

**BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.**

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| In re Three (3) UIC Class VI injection wells |) | |
| (Rose CCS No. 1 - No. 3), Jefferson County, |) | |
| Texas |) | |
| |) | |
| Class VI Well Permit ID Nos. |) | |
| R6-TX-245-C6-0001, |) | |
| R6-TX-245-C6-0002, and |) | |
| |) | |
| R6-TX-245-C6-0003 issued to |) | Appeal No. UIC 25-03M |
| ExxonMobil Low Carbon Solutions Onshore |) | |
| Storage, LLC |) | |
| |) | |
| Docket No: EPA-R06-OW-2025-0421 |) | |
| |) | |

**OPPOSED MOTION TO TRANSFER TO STATE OF TEXAS
OR IN THE ALTERNATIVE
PETITION FOR REVIEW**

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SUMMARY OF ARGUMENTS

During the pendency of this appeal, the Environmental Protection Agency (“EPA”) finalized the State of Texas’ primacy application for the Underground Injection Control program for Class VI wells. Under the primacy agreement, the Texas Railroad Commission now has the sole authority to grant or deny Class VI well permits, including all pending applications or permits that must be transferred to the state. As such, the Environmental Appeals Board (“EAB”) should transfer the entire permits record, including application materials, pending permits and all subsequent docket filings to the State of Texas to incorporate into its permitting process. Alternatively, the Cheek Texas Community Association (“Community Association”) timely petitions the EAB to remand three wrongly approved Class VI underground injection well permits (“Permits”) issued to ExxonMobil Low Carbon Solutions Onshore Storage, LLC (“ExxonMobil”) back to the EPA’s Region 6 (“Region 6”) staff for further review. Dkt. No. EPA-R06-OW-2025-0421. This Petition for Review seeks remand to staff because Region 6 failed to respond to substantive comments that demonstrate the Permits inappropriately authorize injection of carbon dioxide into a deep brackish aquifer that should be protected under the Safe Drinking Water Act and into formations that do not appropriately protect known underground sources of drinking water. Out of an abundance of caution, Community Association is filing its Motion to Transfer and Petition for Review simultaneously but addresses first, its assertion that the EAB should remand or transfer directly on behalf of the Regional Administrator for Region 6 these pending applications and permits to the State of Texas before deciding the underlying issues. Should the EAB decline to transfer, Community Association’s Petition for Review alternatively demonstrates that Region 6’s errors require remand to the agency, and ultimately, the State of Texas.

OPPOSED MOTION TO TRANSFER PENDING APPLICATIONS AND PROPOSED PERMITS TO THE TEXAS RAILROAD COMMISSION

Given the EPA's primacy approval, the EAB has authority to, and should, transfer the entire federal permit record to the State of Texas. The EAB, “[i]n exercising its duties and responsibilities . . . may do all acts and take all measures necessary for the efficient, fair and impartial adjudication of issues arising in an appeal . . .” 40 C.F.R. § 124.19(n). When review is sought through this appeal process at the EAB, a proposed permit that involves a new injection well “shall be without a permit for the proposed new . . . injection well . . . pending final agency action.” 40 C.F.R. §124.16(a)(1). Because no final agency action has occurred on these pending applications for Class VI well permits, once permitting authority for the Class VI program was transferred to the State of Texas, all pending applications and permits should be transferred as well. The Memorandum of Agreement Addendum 2 (“MOA”) between the Railroad Commission of Texas (“RRC”) and EPA Region 6 expressly calls for this result. Section II.D, entitled “Transfer of Responsibility from EPA” expressly states that EPA's:

Regional Administration shall transfer to the RRC any pending permits, applications and any other information relevant to Class VI UIC program operation not already in the possession of the RRC when the RRC assumes primacy for the Class VI UIC program.

(Attachment 1: Mem. of Agreement Addendum 2). Because the EAB, acting in its role as an impartial appellate tribunal within the EPA, serves as the acting entity for final agency action, no final agency action has occurred due to this ongoing appeal. Since this appeal is ongoing and Class VI permitting authority has now been transferred to the State of Texas, EAB should appropriately remand the appeal to Region 6 with instructions for direct transfer of the entire docket to the RRC.

Out of an abundance of caution, Community Association files its Petition for Review simultaneously with its Motion to Transfer to ensure the appeal remains active throughout the

transfer period. This is in part because if the EAB merely “dismissed” the appeal, the applicant here may argue that EPA’s permits were in fact final agency actions without the EAB appropriately adjudicating Community Association’s concerns regarding the deep brackish aquifer known as the Jasper Aquifer, among its other assertions. Because the Permits’ status changed to *pending* when the EAB granted Community Association’s initial Motion for Extension, the EAB should instead transfer the entire record, including this appeal, to the State of Texas.

While the Office of Regional Counsel for Region 6 would not agree to the Motion to Transfer, counsel for the Region did state that “EPA has confirmed the following:

- 1.) The Texas Railroad Commission, not EPA, is now the UIC Class VI permitting authority in Texas,
- 2.) EPA has appropriately transferred materials pertaining to the subject permitting matters to the Texas Railroad Commission, and
- 3.) EPA agrees the federal permits are not effective and will not become effective because the State of Texas has UIC Class VI primacy.”

(Attachment 2: Email from Office of Regional Counsel EPA Region 6). To effectuate this understanding, the EAB must take some action regarding this petition of review. Because the MOA expressly provides that *pending permits* will be transferred to the Railroad Commission, a remand to the Region to transfer or a direct transfer from the EAB to the State, is appropriate here. This is particularly true since the Regional Administrator has not exercised its apparent authority to simply withdraw the permit as permitted under this process. 40 C.F.R. § 124.19(j) (“The Regional Administrator, at any time prior to 30 days after the Regional Administrator files its response to the petition for review. . . may, upon notification to the Environmental Appeals Board and any interested parties, withdraw the permit”). Alternatively, as discussed below, the EAB should adjudicate Community Association’s Petition for Review.

