAs in addition to the PAA for PA-1.

(COL 269) The results of the hydrologic testing program must be submitted with an application for a PAA, which is needed to mine an ore body within an area permit.

UEC has only applied for only one Production Area Authorization (PAA), UR03075PAA1. If UEC submits an application for a PAA for a production area in closer proximity to the Northwest Fault, further testing and characterization of the fault will be required.

**Comment No. 8:**

GCGCD, Wilfred Korth, and Amanda Jo Mamerow expressed concerns that the application mis-labeled wells RBLB-2 and RBLD-1.

**Response No. 8:**

The Executive Director is uncertain which figures, maps, diagrams, tables and/or pages of the application have mis-labeled wells. Without additional information, the Executive Director is unable to respond to the comment.

**Comment No. 9:**

Richard J. Abitz and Carrizo/Comecrudo Nation of Texas, Inc., expressed concerns that the application did not adequately establish baseline.

**Response No. 9:**

The Executive Director reviewed the application and prepared the draft permit in consideration of the applicable rules under 30 TAC Chapter 331 and determined that the applicant adequately addresses baseline requirements. Baseline is not required for the permit area. Under 30 TAC § 331.82(e)(7), the permit includes a range table of pre-mining low and high values of groundwater parameters for wells completed in the production zone. This was added by an amendment to the permit on September 17, 2017. Establishing baseline is a requirement for each PAA. UEC has been issued Production Area Authorization UR03075PAA1 for Production Area 1 and the authorization is not subject to a renewal requirement. After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following findings of fact:

(FOF 79) Local water quality was established by sampling all existing wells within the Mine Permit Area and by sampling nearly all the existing wells within 1 kilometer of the permit area boundary. In addition, UEC completed and sampled 20 baseline wells.

(FOF 80) The locations of the 20 baseline wells largely correspond to the area where UEC anticipates mining (i.e., areas of high uranium mineralization).

(FOF 81) The [Class III injection well permit] application contains the water quality results from the 20 baseline wells and the 47 area wells located inside the permit area boundary or with 1 kilometer of the permit area boundary.

(FOF 82) Groundwater quality data from the 20 baseline wells is remarkably similar to the data from the 47 wells for all constituents with the exception of uranium and radium-226, which are significantly higher in the baseline wells.

After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following conclusions of law:

(COL 254) Based on the findings of fact set forth in Section V.C. above [in the Commission's order], the [Class III injection well permit] application adequately and accurately describe the baseline conditions of the groundwater in the proposed Mine Permit Area under applicable requirements of 30 TAC Chapter 331.

(COL 255) There are no TCEQ rule requirements for establishing baseline conditions as part of the Class III application, but baseline quality is defined as "[t]he parameters and their concentrations that describe the local groundwater quality of an aquifer prior to the beginning of injection operations."

*Operations and monitoring*

**Comment No. 10:**

GCGCD, Wilfred Korth, Heike Jenkins, Dennis Zengerle, Michelle Shelton, Richard J. Abitz, Beki Halpin, Carolyn Croom, Susybell L. Gosslee, Colt William, Katy Williams, Jeff Sibley, Amanda Jo Mamerow, and Carrizo/Comecrudo Nation of Texas expressed concerns that the application does not provide adequate scope and frequency of groundwater monitoring.

**Response No. 10:**

The Executive Director reviewed the application and prepared the draft permit in consideration of the applicable rules under 30 TAC Chapter 331 and determined that the applicant adequately addresses monitoring requirements. The permittee must meet the monitoring requirements of 30 TAC § 331.84 and comply with the specific production area monitoring requirements of 30 TAC §§ 331.103 and 331.105. These include requirements for monitoring the confinement of mining solution to the production area. The layout and designation of monitor wells for Production Area 1 are established in UR03075PAA1 and are not subject to this renewal application. Once mining begins, production zone monitor wells must be sampled twice each calendar month, with sampling events taken between 10-20 days apart.

**Comment No. 11:**

Wilfred Korth, Terrell Lee Graham, Gregory C. Chapman, David Michaelsen, Katy Williams, Tate Bammert, Reagan Sahadi, Barbara Smith and Art Dohman expressed concerns that the application and proposed amendment to remove TDS as control parameter is not adequate.

**Response No. 11:**

Although total dissolved solids (TDS) has been removed as a control parameter

in the draft permit, conductivity remains as a control parameter. The Executive Director determined that conductivity is an appropriate control parameter to detect excursions. Conductivity is directly proportional to TDS content in a specific water sample. TDS can be estimated using conductivity measurements by applying a conversion factor. Both TDS and conductivity are identified as control parameters in the current permit for use in excursion monitoring. Either one or the other is sufficient as a control parameter for determination of dissolved solids content in groundwater samples. Keeping both control parameters in the permit is unnecessary and redundant. Additionally, mining facility and compliance inspectors from TCEQ's Critical infrastructure Division have indicated that measuring conductivity is a more efficient and practical method for determining TDS in a field environment.

**Comment No. 12:**

Wilfred Korth, Terrell Lee Graham, Katy Williams, Tate Bammert, Reagan Sahadi, Barbara Smith and Art Dohman expressed concerns that the application and proposed permit inappropriately rely on self-reported information.

