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

Kelly Keel
Executive Director

Phillip Ledbetter, Director
Office of Legal Services

Charmaine Backens, Deputy Director
Environmental Law Division

Don Redmond

Don Redmond, Staff Attorney
Environmental Law Division
State Bar No. 24010336
P.O. Box 13087, MC 173
Austin, Texas 78711-3087
Phone: (512) 239-0612
Fax: (512) 239-0606

Thomas Hopkins, Staff Attorney
Environmental Law Division
State Bar No. 24143022
P.O. Box 13087, MC 173
Austin, Texas 78711-3087
Phone: (512) 239-5427
Fax: (512) 239-0606

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