COMMUNITY ASSOCIATION’S PETITION FOR REVIEW

On July 1, 2025, Region 6 published the Public Notice of Permit and Hearing on ExxonMobil’s Applications for three (3) Class VI wells (collectively the “Permits” or “Application”).¹ The Notice established a thirty-day comment period for ExxonMobil’s application review and set a public hearing. On July 9, 2025, Community Association asked for the additional materials referenced in Region 6’s Notice and sought a 90-day extension to substantively engage with the proposed permits. On July 24, 2025, Region 6 denied the requested extension but failed to provide additional documents. Counsel again sought additional information for review. Five days before the end of the comment deadline, Region 6 responded to the second request and provided heavily redacted material. On August 4, 2025, Community Association submitted timely comments and its first expert report in opposition to the proposed permits and specifically articulated the concerns regarding the Jasper Aquifer and that the injection zones were into formations that were not isolated from Underground Sources of Drinking Water (“USDW”).² Community Association supplemented with additional substantive comments on August 29, 2025, and October 1, 2025.³ It is assumed Region 6 reviewed those comments since they were added to the administrative record even when labeled as “late comments.” Region 6’s Response to Comments document did not reference the added materials, labeled by EPA as comment numbers 130 and 131.

¹ Because the administrative record was not bates labeled for this appeal, Community Association cites to the existing docket equally available to it and EAB staff rather than reattach as exhibits all the publicly available documents. Dkt. No. EPA-R06-OW-2025-0421. Should the EAB request hard copies of these documents, Community Association will provide them as expeditiously as possible, recognizing that the docket, comments, and exhibits to the comments are very voluminous and would require some time to prepare.

² *Id.* referring to Comment 109, submitted on August 4, 2025.

³ *Id.* referring to Comments 130 and 131, submitted on behalf of Community Association on August 29, 2025, and October 1, 2025.

Two weeks into the government shutdown, Region 6 emailed its October 16, 2025, Notice of the Permits issuance. On November 5, 2025, Community Association sought to extend the November 17, 2025, Petition for Review deadline by 60 days, partly due to the government shutdown and Region 6's failure to respond to comments 130 and 131. On November 12, 2025, EAB granted Community Association's request, stating the Petition for Review would be due by January 16, 2026. However, on November 14, 2025, EPA granted the State of Texas primacy for the Class VI well program with an effective decision date of December 15, 2025.

Because the State of Texas now holds exclusive Class VI well permit authority, Community Association files this Opposed Motion to Transfer these applications and the docket to the State of Texas, or in the alternative, adjudicate its Petition for Review consistent with the Extension Order. As a commenter, Community Association may properly submit this Petition for Review and, in good faith, sought the extension. 40 C.F.R. § 124.19(a)(2). Thus, although this petition is timely, Community Association asserts EAB should decline further review to allow the State of Texas to instead exercise its state authority in controlling these Permits. Should the EAB choose to adjudicate the Petition for Review, Community Association demonstrates that remand to Region 6 is still proper.

I. STANDARD OF REVIEW

While Community Association bears the burden of demonstrating that a remand of the proposed Permits is warranted, the record as a whole must demonstrate that Region 6's approach was rational and considered all comments. *In re Wasbash Carbon Services, LLC*, 19 E.A.D. 128, 135-6 (EAB 2025). ; *In re Powertech (USA) Inc.*, 19 E.A.D. 174, 182 (EAB 2025) *citing In re Shell Offshore, Inc.*, 13 E.A.D. 357, 386 (EAB 2007) (“[a]s a whole, the record must demonstrate that the permit issuer ‘duly considered the issues raised in the comments’ and ultimately adopted

an approach that ‘is rational in light of all information in the record.’”). “Without an articulation of the permitting authority’s analysis, the [EAB] ‘cannot properly perform any review whatsoever of that analysis and, therefore, cannot conclude that it meets the requirement of rationality.’ *Wasbash Carbon Services*, 19 E.A.D. at 135-6, citing *In re Gov’t of D.C. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 323, 343 (EAB 2002) (remanding because the Region’s rationale was “absent”). Thus, the Community Association’s petition for review will be successful if it appropriately identifies a clear error of fact or law, an abuse of discretion by Region 6 in granting the Permits, or at least, raises a policy matter that warrants EAB’s more thorough review. 40 C.F.R. § 124.19(4)(i)(A-B).

Here, Region 6’s procedural irregularities, including documents withheld from the public process and its failure to respond to all comments, justify EAB’s review. Even if those procedural deficiencies are disregarded, Region 6’s Response to Comments fails to describe or analyze why it ignores the Jasper Aquifer as a known underground source of drinking water, or assertions that the confining layer does not adequately protect either the Jasper or Evangeline Aquifers. *See In re FutureGen Indust. Alliance, Inc.*, 16 E.A.D. 717, 721 (EAB 2015) (“The permit issuer must articulate with reasonable clarity the reasons supporting its conclusion and the significance of the crucial facts it relied upon when reaching its conclusion.”). “On matters that are fundamentally technical or scientific in nature, the [EAB] typically will defer to a permit issuer’s technical expertise and experience **as long as** the permit issuer adequately explains its rationale and supports its reasoning in the administrative record.” *Id.* (emphasis added). As demonstrated below, Region 6 fails to explain and support its rationale in light of expert comments submitted with respect to the Jasper Aquifer, and other issues, and as such, Community Association meets its burden. Remand is proper here.

II. REMAND REQUIRED BECAUSE OF REGION 6'S PROCEDURAL DEFICIENCIES IN ITS PUBLIC PARTICIPATION PROCESS

Region 6's procedural abnormalities for this process alone are enough for the EAB to remand to staff. Region 6 first failed to timely provide documents to Petitioner's counsel when requested, denied requests for extension and finally failed to respond to all the Community Association's submitted comments. *D.C. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. at 343 (remanding where Region did not provide record support).

EAB considers a failure to respond to comments as a procedural error that merits remand. For example, in *In re Chevron Michigan, LLC of Traverse City, Michigan*, the EAB remanded a permit where "the Region had not issued one comprehensive response to comments [] and did not appear to have provided all its responses to comments to all commenters." *In re Chevron Michigan, LLC of Traverse City, Michigan*, 2013 WL 11256449, at *2 (EAB Nov. 7, 2013). The EAB described how this failure to robustly respond could inadvertently limit a commenter's ability to challenge the Region's basis for its permitting decision on appeal. *Id.* Similarly here, Region 6's response to the Community Association's request for additional information, the delay in providing that material, including denying a request for extension, shows the procedural irregularities in what should have been a routine notice and comment process. In the response to comments, EPA acknowledges that it finally forwarded the additional information "to the commenter late in the comment period" but attempts to minimize this delay by arguing that much of the material was redacted and so of limited value. (Dkt. No. EPA-R06-OW-2025-0421, Redacted ExxonMobil Rose Resp. to Comments, at 46) ("Although the information was forwarded to the commenter late in the comment period, there remained sufficient time in the comment period to review the 'minimal information' and provide any comments."). The Response to Comments also acknowledges there was a computer malfunction that unexpectedly announced the closure of the

comment period a day early, causing some confusion about the ultimate deadline. *Id.* And finally, the Response to Comments document completely ignores the initial late comment submitted a mere 25 days later, which Community Association believed and understood was considered and placed in the record. Region 6’s Response to Comments fails to address Comments 130 and 131, arguing although the comments appear in the record they were not reviewed because they were late. Yet, these additional comments were delayed due to Region 6’s own delay in providing the information allegedly available immediately from staff as listed in the notice. The EAB should not reward Region staff for failing to provide public information but instead remand due to the procedural irregularities.