**Response No. 12:**

The Executive Director reviewed the application and prepared the draft permit in consideration of the applicable rules under 30 TAC Chapter 331 and determined that self-reported information is appropriate. Self-reporting is an aspect of all TCEQ programs. It is not practical or financially feasible for TCEQ to physically collect samples and analyze them for every regulated facility with the frequency required for many of the programs under the agency's jurisdiction. However, there are several safeguards in place to help ensure the validity of information that is self-reported. First, all analytical data submitted to the TCEQ by a regulated entity must be certified as true and correct; falsification of any data constitutes fraud and may subject the permittee to enforcement or criminal prosecution. Second, analytical data submitted to the TCEQ must be from laboratories that meet the accreditation requirements of 30 TAC Chapter 25. Third, all data submitted is reviewed by TCEQ and any apparent inconsistencies or violations would be investigated further. Fourth, TCEQ may periodically collect its own samples and compare to self-reported information. And finally, all reported information is a public record available to anyone under the requirements of the Texas Public Information Act.

These comments are not relevant or material to the Commission's or the Executive Director's consideration of the application.

*Post-mining requirements*

**Comment No. 13:**

Rachel Tyrna, Karen D. Hadden, Beki Halpin, Jeff Sibley, Cara Alstrom, Janie Vondohler, and Fred Grieder expressed concerns that proposed groundwater restoration is not adequate.

**Response No. 13:**

The Executive Director reviewed the application and prepared the draft permit in consideration of the applicable rules under 30 TAC Chapter 331 and determined that the proposed groundwater restoration is adequate. Under 30 TAC § 331.107(a), groundwater in the production zone within the production area must be restored when

mining is complete. UEC proposes to use reverse osmosis treatment as the main restoration technique. Reverse osmosis treatment circulates cleaned water through the production zone, removes contaminants through reverse osmosis filtration, dispose the contaminants in the deep waste disposal well, and then re-circulates the filtered water through the production zone.

After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following findings of fact:

(FOF 131) UEC's proposal for restoration of groundwater to baseline levels as contained in the [Class III injection well permit] application is reasonable and adequate.

(FOF 132) The [Class III injection well permit] application contains a description of UEC's proposed restoration procedures, plans for a restoration demonstration and report to TCEQ regarding the demonstration.

(FOF 133) UEC's restoration proposal incorporates improvements as compared to past restoration efforts in Texas. These include: 1) the use of reverse osmosis on a commercial scale during mining to provide a jump start on restoration; 2) the initiation of restoration as soon as mining ends in a production area; and 3) the continued use of the ion exchange (IX) columns to remove residual uranium during restoration instead of only during mining.

(FOF 134) In addition, UEC's restoration efforts will benefit from technological advancements. The membranes that are used in the reverse osmosis process are now specifically designed to function with a longer life span and higher performance in the particular water quality in which they will be used.

(FOF 136) Within 18 months after initiation of mining in the first production area, UEC will conduct a restoration demonstration. If the results of that demonstration indicated that the assumed number of pore volumes required for aquifer restoration is inadequate, the ED will require the amount of financial assurance for aquifer restoration to be adjusted accordingly.

After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following conclusion of law:

(COL 285) Based on the findings of fact set forth in Section V.L. above [in the Commission's order], UEC's proposal for restoration of groundwater to baseline levels as contained in the permit application is reasonable and adequate.

**Comment No. 14:**

Cara Alstrom expressed concerns that the application and proposed permitted activities are not adequate for decommissioning the surface and facilities after mining.

**Response No. 14:**

Decommissioning of the surface is not addressed under TCEQ's underground injection control program rules in 30 TAC Chapter 331 or in the application for renewal and amendment of Class III injection well area permit UR03075.

Decommissioning is a requirement under the Radioactive Materials License R06064 issued to UEC. Under this license, UEC must implement a decommissioning plan in accordance with 30 TAC § 336.1115 to close the site, structures, and outdoor areas so that the property may be released for unrestricted use by the property owner.

This comment is not relevant or material to the Commission's or the Executive Director's consideration of the application.

*Financial Assurance*

**Comment No. 15:**

Carrizo/Comecrudo Nation of Texas, Inc. expressed concerns that the proposed financial assurance is inadequate.

**Response No. 15:**

The Executive Director reviewed the application and prepared the draft permit in consideration of the applicable rules under 30 TAC Chapter 331 and determined that the financial assurance is adequate. Under permit provision VII. A. of the draft permit, the permittee must secure and maintain in full force and effect at all times an acceptable financial assurance mechanism, following 30 TAC §§331.109(b) and 331.142-331.144 to provide for plugging and abandonment of the permitted Class III wells, baseline wells, and monitoring wells. UEC has provided a cost estimate of $468,464 for plugging and abandonment of these wells. The draft permit does not authorize injection of fluids until the financial assurance mechanism in the amount of the current cost estimate is established and effective. Additional financial assurance for plugging and abandonment will be required as additional wells are installed. While cost estimates for groundwater restoration are required for each production area, the financial assurance for groundwater restoration is included as part of the financial assurance required for closure under the radioactive materials license.

