BEFORE THE ENVIRONMENTAL APPEALS BOARD

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C.

In re: Pratt Zero Carbon, LLC Pratt Energy CCUS #1 (PECCUS-1) Pratt County, Kansas Class VI UIC Permit No. KSS151570001	)	UIC Appeal No. 26-____

PETITION FOR REVIEW

Pursuant to 40 C.F.R. § 124.19, Petitioners Alexis Iwasiw (Lead Petitioner), Walter Scott Alberg, Jill Makuka, and Gene and Jan Parsons ("Petitioners") petition the Environmental Appeals Board ("Board" or "EAB") to review the final Underground Injection Control ("UIC") Class VI permit, No. KSS151570001 ("Final Permit"), issued by Region 7 of the U.S. Environmental Protection Agency ("Region 7") to Pratt Zero Carbon, LLC ("PZC") on May 8, 2026, authorizing geologic

sequestration of carbon dioxide at the Pratt Energy CCUS #1 ("PECCUS-1") project in Pratt County, Kansas. Petitioners challenge six aspects of the Final Permit, each of which rests on a clearly erroneous finding of fact or conclusion of law, warrants Board review as an exercise of discretion, or both. 40 C.F.R. § 124.19(a)(4)(i).

This Petition is timely filed within 30 days of service. § 124.19(a)(3). Petitioners request that the Board grant review and vacate the Final Permit in whole or in part, or alternatively remand it to Region 7 for the corrective action specified herein. By operation of § 124.16(a)(1), filing this Petition stays the contested conditions pending final agency action; and because PE IW-1 is a new injection well, PZC "shall be without a permit for the proposed new … injection well … pending final agency action."

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Scientific and Technical Authorities

The following secondary sources are cited in Issue 4.

Birkholzer, J. T., Nicot, J. P., Oldenburg, C. M., Zhou, Q., Kraemer, S., & Bandilla, K. (2011). Brine flow up a well caused by pressure perturbation from geologic carbon sequestration: Static and dynamic evaluations. International journal of greenhouse gas control, 5(4), 850-861.

Carr, J. E., McGovern, H. E., Gogel, T., & Doveton, J. H. (1986). Geohydrology of and potential for fluid disposal in the Arbuckle aquifer in Kansas (No. 86-491). US Geological Survey.

Lucia, F.J. (1995). Rock-fabric/petrophysical classification of carbonate pore space for reservoir characterization. AAPG Bulletin, 79(9), 1275–1300.

Male, F., & Duncan, I.J. (2020). *Lessons for machine learning from the analysis of porosity–permeability transforms for carbonate reservoirs.* Journal of Petroleum Science and Engineering, 187, 106825.

Docket References

The following docket entries from EPA Docket No. EPA-R07-OW-2026-1585 are cited in this Petition. Short identifiers are used throughout the body of the Petition for convenience.

Short Identifier	Description	Docket Entry
Final Permit	UIC Class VI Permit No. KSS151570001 (Final Permit)	EPA-R07-OW-2026-1585-0010
Permit Application	Draft UIC Class VI Permit No. KSS151570001 + Class VI Permit Application Narrative (and Attachments)	EPA-R07-OW-2026-1585-0001
RTC	EPA Region 7, Response to Comments, Permit No. KSS151570001	EPA-R07-OW-2026-1585-0009
Iwasiw Comment	Written Comments of Petitioner Alexis Iwasiw	EPA-R07-OW-2026-1585-0006

Short Identifier	Description	Docket Entry
Alberg Comment	Comments of Walter Scott Alberg, PG	EPA-R07-OW-2026-1585-0007
City of Pratt Comment	Comments of Kelvin Clay, City of Pratt Water Superintendent	EPA-R07-OW-2026-1585-0008
Parsons Comment	Comments of Jan and Gene Parsons	EPA-R07-OW-2026-1585-0004
Makuka Comment	Comment of Jill Makuka	EPA-R07-OW-2026-1585-0005

Other Authorities

The ACO-1 well completion records and related KCC well record cited in Issue 4 are appended to this Petition; see the Table of Attachments below.

TABLE OF ATTACHMENTS

Pursuant to 40 C.F.R. § 124.19(d)(1)(iii) and (d)(2), the following public Kansas Corporation Commission (KCC) records, cited in Issue 4 and offered subject to official notice, are appended to this Petition.