III. REMAND IS PROPER DUE TO SUBSTANTIVE ERRORS IN LAW AND FACT

Even if EAB excludes Comment 130 and 131, remand remains proper because Region 6 fails to appropriately account for a known source of drinking water. The Safe Drinking Water Act articulates the federal Administrator’s authority to construct regulations for all underground injection programs. More importantly, it specifies the Administrator’s ultimate responsibility: “[n]othing . . . shall be construed to alter or affect the duty to assure that underground sources of drinking water will not be endangered by any underground injection.” 42 U.S.C. § 300h(b)(3)(C). Under the authorized Class VI well rules, a “geologic sequestration project means an injection well or wells used to emplace a carbon dioxide stream **beneath** the lowermost formation containing a USDW.....” 40 C.F.R. §146.81(d) (emphasis added). Thus, the regulations directly obligate Region 6 to protect the lowermost formation containing a USDW. That obligation is twofold: 1) avoid direct injection into the formation and 2) ensure that any confining zone will appropriately trap the carbon dioxide long-term. *See generally* 40 C.F.R. §§ 146.81; 146.83.

Importantly, these regulations contrast with the regulations issued for the UIC Class II program where the production of hydrocarbons are prioritized over the protection of any possible drinking water aquifer. *Compare* 40 C.F.R. § 146.4(b)(1). This demonstrates Congress's and EPA's decision that any and all possible sources of underground drinking water should receive protection from Class VI injections. To issue Class VI well permits, the agency must consider a detailed application with various pieces of information. 40 C.F.R. § 146.82. Here, despite these regulatory responsibilities, Region 6 failed to support its decision to ignore the Jasper Aquifer or substantially respond to concerns highlighting that the confining zones would allow fluids to mix. Additionally, and again without record support, Region 6 disregarded known concerns and fractures through the confining zone, now articulated as the Amphistegina (Amph) B Shale (the "Burkeville") occurring at a depth of 2,900 to 3,100 feet, and selected the Amph B Shale as the primary confining zone instead of limiting sequestration to the Frio Formation with the Anahuac Shale confining zone. Attached and incorporated by reference into this Petition is the expert report timely submitted demonstrating these proposed wells inject into the Jasper Aquifer when injecting into the Fleming Formation and that the Jasper aquifer already serves as an USDW. (Attachment 3: Dr. Lauren Ross, *Underground Injection Control Class VI Draft Permit ID Nos: R6-TX-245-C6-001, R6-TX-245-C6-002, R6-TX-245-C6-003, Preliminary Permit Review*; Aug. 4, 2025). Attached and incorporated by reference into this Petition is the expert report by 3D Seismic Solutions articulating that the confining zones are not best understood as lateral lithostratigraphic zones but by chronostratigraphic zones, meaning that the confining zone will not protect even the Evangeline Aquifer, the named USDW by Region 6. (Attachment 4: 3D Seismic Solutions, *Rose Carbon Capture and Sequestration Project, Jefferson County, Texas, Review and Comments on Select*

Aspects of the Permit Application). As demonstrated below, Region 6's Response to Comments does not adequately address these concerns.

A. REMAND NECESSARY BECAUSE THE INJECTION INTO THE FLEMING FORMATION SHOULD HAVE REQUIRED A WAIVER OF THE CLASS VI INJECTION DEPTH REQUIREMENTS

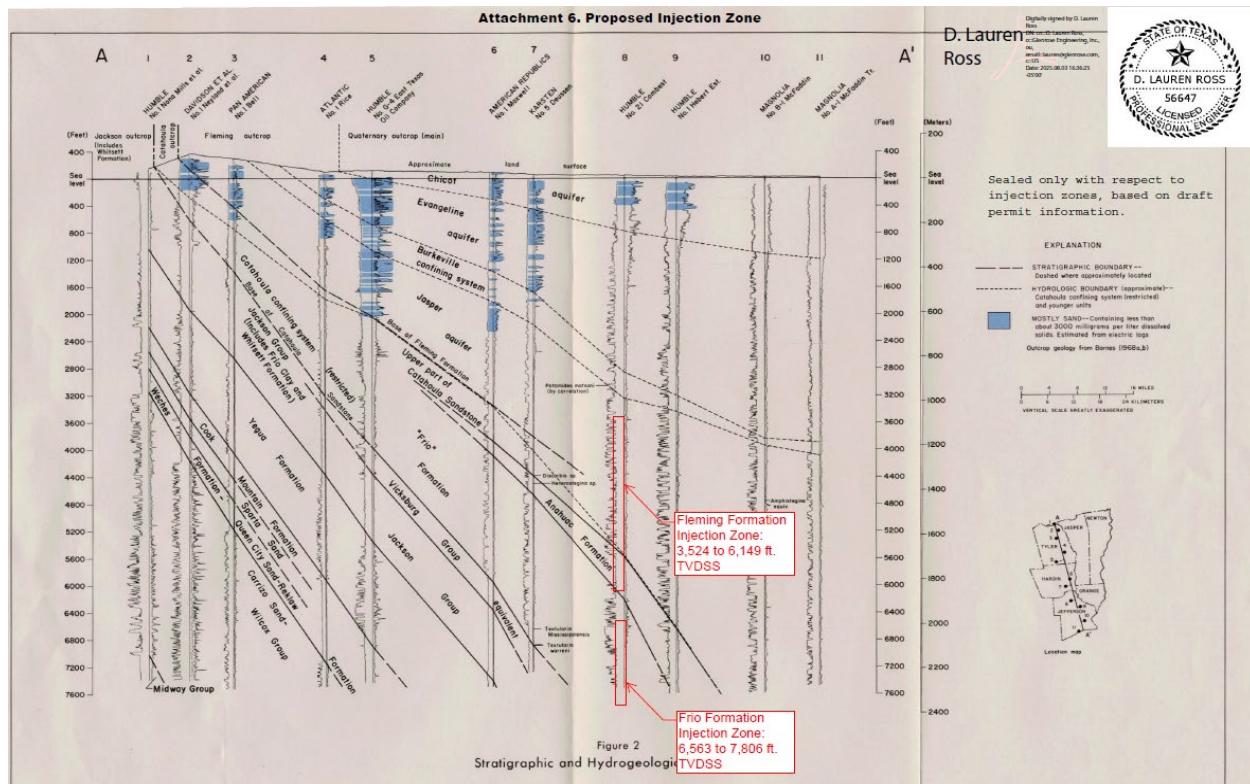
ExxonMobil specifically stated under section 1.13 of its application that it was not seeking an aquifer exemption expansion request or an injection depth waiver. This is true, in part because new aquifer exemptions cannot be issued for Class VI wells without confirming the aquifer does not serve as drinking water, among other items. 40 C.F.R. § 144.7(a) (“Other than EPA approved aquifer exemption expansions that meet the criteria set forth in § 146.4(d) of this chapter, new aquifer exemptions shall not be issued for Class VI injection wells.”). Because the Jasper aquifer currently serves as a source of drinking water, it would not qualify for exemption. *See* 40 C.F.R. § 146.4(a-d).⁴ Under 40 C.F.R. § 146.95, ExxonMobil’s proposed injection into the Fleming Formation seeks to inject above the lowermost USDW and ExxonMobil articulated that “CO2 can dissolve in water and dissolved CO2 is considered permanently sequestered in the saline aquifer.”