*Environmental and Natural Resources Protection*

**Comment No. 16:**

The following commenters expressed their concerns about UEC's operation having a negative impact on groundwater quality, including contamination of groundwater from mining activities: Heather Sumpter, GCGCD, Wilfred Korth, Heike Jenkins, Darren Franke, Renee Franke, Dennis Zengerle, Aldon Bade, David Arthur Byrd, Terrell Lee Graham, Patricia Lux Graham, Alicia Cowley, Garland R Gloor, Gary Cowley, Michelle Shelton, Debra Sue Primrose, Richard J. Abitz, Harvey G. Brewer, Karen Kneip Brewer, Misty Ortega, Jesse Ortega, William Christopher, N. Michael Warzecha, Cynthia Warzecha, Pamela Christopher, David A. Wright, Tina Shearman, Joanna Packard, Cody Shearman, Claire Barnhart, Gregory C. Chapman, David Michaelsen, Linda Pinsker, Debra Chapman, Ginger Cook, Rachel Tyrna, Karen D. Hadden, Beki Halpin, Carolyn Croom, Pat Bulla, Travis Schley, Brianna Schrade, Susybelle L. Gosslee, Colt Williams, Katy Williams, Jeff Sibley, Cara Alstrom, Jesse Manciaz, Janie Vondohler, Angela Lantz, Raymond Starr, Beverly Havlik, Donna L. Hoffman, Karen Migura Radtke, Fred Grieder, Rosalie Migura, Malcolm Migura, Gary Paul Weise, Callie C. Albrecht, Greyson Radtke, Chad Cardosa, Lance Radtke, Kirsten Brueggerhoff, Dave Barnet, Gerald A. Griffith, Mike R. Bennett, Kirby Brumby, Kevin Fagg, Kenneth Edwards, David Young, Jim S. Bluntzer, Billy Dornburg on behalf of congregation of St. Peter's Lutheran Church of

Ander, Anna Lund, Amanda Jo Mamerow, Tate Bammert, Reagan Sahadi, Barbara Smith, Art Dohman, Rod Packard, Lon Burnam representing Sierra Club, Kenneth Klanika, Robert Wood, Eric D. Grahmann, and Carrizo/Comecrudo Nation of Texas, Inc.

**Response No. 16:**

The Executive Director reviewed the application and prepared the draft permit in consideration of the applicable rules under 30 TAC Chapter 331 and determined that groundwater will be adequately protected from mining activities and permitted injection activities. The focus of the TCEQ Underground Injection Control program and the rules of 30 TAC Chapter 331 is to protect underground sources of drinking water and fresh water from pollution. Mining activity will occur in an exempted aquifer. The *in situ* mining process involves injecting a mining fluid (lixiviant) into a mineralized zone, circulating this fluid through the zone to dissolve uranium minerals from the aquifer material, and then pumping the mining fluid to the surface where it can be processed to recover the uranium. In addition to uranium other constituents may also be dissolved from the aquifer material into the mining fluid. This results in an increase in the concentration of certain constituents in the groundwater within the mineralized zone and the area being mined. To provide protection of groundwater outside of the zone and area being mined using *in situ* techniques, the permittee must confine the mining solutions to the production zone within the area of designated production zone monitor wells under 30 TAC § 331.102. During mining operations, the permittee will be required to maintain a cone of depression in the production zone to confine mining solutions within the production area. To ensure protection of the areas outside of the mining zone, the permittee must:

- Identify existing wells that could serve as a conduit for mining solutions to move outside of the production area (30 TAC § 331.42);
- Construct wells in accordance with construction requirements (30 TAC § 331.82);
- Maintain mechanical integrity of all Class III wells (30 TAC § 331.4);
- Implement corrective action to prevent or correct pollution of an underground source of drinking water (30 TAC § 331.44);
- Obtain Executive Director approval of construction and completion of wells (30 TAC § 331.45)
- Operate the wells in accordance with operation requirements (30 TAC § 331.83);
- Monitor operations in accordance with monitoring requirements (30 TAC § 331.84);
- Submit reports in accordance with the reporting requirements (30 TAC § 331.85);
- Restore groundwater in the production zone within the production areas when mining is complete (30 TAC § 331.107); and
- Close wells in accordance with a plugging and abandonment plan in a manner which will not allow the movement of fluids through the well, out of the injection zone, or to the land surface. (30 TAC §§ 331.46 and 331.86)

After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following findings of fact:

(FOF 91) Data from the [Class III injection well permit] application shows that mining fluids will not migrate vertically or horizontally and contaminate an USDW (underground source of drinking water.)….

(FOF 92) UEC's proposal for restoration of groundwater to baseline levels as contained in the [Class III injection well permit] application is reasonable and adequate….

(FOF 93) The [Class III injection well permit] application is sufficiently protective of groundwater quality.

(FOF 110) Mining fluids will not migrate vertically or horizontally and contaminate an USDW (underground source of drinking water)….

(FOF 141) Groundwater is adequately protected from pollution….

(FOF 161) Maintaining a cone of depression during mining operations prevents the horizontal migration of mining fluids.

(FOF 172) Data in the [Class III injection well permit] application shows that USDWs within Goliad County will not be adversely impacted by UEC's proposed *in situ* uranium operations.

(FOF 235) Based on the above findings of fact [in the Commission's order], both groundwater and surface fresh water can be adequately protected from pollution with proper safeguards. The draft [Class III injection well] Permit and draft PAA-1 [UR03075PAA1] impose terms and conditions reasonably necessary to protect fresh water from pollution.

After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following conclusions of law:

(COL 263) Based on the findings of fact set forth in and/or incorporate into Section V.F. above [of the Commission's order], the [Class III injection well permit] application is sufficiently protective of groundwater quality.

(COL 294) Based on the findings of fact set forth in and/or incorporated into Section V.R. above [of the Commission's order], mining fluids will not migrate vertically or horizontally and contaminate an USDW.

(COL 298) Based of the findings of fact set for in and/or incorporated into Section V.T. above [of the Commission's order] no USDWs within Goliad County will be adversely impacted by UEC's proposed *in situ* uranium operations.

(COL 340) Based on the findings of fact set forth herein [in the Commission's order], both groundwater and surface fresh water can be adequately protected from pollution with proper safeguards…. The draft [Class III injection well] Permit and draft PAA-1 [UR03075PAA1] impose terms and conditions reasonably necessary to protect fresh water from pollution.

**Comment No. 17:**

The following commenters expressed concerns about the availability and use of groundwater supplies from the proposed mining activities: Heather Sumpter, GCGCD, Wilfred Korth, Dennis Zengerle, Terrell Lee Graham, Michelle Shelton, Richard J. Abitz,

Harvey G. Brewer, Karen Kneip Brewer, Misty Ortega, Jesse Ortega, William Christopher, N. Michael Warzecha, Cynthia Warzecha, Pamela Christopher, David A. Wright, Tina Shearman, Joanna Packard, Cody Shearman, Claire Barnhart, Gregory C. Chapman, David Michaelsen, Linda Pinsker, Debra Chapman, Carolyn Croom, Colt Williams, Angela Lantz, Beverly Havlik, Karen Migura Radtke, Rosalie Migura, Lance Radtke, Mike R. Bennett, Kirby Brumby, Kevin Fagg, Kenneth Edwards, David Young, Jim S. Bluntzer, Billy Dornburg on behalf of congregation of St. Peter's Lutheran Church of Ander, Tate Bammert, Reagan Sahadi, Barbara Smith, and Art Dohman.

**Response No. 17:**

The applicable statutes and rules for the application and issuance of a Class III injection well area permit for *in situ* uranium mining do not regulate the volume of fresh water used by a permittee to conduct mining operations. After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following findings of fact:

(FOF 69) UEC's projected water consumption is between 133 and 206 acre-feet per year.

(FOF 70) The [Goliad County Groundwater Conservation] District's Management Plan anticipated the need to plan for groundwater usage for uranium mining purposes. The Plan projects 800 acre-feet per year of groundwater usage for such purposes, which is almost four times the amount that UEC projects it will use on an annual basis.

(FOF 71) UEC's estimated water use over the life of the project and projected maximum monthly water use are also projected to fall within the limits of the District's current water usage rule.

(FOF 72) UEC's mining operation and restoration activities will not unreasonably reduce the amount of groundwater available for permitting by the District.

After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following conclusion of law:

(COL 248) The Class III injection well requirements that apply to *in situ* mining do not regulate the volume of fresh water used by a permittee.

These comments are not relevant or material to the Commission's or the Executive Director's consideration of the application.

**Comment No. 18:**

GCGCD, Wilfred Korth, Rachel Tyrna, Cara Alstrom, Amanda Jo Mamerow, and Eric D. Grahmann expressed concerns that the application and proposed permitted activities are not adequately protective of surface waters.

**Response No. 18:**

The Executive Director reviewed the application and prepared the draft permit in consideration of the applicable rules under 30 TAC Chapter 331 and determined that surface waters will be adequately protected from mining activities and permitted injection activities. The draft permit prohibits the discharge of fluids into or adjacent

to any water in the State (Sec. V. C. 5.) Requirements for containment of spilled fluids from mining activities are addressed in the radioactive materials license and are not part of this injection well permit. After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following findings of fact:

(FOF 118) Class III area permit applications address protection of surface water only in a general sense. The specific regulatory requirements for containment of surface fluids are included in a radioactive material license ("RML"). An *in situ* uranium mine operator is required to have an RML.

(FOF 119) UEC's [Class III injection well permit] application contains operational measures to comply with the Draft [Class III injection well] Permit's prohibition against discharge of fluids into surface waters.

(FOF 120) No impact to wetlands are anticipated as a result of UEC's proposed operations.

(FOF 121) The [Class III injection well permit] application describes design features related to the management of flooding and runoff. These features will prevent and/or minimize contact of mining fluids with the ground surface.

(FOF 122) With proper construction practices, mining activities will not impact the quality of runoff caused by flooding.