⁴ While the attached Texas Water Development Board (TWDB) groundwater model was not provided in these comments submitted by Community Association, Region 6 states it confirmed its assessment that the Jasper was not a USDW with the TWDB. Yet, the Groundwater Model discussing the Gulf Coast Aquifer in proposed future conditions specifically states:

Having a lower Jasper layer available for model simulations is also important as the potential for future brackish groundwater development continues to increase. In addition to production wells being located in the upper Jasper, on geophysical logs, there are distinct differences in the electrical resistivity signatures of the upper Jasper Aquifer and lower Jasper Aquifer sands. The water contained within the lower Jasper Aquifer sands is often brackish with higher concentrations of chloride and total dissolved solids. In addition, elevated concentrations of fluoride, methane gas, and/or hydrogen sulfide are common. The water quality and hydraulic property differences between the upper and lower Jasper are more than sufficient to justify dividing the Jasper Aquifer model layer.

Thus, demonstrating that the Jasper aquifer is a known resource to protect currently, as it produces drinking water in the upper regions, and in the future, because of the possibility to produce from brackish aquifers. (Attachment 5: Michael R. Keester et. al, *Northern Portion of the Gulf Coast Aquifer System Groundwater Availability Model for Groundwater Management Area 14 Joint Planning*, at PDF page 216, ¶ Future Improvements). Unfortunately, and as argued later, while Region 6 now purports to rely on well logs from TWDB, those logs also do not appear to be in the administrative record.

(Dkt. No. EPA-R06-OW-2025-0421, Redacted R6-TX-245-C6-002 Permit Final at 77 ¶ Aqueous Solubility). As demonstrated by Community Association's expert report:



The proposed injection zone is not below the identified Jasper aquifer, and thus, 40 C.F.R. § 146.95 should apply. As such, ExxonMobil—and Region 6—were required to provide and review additional information as outlined through 40 C.F.R. § 146.95(a). For example, with an injection depth waiver, ExxonMobil would have had to demonstrate that the “injection zone(s) are laterally continuous, is not a USDW, and is not hydraulically connected to USDW’s; **does not outcrop**; . . .” 40 C.F.R. § 146.95(a)(1) (emphasis added). No information was provided.

“In exercising its considered judgment, the Region must explain the basis for its determination including the crucial facts on which it relied in reaching its conclusion.” *Wabash Carbon Services*, 19 E.A.D. at 137. Without this explanation, the Board cannot properly perform any meaningful review, and Region 6’s reliance, in part, on the idea that each permit provision

cites to the regulatory requirements does not operate to relieve it of conducting its own analysis. *Id.* at 145 (“Deferring to a region’s scientific and technical expertise does not mean ‘blind acceptance.’”). Indeed, “[t]he Board has long held that the Region’s scientific and technical determinations must be ‘adequately explained and supported by information in the administrative record.’” *Id. citing In re Stonehaven Energy Mgmt., LLC*, 15 E.A.D. 817, 830 (EAB 2013). Here, EPA “clarifie[d] that, while [a report attached to Commenter’s expert report] asserts the Jasper and Fleming formation may be interpreted as converging at the Texas-Louisiana border, this interpretation is significantly outside the extent of the plume and pressure front.” (Dkt. No. EPA-R06-OW-2025-0421, Redacted ExxonMobil Rose Resp. to Comments, at 24). This response wholly ignores the signed and sealed opinion by Dr. D. Lauren Ross of Glenrose Engineering that shows, consistent with the above picture, the Jasper aquifer serving as a USDW, that outcrops in northern regions, and is a known co-mingled aquifer in these zones and at the location of the Area of Review (“AOR”) identified by ExxonMobil. EPA goes on to further state that the “bottom of the lowermost USDW was confirmed by the Texas Water Development Board (TWDB) through the collection of open-hole wireline-resistivity logs at the stratigraphic well in October 2023” and yet, those referenced well logs do not appear in the record. Because the well logs were allegedly conducted by the TWDB, a public agency for the state of Texas, no redaction or confidentiality provision could apply and thus, those well logs should be identified.⁵ This absence, again like the procedural irregularities with this rushed public process, is enough to grant remand. Finally, EPA “recognizes that the well schematics indicate the usable quality of water . . . [h]owever, the EPA considers the base of the lowermost USDW (the Evangeline Aquifer) to be the resource protected by the Permits.” (Dkt. No. EPA-R06-OW-2025-0421, Redacted ExxonMobil Rose Resp. to

⁵ It is unclear from the Response to Comments document if Region 6 is relying instead on only the well log from ExxonMobil’s Béaud #1a or if there are existing TWDB well logs that it reviewed.

Comments, at 24). This implies that the EPA knows the Jasper Aquifer is found within the Fleming Formation and would meet the 10,000 total dissolved solids (“tds”) standard for protection because “schematics indicate the usable quality of water.” As such, EPA’s failure to adequately articulate why the Jasper aquifer should not be protected demands remand.