(FOF 123) Accidental spills at the plant, in the field, and at the Class I waste disposal well areas will be minimized by automated monitoring equipment, daily visual inspections and reporting, and by UEC's corrective action program.

(FOF 126) The [Class III injection well permit] application is sufficiently protective of surface water quality.

After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following conclusion of law:

(COL 279) Based on the findings of fact set forth in Section V.J. above [in the Commission's order] the [Class III injection well permit] application is sufficiently protective of surface water quality.

**Comment No. 19:**

GCGCD, Wilfred Korth, Aldon Bade, Debra Sue Primrose, Briana Schrade, Susybelle L. Gosslee, Colt Williams, Katy Williams, Jesse Manciaz, Donna L. Hoffman, expressed concerns that the application and proposed permitted activities are not adequately protective of livestock or wildlife.

**Response No. 19:**

The Executive Director reviewed the application and prepared the draft permit in consideration of the applicable rules under 30 TAC Chapter 331 and determined that livestock and wildlife will be adequately protected from mining activities and permitted injection activities. Impact to livestock and wildlife will be minimized by the protections to groundwater, surface water, soil and air contamination. After

considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following findings of fact:

(FOF 138) The proposed uranium mining activities will not negatively impact livestock and wildlife, including endangered species.

(FOF 139) If there is no contamination of the air, soil, surface water or groundwater outside the production area, then animals are not impacted. The [Class III injection well permit] application complies with rules designed to eliminate these possible pathways for contamination of animals.

After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following conclusions of law:

(COL 286) Based on the findings of fact set forth in and/or incorporated into Section V.M. above [of the Commission's order], the Applicant's proposed activities will not negatively impact livestock and wildlife, including endangered species.

(COL 287) Applicants for an RML must examine levels of radiological exposure to facility workers and members of the public via pathways such as air, soils, surface water, and food chain (crops, cattle, etc.) 30 TAC §§ 336.301-336.368.

**Comment No. 20:**

GCGCD, Wilfred Korth, Aldon Bade, Debra Sue Primrose, Gregory C. Chapman, Carolyn Croom, Pat Bulla, Jeff Sibley, Angela Lantz, Donna L. Hoffman, Callie C. Albrecht, Anna Lund, Amanda Jo Mamerow, Vivian Howard, and Eric D. Grahmann expressed concerns that the application and proposed permitted activities are not adequate to protect health and welfare.

**Response No. 20:**

The Executive Director reviewed the application and prepared the draft permit in consideration of the applicable rules under 30 TAC Chapter 331 and determined that health and welfare will be adequately protected from mining activities and permitted injection activities. Impact to health and welfare will be minimized by the protections to groundwater, surface water, soil and air contamination. After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following finding of fact:

(FOF 147) UEC's proposed activities will not adversely affect public health and welfare.

After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following conclusion of law:

(COL 291) Based on the findings of fact set forth in and/or incorporated into Section V.O. above [in the Commission's order], the Applicant's proposed activities will

not adversely affect public health and welfare.

**Comment No. 21:**

Pamela Christopher and Pat Bulla expressed concerns that the application and proposed permitted activities are not adequate to protect soil and land from contamination.

**Response No. 21:**

The Executive Director reviewed the application and prepared the draft permit in consideration of the applicable rules under 30 TAC Chapter 331 and determined that soil and land will be adequately protected from mining activities and permitted injection activities. Requirements for responding to spills and contamination of soils and land are not addressed in the application for the Class III injection well permit. Requirements for responding to spills and soil and surface contamination are addressed in the radioactive material license. After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following finding of fact:

(FOF 145) UEC has demonstrated its compliance with the TCEQ regulatory scheme governing *in situ* uranium mining. Fresh water and air are adequately and sufficiently protected from pollution, soil and vegetation are adequately and sufficiently protected from contamination, and UEC's proposed activities will not negatively impact livestock and wildlife, including endangered species.

(FOF 149) Fresh water and air are adequately and sufficiently protected from pollution; soil and vegetation are adequately protected from contamination; and UEC's proposed activities will not negatively impact livestock and wildlife, including endangered species….

*Air Emissions*

**Comment No. 22:**

Pat Bulla, Greyson Radtke, Chad Cardosa, and Lance Radtke expressed concerns that the application and proposed permitted activities are not adequate to protect the air from pollution.

**Response No. 22:**

The Executive Director reviewed the application and prepared the draft permit in consideration of the applicable rules under 30 TAC Chapter 331 and determined that the air will be adequately protected from mining activities and permitted injection activities. The Injection Well Permit UR03075 does not authorize air emissions. The rules and statutes under which the subject application is reviewed do not include consideration of emissions of air pollutants or radiation. Worker and public exposure to radiation are addressed in the radioactive materials license. Emission of air pollutants are subject to the applicable requirements of the Texas Clean Air Act. After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following finding of fact:

(FOF 145) UEC has demonstrated its compliance with the TCEQ regulatory scheme governing *in situ* uranium mining. Fresh water and air are adequately and sufficiently protected from pollution, soil and vegetation are adequately and sufficiently protected from contamination, and UEC's proposed activities will not negatively impact livestock and wildlife, including endangered species.

After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following conclusion of law:

(COL 287) Applicants for an RML must examine levels of radiological exposure to facility workers and members of the public via pathways such as air, soils, surface water, and food chain (crops, cattle, etc.) 30 TAC §§ 336.301-336.368.

These comments are not relevant or material to the Commission's or the Executive Director's consideration of the application.

**Comment No. 23:**

Rachel Tyrna and Angela Lantz expressed concerns that the application and proposed permitted activities are not adequate to protect from radiation.

**Response No. 23:**

The rules and statutes under which the subject application is reviewed do not include consideration of emissions of air pollutants or radiation. Worker and public exposure to radiation are addressed in the radioactive materials license. Requirements for protection against radiation are addressed under the requirements of the Texas Radiation Control Act and the rules of the Commission in 30 TAC Chapter 336. These requirements include radiation protection standards and radiation monitoring. After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following finding of fact:

(FOF 142) UEC has adopted an Operational Monitoring Program, which is set forth in its [Radioactive Material License] Application. Pursuant to the RML, UEC will be required to conduct regular sampling of air, vegetation (including a grazing crop), soil, sediment, surface water and groundwater at pre-determined locations on a quarterly and annual basis throughout its operations. This monitoring will enable UEC to detect any potential breach of the controls required by the RML.

After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following conclusion of law:

(COL 287) Applicants for an RML must examine levels of radiological exposure to facility workers and members of the public via pathways such as air, soils, surface water, and food chain (crops, cattle, etc.) 30 TAC §§ 336.301-336.368.

*Public Concerns*

**Comment No. 24:**

GCGCD, Wilfred Korth, and Amanda Jo Mamerow expressed concerns that the application is not in the public interest.

**Response No. 24:**

The Executive Director reviewed the application and prepared the draft permit in consideration of the applicable rules under 30 TAC Chapter 331 and the Texas Injection Well Act in Texas Water Code Chapter 27 and determined that the use and installation of the proposed injection wells is in the public interest. After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following findings of fact:

(FOF 63) UEC's proposed installation and use of Class III injection wells for *in situ* mining of uranium are in the public interest in accordance with the criteria in Tex. Water Code § 27.051(a).

(FOF 64) Uranium, in contrast with oil and gas, is a very scarce natural resource that exists in commercially mineable concentrations in only a few areas of the United States, including Goliad County, Texas.

(FOF 65) It is in the public interest for this natural resource to be produced to meet the energy needs of the United States, for the mineral owners to realize the economic benefits of uranium production on their property.

(FOF 66) A review of the ED's RTC [filed October 31, 2008] regarding [the original Class III injection well permit] application shows that the ED considered a wide range of issues regarding public interest, including: economic impacts and quality of life, health and welfare, groundwater quality, geology/hydrology of the aquifer, monitoring, control of migration of mining fluids, aquifer restoration, financial assurance and compliance history.

(FOF 67) The ED undertook a balancing approach and considered potential and negative impacts in making a determination of public interest.

(FOF 68) The ED also reviewed the [Class III injection well permit] Application to ensure that UEC would meet all regulatory requirements.

(FOF 73) UEC's compliance history does not show that granting the [Class III injection well permit] application would be against the public interest….

(FOF 74) UEC's ability to meet applicable financial assurance requirements does not show that granting the [Class III injection well permit] application would be against the public interest….

(FOF 75) UEC's restoration proposal and past groundwater restoration efforts by other operators do not show that granting the [Class III injection well permit] application would be against the public interest….

After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following conclusion of law:

(COL 244) Based on the findings of fact set forth in and incorporated into Section V.A. above [in the Commission's order], UEC's [Class III injection well permit] application is in the public interest consistent with the policy of the state as defined by the Legislature under Tex. Water Code § 27.051(a).

(COL 245) TCEQ rules require TCEQ to implement Chapter 27 of the Texas Water Code in a manner consistent with the policy of this state to: maintain the quality of fresh water in the state to the extent consistent with the public health and welfare and the operation of existing industries, taking into consideration the economic development of the state, prevent underground injection that may pollute fresh water; and require the use of all reasonable methods to implement this policy.

(COL 246) The scope of the public interest consideration must be appropriately limited so that it does not conflict with other law.

**Comment No. 25:**

Wilfred Korth, Terrell Lee Graham, Colt Williams, Tate Bammert, Reagan Sahadi, Barbara Smith, Art Dohman, and Lon Burnam representing Sierra Club expressed concerns that the application has not demonstrated a public need.

**Response No. 25:**

An applicant is not specifically required to demonstrate a public need to obtain a Class III injection well permit. The Executive Director reviewed the application and prepared the draft permit in consideration of the applicable rules under 30 TAC Chapter 331 and the Texas Injection Well Act in Texas Water Code Chapter 27 and determined that there is not a practical, economic and feasible alternative to injection wells reasonably available. After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following findings of fact:

(FOF 176) There are no practical, economic and feasible alternatives to the use of injection wells for uranium in the Mine Permit Area.

(FOF 177) The available alternative methods for recovering uranium are underground and open pit (surface) mining, both of which involve de-watering the production zone sands, removing huge quantities of surface and subsurface material (i.e., the overburden), and creating substantial amounts of solid waste (i.e., tailings).