B. REMAND IS NECESSARY BECAUSE REGION 6’S INITIAL RESPONSE TO COMMENTS IGNORES THE JASPER AQUIFER

The Region 6 staff failed to address comments and expert reports indicating that the Jasper Aquifer deserves protection in the injection zone itself. *See* 40 C.F.R. § 124.17(a)(2). Region 6 incorrectly stated that the “lowest geologic unit considered to be a USDW in the project area is the Santa Rosa Formation, which contains the Evangeline Aquifer at a depth of 1,415 feet below mean sea level.”⁶ In the partial response to comments, Region 6 also unequivocally concludes that “no injection into the Jasper Aquifer is occurring or will occur under the Permits, as some commenters have alleged.” (Dkt. No EPA-R06-OW-2025-0421, ExxonMobil Rose Resp. to Comments, at 23). But Region 6 also states that “[w]hile information about formations containing usable, quality water may be included in the well records because it was provided to meet state requirements at the time the wells were constructed, the EPA considers the base of the lowermost USDW (the Evangeline Aquifer) to be resource protected by the permits.” (Dkt. No. EPA-R06-OW-2025-0421, Redacted ExxonMobil Rose Resp. to Comments, at 37). This seems particularly problematic because EPA does not explain why ignoring that information about other “formations” supports its conclusion to ignore protecting the Jasper aquifer (or what other “usable quality water” it references but does not protect). Nor does Region 6 explain why it “considers” the Evangeline as the lowermost USDW.

⁶ Dkt #EPA-R06-OW-2025-0421, Exxon-Rose Permit Fact Sheet Final at 6, July 2025.

The Director must consider a long list of information related to the geologic and hydrogeologic properties of the proposed storage sites, including “baseline geochemical data on subsurface formation, including all USDWs in the area of review” when authorizing Class VI wells. 40 C.F.R. §§ 146.82(a)(1-21). The reference to all subsurface formations—including USDWs—highlights the Director’s responsibility to review and consider the Jasper aquifer. *Id.* at §146.82(a)(6). And importantly, here, the word “aquifer” is specifically defined to include parts of the whole: “Aquifer means a geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.” 40 C.F.R. § 146.3.

Indeed, since at least 1979, the TWDB through its study of the greater Gulf Coast Aquifer understood the Jasper Aquifer through the coastal zone to be less than 10,000 tds, making it a known source of underground drinking water. *See* Attachment 3. In contrast, Exxon’s application relies on a 2016 report that purported to fundamentally alter the known zones of brackish drinking water throughout the Gulf Coast Aquifer. (Dkt. No. EPA-R06-OW-2025-0421, Application p. 200 Section 2.10 Hydrogeology). The Young report purports to amend more than 30 years of review related to the Jasper, and it excludes the Jasper Aquifer as a known source of drinking water for almost all of Jefferson County, Texas. The authors recognized however the report’s limitations and discussed the lack of modeling and knowledge about this brackish aquifer. (Attachment 6: Steven C. Young et al., *Final Report: Identification of Potential Brackish Groundwater Production Areas – Gulf Coast Aquifer System*, Aug. 2016 at Figures 6 and 7)⁷.

As documented by the second expert report attached and incorporated by reference here, the Young report contains cross-sections purporting to show zones where groundwater does not meet the 10,000 tds threshold for protection. (*See* Attachment 4). However, the cross-sections do

⁷ Dkt. No. EPA-R06-OW-2025-0421, Comment 131 Attachment 4, *Final Report: Identification of Potential Brackish Groundwater Production Areas - Gulf Coast Aquifer System*, Steve C. Young et al., Aug. 2016.

not compare with known core samples, highlighting the deficiency within the Young report. While the Young report shows no aquifers have less than 10,000 tds past 800 feet below ground, (*Compare Attachment 6, Figure 7 with Attachment 3, Section 2 at pp. 8-10*), multiple well bores show freshwater at depths at least as deep as 1,750 feet, and likely further. (*See generally* Attachments 3, 4 and 6). This discrepancy of known water samples demonstrates, as discussed below, the key limitation of the Young study, and calls into question ExxonMobil's reliance (and then Region 6's) on that study.

Further, while ExxonMobil relies on the Young study, it ignores the stated limitations regarding the confining zone: "the Burkeville[,] is composed of many individual sand layers, which contain fresh to slightly saline water " (Attachment 6 at p. 324) ("Among the limitations associated with the Houston Area Groundwater Model for Groundwater Management Area 14 and the Central Gulf Coast Groundwater Availability Model is that their representation of the Jasper Aquifer includes [sic] does not extend across a large region of the Gulf Coast Aquifer System."). In other words, Exxon's over-reliance on the Young report to assume that the Jasper is no longer a protected source of underground drinking water fails to account for limitations expressed by the report's own authors. Further, a review of Exxon's own testing results (although heavily redacted) shows that the Bead #1a well log calculated the depth of the lowermost USDW from 1,100 to 1,750 ft below surface. (*See* Dkt. No. EPA-R06-OW-2025-0421, Exxon Rose Class VI Application, at 94-99, Tables 2-28a-2-28f). This also directly contradicts the Young report that crafts a linear zone of freshwater to a mere 800 foot depth and directly contradicts the Region 6 staff's "consideration" of USDWs. (Attachment 6 at Figure 7). Instead of demonstrating that the Jasper does not meet the 10,000 tds limit or less for protection, ExxonMobil's own well log demonstrates that these zones are not consistent with the Young report. Because the Jasper meets

the standard under the Safe Drinking Water Act for protection and ExxonMobil’s permit application inappropriately dismisses its responsibility for either an injection depth waiver or aquifer exemption expansion request, Region 6’s failure to seek the additional information is fatal to its “consideration.” (Attachment 4, Section 2.4 at 11).

Because of this discrepancy between ExxonMobil’s core samples and the Young report, ExxonMobil’s application should not have been considered complete because it failed to indicate, for example, the general vertical and lateral limits of all USDWs within the AOR, their positions relative to the storage reservoir and the direction of water movement. *See generally*, 40 C.F.R. §146.82(a)(3)(i-vi). Based on the discrepancies between the known reports implying the injection zone in the Jasper Aquifer should have required protection under the Safe Drinking Water Act, the EAB should remand this application back to staff for additional review.

C. REMAND NECESSARY BECAUSE THE CONFINING ZONES ARE NOT ADEQUATELY SUPPORTED BY THE PROPOSED MONITORING GROUNDWATER WELLS

ExxonMobil’s own comments to the draft permit sought various changes in injection depths from its initial application. (Dkt #EPA-R06-OW-2025-0421, July 23, 2025, Comment Ltr from ExxonMobil, page 2 re: injection depths). The final permit further amends the injection zones and allows injection to a topmost injection zone height of 3,481 ft in the Fleming Formation. But, as detailed further below, does not indicate why this Fleming Formation is isolated from the Evangeline when the Burkville Confining Zone has known fractures and is described as crossing timelines. (Attachment 4).