(FOF 178) The *in situ* mining process is more environmentally-protective means of uranium mining. As compared to the available alternatives, *in situ* uranium mining greatly minimizes the physical damage to the land and subsurface and results in much less solid waste.

After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following conclusions of law:

(COL 300) Based on the findings of fact set forth in Section V.U. above [in the Commission's order], there is no "practical economic, and feasible alternative to an injection well reasonably available" within the meaning of that term as set forth in Tex. Water Code § 27.051(d)(2).

(COL 301) Section 27.051(d) of the Texas Water Code provides that in determining if the use or installation of an injection well is in the public interest, the Commission must consider whether there is an alternative to "an injection well," not whether there is an alternative to the proposed injection well location.

**Comment No. 26:**

Michelle Shelton, Mike R. Bennett, Kirby Brumby, Kevin Fagg, Kenneth Edwards, David Young, and Billy Dornburg on behalf of congregation of St. Peter's Lutheran Church of Ander expressed concerns that the application and proposed permitted activities are not beneficial to the local economy.

**Response No. 26:**

The Executive Director reviewed the application and prepared the draft permit in consideration of the applicable rules under 30 TAC Chapter 331 and the Texas Injection Well Act in Texas Water Code Chapter 27 and determined that the use and installation of the proposed injection wells is in the public interest. However, an application for a Class III injection well permit is not specifically required to demonstrate a benefit to the local economy.

*Local roadways Ingress/Egress*

**Comment No. 27:**

Bev Bruns expressed concerns that the application and proposed permitted activities do not adequately consider transportation routes to the proposed permit area.

**Response No. 27:**

An application for a Class III injection well permit is not specifically required to demonstrate adequate transportation routes to the proposed permit area. The TCEQ does not regulate motor vehicle use or the routing of transportation for Class III injection activities. After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following findings of fact:

(FOF 127) Local roadways are sufficient to handle traffic to and from the proposed facility.

(FOF 128) UEC's site access plan provides that UEC construct a new road so that the main entrance to the proposed site will be directly onto US Highway 183.

(FOF 129) US Highway 183 is designed for higher volume traffic and larger vehicles than local county roadways.

(FOF 130) The local roadways will not be adversely affected by the traffic created by the proposed *in situ* uranium mining operation.

After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following conclusion of law:

(COL 284) Based on the findings of fact set forth in Section V.K. above [in the

Commission's order], local roadways are sufficient to handle traffic to and from the proposed facility.

These comments are not relevant or material to the Commission's or the Executive Director's consideration of the application.

*Bankruptcy Contingency*

**Comment No. 28:**

Dennis Zengerle and Dave Barnet expressed concerns that application and proposed permitted activities do not appropriately consider the applicant's bankruptcy. Dennis Zengerle, Pamela Christopher, Catherine Alstrom, Cara Alstrom and Angela Lantz expressed concerns that the application and proposed permitted activities inappropriately impose long term liability on the state and taxpayers.

**Response No. 28:**

Financial assurance provides a contingency mechanism to assure that a permittee's obligations are performed even if the permittee is unable to do so because of a bankruptcy or other situation. Financial assurance provides a source of funds secured by a third party to the benefit of TCEQ to perform activities like closure or corrective action, if necessary, so that state money is not used. Under 30 TAC § 305.125(22), which is incorporated by reference into the draft permit, the permittee is required to notify the Executive Director immediately following the filing of a petition for bankruptcy by the permittee or affiliate of the permittee. Financial assurance for plugging and abandonment (closure) of the Class III wells is required under the permit. In addition, financial assurance for decommissioning and groundwater restoration is required under UEC's radioactive materials license. In event of the permittee's bankruptcy and failure to close wells or complete decommissioning, funds from the financial assurance would be available to TCEQ.

*Uranium Mining Generally*

**Comment No. 29:**

Jeff Sibley, Gerald A. Griffith and Lon Burnam representing Sierra Club expressed concerns that the application and proposed permitted activities should not be approved because of the poor history of uranium mining.

**Response No. 29:**

The Executive Director's review of an application for a Class III injection well permit does not consider the perceived success or failures of other uranium mining activities. Injection well area permits are specifically established by the legislature in Tex. Water Code § 27.0513, and applications for such permits are considered under the applicable statutes and rules of the Commission. The Executive Director reviewed UEC's application for renewal and amendment of the Class III injection well permit and determined that the application meets all applicable requirements. Surface mining and underground mining are alternative methods historically used for recovering uranium. The *in situ* method using injection and production wells causes less physical destruction of the production zone aquifer and overlying land because it does not use heavy machinery and minimizes generation of waste because it does not require the removal of overburden.

These comments are not relevant or material to the Commission's or the Executive Director's consideration of the application.

*Property Rights*

**Comment No. 30:**

Gregory C. Chapman expressed concerns that granting the application and issuing the proposed permit would constitute a taking of private property.