The Burkeville confining system is a stratigraphic unit predominantly consisting of silt and clay. *Id.* Upper and lower boundaries of the unit do not strictly correspond to geologic time boundaries, although in some places the unit appears to possess approximately isochronous

boundaries. *Id.* The configuration of the top and bottom of the unit is irregular, highlighting the concern that the Burkeville cannot act as a primary confining zone for the injection into the Fleming Formation.⁸ *Id.* Boundaries are not restricted to a single stratigraphic unit but are included within the Fleming Formation and Oakville Sandstone in some places. (See generally Attachment 3). Similarly, the configuration of the Jasper Aquifer is geometrically irregular because the delineation was made on the basis of the aquifer being a rock stratigraphic unit. (Attachment 4). Thus, the hydrologic boundaries were defined from observable physical (lithologic) features rather than from geologic time lines (which do not necessarily correspond to lithologic features). *Id.* It is these discrepancies that were pointed out with the two expert reports provided to Region 6 by the Community Association, and it is this flaw that permits the EAB to remand these Permits back to region staff. Without clear seismic data, outlining the variability of the hydrologic boundaries, as well as the confining layers, the Permits cannot meet the standard of protecting the lowermost USDW.

Region 6’s Response to Comments “anticipate[] that fluid interaction may occur across the different injection stages and intervals within an injection zone.” (Dkt. No. EPA-R06-OW-2025-0421, Redacted ExxonMobil Rose Resp. to Comments, at 32). EPA’s response to some of these comments also acknowledge “that the USDW monitoring wells at the site are much shallower than those at Jasper [sic]” going on to state that “this monitoring is complementary to the above confining zone monitoring in the Bead Farm Co. #1 well.” (Dkt. No. EPA-R06-OW-2025-0421, Redacted ExxonMobil Rose Resp. to Comments, at 29). This implies that EPA recognizes the Jasper as a known USDW but still ignored its responsibility to protect it, and ultimately failed to

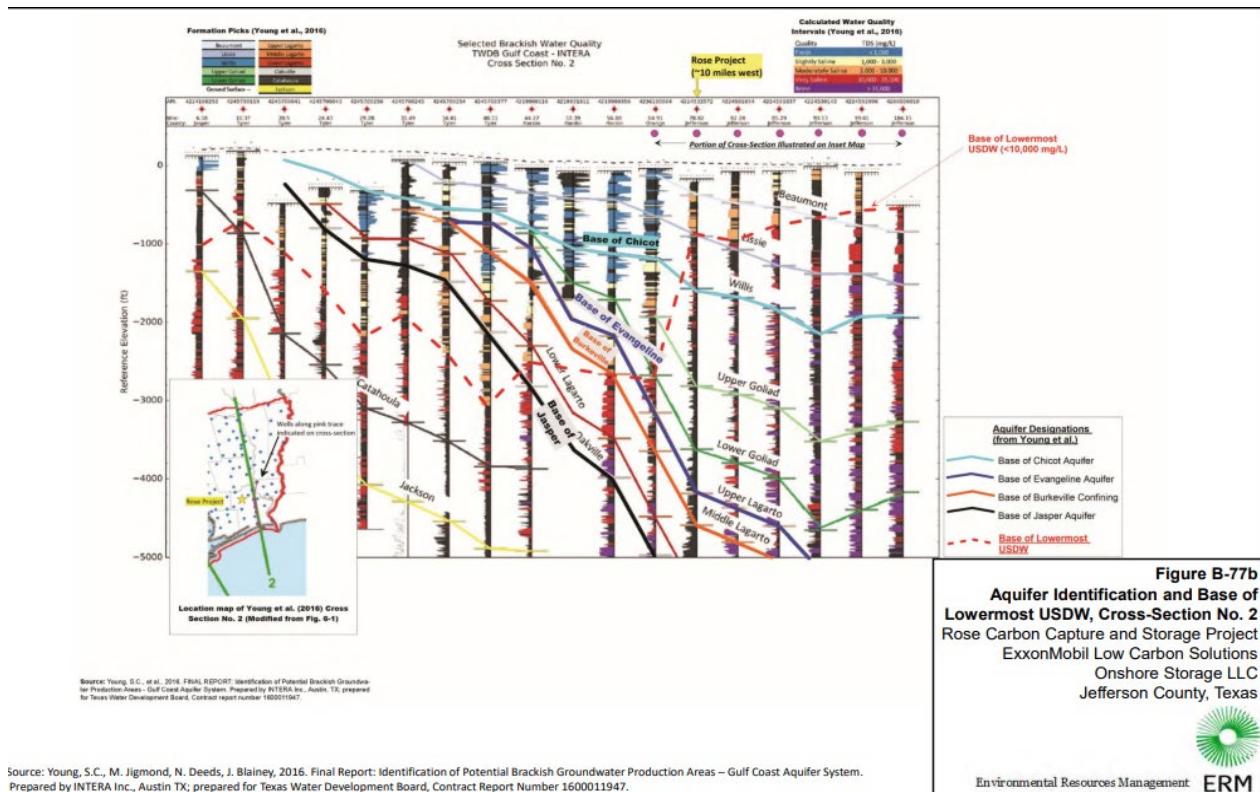
⁸ While Region 6 articulates that the Amph B is the “primary” confining zone, there is no dispute that the Permits authorize into two distinct formations, and that the Burkeville is considered the “primary” confining zone for the injection into the Fleming Formation.

articulate why the confining zones would protect even the Evangeline. Indeed, in its response to comments, EPA Region 6 staff merely articulate a conclusion: “The CO₂ will then remain dissolved in the formation fluids and not migrate to USDWs or the surface.” (Dkt. No. EPA-R06-OW-2025-0421, Redacted ExxonMobil Rose Resp. to Comments, at 23). Instead, staff seem to rely on the permits themselves, stating that “if the UIC Program Director determines the site is no longer suitable for injection based on new information about the site geology during the well’s operational phase, injection must cease.” *Id.*

But the Permits do not require any monitoring wells in the Jasper or the Evangeline throughout the entire AOR, and instead, refer to 40 C.F.R. § 146.90(g) implying that indirect test methods such as seismic surveys can appropriately monitor the effects. More problematically however, is that Exxon’s own application highlights this discrepancy in the quality of the water throughout these zones. Exxon states:

[Redacted on claim of proprietary business information] The bottom of the USDW was confirmed by both literature review and through the collection of open-hole wireline logs at the stratigraphic well (Bead Farm Co. #1) in November 2023, confirming the literature-cited depths of the lowermost USDW. The close correlation of the top of the Evangeline Aquifer and the elevated concentrations of TDS above 10,000 mg/L was sufficient evidence that monitoring groundwater quality at this depth could have a high potential for false positive detections of brine presumed to be associated with brine leakage through the UCCZ. **For this reason, no USDW monitoring wells were located in the Evangeline Aquifer.**

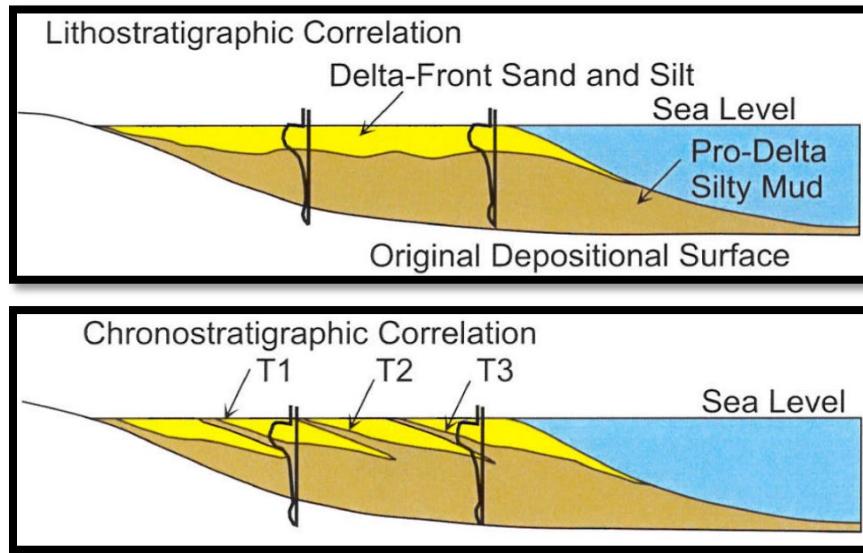
(Dkt. No. EPA-R06-OW-2025-0421, Exxon Rose Class VI Application at 405, ¶ 5.9.3. USDW Monitoring Well Construction). Again, Exxon’s own application contained Figure B-77b, indicating that the Evangeline aquifer was found at a depth close to 4,000 ft.



Rather than using its own reasoned judgment, Region 6 responded to comments concerned about the Jasper and Evangeline by stating “[t]he bottom of the lowermost USDW was confirmed by the Texas Water Development Board through the collection of open hole wireline resistivity logs at the stratigraphic well in October 2023 and corroborated by literature reviews. ExxonMobil will confirm the depth to the USDW at the injection well locations during pre-operating testing, which is required before the EPA authorizes injection.” (Dkt. No, EPA-R06-OW-2025-042, Redacted ExxonMobil Rose Resp. to Comments, at 24). This does not explain why Region 6 found that the application met its burden by only relying on lithostratigraphic correlations with the USDW instead of relying on likely more viable and correct chronostratigraphic correlations.⁹

⁹ Region 6's overreliance on the Young report also indicates potential production areas for brackish groundwater from the Jasper in the Lower Lagarto, Oakville, and Catahoula formations. (Attachment 6 at 406).

Compare:



Based on this, Region 6 staff have not met the requirement under 40 C.F.R. § 146.90(d)(2) which requires the placement of monitoring wells to be based on actual site characterization data.

D. REMAND NECESSARY BECAUSE CONFINING ZONES WILL NOT “SELF SEAL” IN ORDER TO PREVENT MIGRATION OR LEAKAGE INTO THE EVANGELINE (OR JASPER) AQUIFERS

ExxonMobil's application admits that no baseline 3D seismic survey was done in order to better understand both the Burkeville cap, as well as the Jasper and/or Evangeline Aquifers. Instead, ExxonMobil utilized two (2) existing surveys (one from the 1990's and one from early 2000's) and then reprocessed them into a single dataset to create a faux baseline. (Attachment 4, Section 5.3 at 40-44). This technique creates known flaws within the system, and it is well known that there are key limitations from 3D seismic work in the 1990s. (See for ex., Attachment 7: Satinder Chopra et al., *Evolution of Seismic Interpretation during the Last Three Decades*, 2012). This creates a true comparison problem for this proposed permit because, as Community Association's expert notes:

[t]o accomplish a valid apples-to-apples comparison between two datasets . . . the acquisition parameters and data processing of subsequent 3D datasets should be as

close to identical as possible with Survey Event #1. A significant change in these parameters would introduce additional variables that are not plume-related and would unnecessarily complicate any subsequent recalibration and/or remediation efforts based on anomalous attribute differences.

(Attachment 4 at 41). The current proposed permit does not stipulate this requirement, nor does it account for the known limitations with ExxonMobil's initial faux baseline. The proposed permit must recognize that any verification of ExxonMobil's proposed plume migration can only be done through seismic data evaluation.

As such, the confining zones¹⁰ are not adequately supported and Region 6 failed to respond to comments calling into question the injection intervals.

Given the laterally varying stratigraphic facies and corresponding variations in reservoir properties within [area of review] injection intervals up to a thousand feet thick, it seems risky to base plume behavior models on averaged reservoir properties obtained from a single location, and to extrapolate those predictions horizontally over three miles.

(Attachment 4 at 37). This is one of the key conclusions that Region 6 failed to respond to with respect to the comments.

[T]he reservoir net sand maps, text descriptions of the reservoir throughout the Permit, and the Model Structural Cross Section (Figure B-53a) seem to describe a model based on litho-stratigraphic facies concepts rather than on chrono-stratigraphic facies concepts, implying an improper distribution of model parameters (porosity-permeability-formation pressure-CO₂ saturations) across the AOR.

(Attachment 4 at 38). Further, the application states unequivocally that the plume is expected to travel north but then makes no further monitoring plan.

Since the model expects the CO₂ plume to expand northward, and the single In-Zone Monitoring well is located approximately one mile north of the most northernly injector well, Injection Well #3, no provisions are available to monitor possible anomalous lateral expansion of the plume maximum pressure front.

¹⁰ A confining zone "means a geologic formation, group of formations, or part of a formation stratigraphically overlying the injection zone(s) that acts as barrier to fluid movement. For Class VI wells operating under an injection depth waiver, confining zone means a geologic formation, group of formations, or part of a formation stratigraphically overlying and underlying the injection zone(s)." 40 C.F.R. § 146.81(d) (Confining Zone).