**Response No. 30:**

The Executive Director disagrees that approving an application and issuing an injection well permit constitutes a taking of private property. UEC must possess all property rights to conduct its permitted activities. TCEQ does not acquire any property, confer any property right to UEC, or convey any property to UEC. Under 30 TAC § 305.122(c), an injection well permit does not convey any property rights of any sort, nor any exclusive privilege, and does not become a vested right in the permittee. Under 30 TAC § 305.122(d), a permit does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of state or local law or regulations. Under Tex. Water Code § 27.104, the fact that a person has a permit issued under the Injection Well Act does not relieve him from any civil liability. If a person believes that a well operator's actions are infringing upon a protected property right, the person should seek redress in a civil court.

*Application Review*

**Comment No. 31:**

GCGCD, Wilfred Korth, and Amanda Jo Mamerow expressed concerns that all application requirements have not been met.

**Response No. 31:**

The Executive Director reviewed the application and prepared the draft permit in consideration of the applicable rules under 30 TAC Chapter 331 and the Texas Injection Well Act in Texas Water Code Chapter 27 and determined that the application met all requirements.

**Comment No. 32:**

Dennis Zengerle and Jeff Sibley expressed concerns that the application requires review by an independent thirty party.

**Response No. 32:**

The Executive Director is assigned the responsibility by statute and rules of the Commission to review an application for a Class III injection well permit. The Executive Director reviews applications under applicable laws with independence and without prejudice. The application is subject to public notice with opportunity for the public to review the application and submit comments. There is no requirement or authority to obtain the review by some other entity.

These comments are not relevant or material to the Commission's or the Executive Director's consideration of the application.

**Comment No. 33:**

Wilfred Korth, Terrell Lee Graham, Katy Williams, Tate Bammert, Reagan Sahadi, Barbara Smith, and Art Dohman expressed concerns that the application was subject to too many notices of deficiency.

**Response No. 33:**

The notice of deficiency process is an integral part of the Executive Director's technical review of an application. The Executive Director issues notices of deficiency during technical review of an application to inform an applicant of additional information required before the Executive Director declares an application to be technically complete. The application was subject to one administrative notice of deficiency and four technical notices of deficiency. After submission of all application revisions, the Executive Director determined that the application is complete.

These comments are not relevant or material to the Commission's or the Executive Director's consideration of the application.

*Property Values*

**Comment No. 34:**

GCGCD, Wilfred Korth, Aldon Bade, David Arthur Byrd, Terrell Lee Graham, Patricia Lux Graham, Garland R. Gloor, Gregory C. Chapman, and Amanda Jo Mamerow expressed concerns that the application and proposed permitted activities are not adequate to protect the value and use of property.

**Response No. 34:**

The TCEQ's jurisdiction is established by the legislature and is limited to the issues and subjects forth in statute. Accordingly, the TCEQ does not have jurisdiction to consider the effects on property values when determining to approve or deny a permit application. In addition, the draft permit does not convey any property rights of any sort and does not authorize any injury to persons or property or an invasion of other property rights (Sec. VIII. E and F.) After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for parties to submit evidence on the matter, the Commission issued an order adjudicating the following findings of fact:

(FOF 143) UEC's proposed activities will not negatively impact the use of property.

(FOF 144) Existing land uses adjacent to the Mine Permit Area include low density, scattered rural residential, cattle ranching, cropland, and oil and gas production.

(FOF 145) UEC has demonstrated its compliance with the TCEQ regulatory scheme governing *in situ* uranium mining. Fresh water and air are adequately and sufficiently protected from pollution, soil and vegetation are adequately and sufficiently protected from contamination, and UEC's proposed activities will not negatively impact livestock and wildlife, including endangered species….

After considering the record of a contested case hearing on the original application to issue Class III injection well permit UR03075 with opportunity for

parties to submit evidence on the matter, the Commission issued an order adjudicating the following conclusions of law:

(COL 288) Based on the findings of fact set forth in and/or incorporated into Section V.N. above [in the Commission's order], the Applicant's proposed activities will not negatively impact the use of property.

(COL 289) TCEQ does not have jurisdiction to consider effects on property values when determining whether to approve or deny a Class III injection well [permit] application.

(COL 290) The issuance of an injection well permit "does not convey any property rights of any sort" and "does not authorize any injury to persons or property or an invasion of other property rights, or any infringement of state or local law or regulations." 30 TAC § 305.122 (b)-(c); *see also id.* § 305.125(16) (providing that all injection well permits must include a condition stating that it "does not convey any property rights of any sort, or any exclusive privilege").

## V. Conclusion

The Executive Director has reviewed the application and preliminarily determined that it meets all relevant regulatory and statutory requirements.

## VI. Changes Made to the Draft Permits in Response to Comments

No changes were made to the draft permits in response to public comments received.

Respectfully submitted,

Texas Commission on Environmental Quality

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REPRESENTING THE EXECUTIVE DIRECTOR
OF THE TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

**CERTIFICATE OF SERVICE**

I certify that on March 11, 2025, that the Executive Director's Response to Public Comments for Renewal and Amendment of Class III Injection Well Area Permit No. UR03075 was filed with the TCEQ's Office of the Chief Clerk.

Don Redmond

Don Redmond, Staff Attorney
Environmental Law Division