Consequently, no “triggered” events can occur for monitoring Plume anomalies in a lateral direction.

(Attachment 4 at 39).

Because the Fleming and Frio injection intervals are likely connected throughout the area, Region 6 failed to articulate why the proposed area of review and boundary conditions were protective of USDW. (Dkt. No, EPA-R06-OW-2025-042, Redacted ExxonMobil Rose Resp. to Comments, at 32) (“EPA clarifies that one injection zone comprises the Fleming Formation and another injection zone comprises the Frio Formation, for a total of two injection zones. . . . It is anticipated that fluid interaction may occur across the different injection stages and intervals within an injection zone. However, injectate is not expected or permitted to migrate from either injection zone.”). Community Association’s expert 3D Seismic Solutions noted in detail that the:

[r]eview of the available data on the depth, areal extent, and thickness of the injection and confining zones, and facies changes based on analysis of literature data and the stratigraphic well geophysical well log and core analyses, [raised concerns]. The stratigraphic well [relied on by Region 6] represents one 5” diameter data point in the many square miles represented by the Area of Review. The baseline seismic data, comprised of the merged and reprocessed vintage data, may not have the resolution to accurately show the confining zones. ExxonMobil acknowledges there are variations within both the Fleming and Frio reservoirs. Any specific data attesting that these variations were included in the model has either been redacted or is not present in the application.

(Attachment 4 at 24). Region 6 did not respond to the comments identifying the known discrepancies within the Fleming and Frio reservoirs, yet it is those reservoirs that are allegedly isolated from the Evangeline.

While seismic surveys are an important tool, here, ExxonMobil frankensteinized previous seismic surveys from two different data sets as opposed to seeking new seismic data within this AOR. By doing so, any further comparison from monitoring to the baseline seismic will not accurately depict whether concerns have arisen. This, when coupled with the concern regarding

pressure differentials and a lack of a firm shale block at depths, means that migration within the AOR could potentially impact USDW. Regardless of whether this second report was considered, other commenters raised similar concerns regarding these confining zones. Region 6's response ignored concerns regarding whether fluid could migrate laterally, instead only responding that "low permeability will prevent the injected CO₂ . . . from migrating upward. . . . In addition, the upper confining zone . . . provid[es] further vertical separation . . ." (Dkt. No, EPA-R06-OW-2025-042, Redacted ExxonMobil Rose Resp. to Comments, at 22). Region 6's response to comments should have provided more details for why the application demonstrated that the confining layers met the geologic requirements. 40 C.F.R. §146.86(a)(1)(“The owner or operator must ensure that all Class VI wells are constructed and completed to: prevent the movement of fluids into or between USDWs or into any unauthorized zones.”). Without further demonstrating that the Burkeville would also be protective of lateral migration of fluids or pressure, Region 6 could not confirm that the confining zone was protective.

V. CONCLUSION

Before reaching the issue of remand, the EAB should transfer this docket in its entirety to the State of Texas to complete the review and issue final Permits. Regardless, remand to Region 6 is proper solely on the procedural deficiencies with Region 6's public participation process. But barring that, because the Region did not fully articulate a rational, supported response to substantive issues, remand remains the proper remedy. The Community Association demonstrated the review failed to meet statutory requirements to protect underground drinking water aquifers under the Safe Drinking Water Act, rendering key permit provisions wrongly granted. Specifically, Community Association demonstrated that (1) ExxonMobil failed, and Region 6 failed to require ExxonMobil, to request a waiver of the injection depth requirements in order to inject into the

Fleming formation, (2) the Jasper aquifer warrants protection as an underground source of drinking water and the application proposes injection of carbon dioxide into the Jasper at certain depths, and (3) regardless of the discrepancy between published reports on the total dissolved solid concentration of the waters within the Jasper Aquifer within the AOR, the application did not provide evidence the injection zones were sufficiently isolated or separated from either the Evangeline Aquifer or Jasper Aquifer at certain depths, or that monitoring wells were appropriately placed to protect the known sources of drinking water.

Dated: January 15, 2026

Respectfully submitted,

EARTHJUSTICE

By: /s/ Jennifer A. Powis

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STATEMENT OF COMPLIANCE WITH WORD LIMITATION

This petition for review complies with the requirement that petition for review not exceed 14,000 words. The petition for review excluding attachments, is approximately 7,713 words in length.

LIST OF ATTACHMENTS

Attached are the following exhibits, numbered in order of appearance in the petition:

Attachment 1: Memorandum of Agreement Addendum between the Railroad Commission of Texas and the United States Environmental Protection Agency Region 6 For the Class VI UIC Program signed on April 29, 2025.

Attachment 2: Email from office of Regional Counsel for EPA Region 6. Response dated January 6, 2026.

Attachment 3: D. Lauren Ross, *Underground Injection Control Class VI Draft Permit ID No.s: R6-TX-245-C6-001, R6-TX-245-C6-002, R6-TX-245-C6-003, Preliminary Permit Review* (Glenrose Engineering, Report, Aug. 4, 2025).

Attachment 4: 3D Seismic Solutions, *Rose Carbon Capture and Sequestration Project, Jefferson County, Texas, Review and Comments on Select Aspects of the Permit Application* (Report, Aug. 2025).

Attachment 5: Michael R. Keester et al., *Gulf Coast Aquifer System Groundwater Availability Model for Groundwater Management Area 14 Joint Planning* (Report, Mar. 31, 2025).

Attachment 6: Steven C. Young et al., *Final Report: Identification of Potential Brackish Groundwater Production Areas – Gulf Coast Aquifer System* (Report, Aug. 2016).

Attachment 7: Satinder Chopra et al., *Evolution of Seismic Interpretation During the Last Three Decades* (Article, 2012).

CERTIFICATE OF SERVICE

I certify that the Opposed Motion to Transfer to the State of Texas or in the alternative Petition for Review was filed electronically with the Board through its online docketing system. In addition, by my signature below, I certify that this Opposed Motion and Petition has been provided to the following parties through email with a courtesy copy to the Clerk of Board at Clerk_EAB@epa.gov.

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In addition, as required, because the filing is over fifty (50) pages, a true and correct copy of this filing, in its entirety, will be mailed within 24 hours through the U.S. Mail to the following address:

Clerk of the Board
U.S. Environmental Protection Agency
Environmental Appeals Board
1201 Constitution Avenue, N.W.
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Respectfully,

EARTHJUSTICE

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