Attachment	Document	Public Source
Attachment 1	KCC Form ACO-1 (Well Completion or Recompletion Report and Log), PE AZM-1 (API: 15-151-22610), filed June 3, 2025	link
Attachment 2	KCC Form ACO-1, Rolf #1 (API: 15-151-00477), filed May 14, 2026	link
Attachment 3	KCC Form ACO-1, Swingle #1 (API: 15-151-00051), filed May 15, 2026	link
Attachment 4	KCC record Q0084781, Briggeman-Leal-Trinkle 1 (API: 15-151-21589)	link
Attachment 5	KCC Form ACO-1, Chinn #1 (API: 15-151-21910), filed Dec. 19, 1988	link
Attachment 6	KCC Form ACO-1, Kerr #1 (API: 15-151-21405), filed Feb. 22, 1984	link
Attachment 7	Location, API numbers, and dates of latest ACO-1 filing of wells mentioned in the project application (figure)	
Attachment 8	Legacy well location, Area of Review map, and pressure-front map (figure)	

I. OVERVIEW

Petitioners seek review of UIC Class VI Permit No. KSS151570001, which authorizes Pratt Zero Carbon, LLC to inject approximately 160,000 metric tons of carbon dioxide (CO2) per year for twelve years into the carbonate Shawnee and Lansing-Kansas City Groups beneath Pratt County, Kansas. Those injection zones lie below the High Plains Aquifer, the regional aquifer system that supplies 70 to 80 percent of Kansas's daily water use (KGS PIC 18 (2023)). Region 7 issued the Final Permit on May 8, 2026. It is only the second Class VI permit issued in Kansas.

Four of the six issues rest on Region 7's own record. Each identifies findings the Region made that cannot stand together, or a Subpart H showing the record never makes. The Board may review those defects for clear error under § 124.19(a)(4)(i)(A) without weighing the Region's technical judgment. The remaining issues are procedural.

Issues 1 through 3 concern the USDWs the permit must protect. In Issue 1, the foundational defect, the application never characterizes the High Plains Aquifer as a USDW within the Area of Review, although Region 7 conceded that the aquifer "qualifies as a USDW" at the site. That omission defeats four linked requirements of Subpart H (§§ 146.82(a)(5)-(6), 146.84(a), and 146.90(d)(2)). In Issue 2, Region 7 treats 230 feet as the lowermost USDW and calculates its protection findings from that depth, yet the only wells monitoring that unit terminate at 150 to 200 feet. In Issue 3, Region 7 expressly conceded that USDWs in the project area communicate hydraulically, then analyzed none of the consequences for monitoring design, confining-zone integrity under § 146.83(a)(2), or Area-of-Review scope under § 146.84(a).

Issue 4 concerns the Area of Review and the corrective-action obligation that depends on it. The Area of Review follows the modeled CO2 plume, and the same subsurface inputs govern both that plume and the 303-psi critical-pressure threshold that sets the pressure front. The operator concedes that "site-specific geomechanical data … are absent" and built those inputs from off-site, decades-old, and wrong-zone sources without validating them. The operator also accepted a model that, by its own admission, "does not factor in the geochemical effects of CO2 injection," although it expects those effects to alter the porosity and permeability the model relies on. Region 7's finding that the Area of Review "reflects site-specific data" cannot be squared with these concessions. The operator's sensitivity analysis confirms that the boundary moves widely with the unmeasured inputs, yet the analysis tested too narrow a range and never tested the pressure gradient. Because §§ 146.84(c)(2)-(3) and (d) require pre-injection corrective action on every confining-zone-penetrating well inside the Area of Review, an under-bounded boundary leaves aging legacy wells unaddressed, and post-permit testing cannot cure that defect.

Issue 5 is procedural. Petitioners do not contest deferring acquisition of the 3D-seismic fault-and-fracture data on which the § 146.83(a) confining-zone finding depends. They contest the permit's mechanism, which makes public review of that data contingent on the Director's discretionary decision to modify the permit and displaces the comment right § 124.10 guarantees.

Issue 6 concerns notice. Region 7's direct-mail notice reached only owners within one-half mile of the well. That radius falls short of the application's own modeled pressure front, which extends two to three miles, and of the City of Pratt's planned regional water-treatment facility, which sits about one mile beyond the Area of Review and down-gradient of the injection well.

The notice also omitted Groundwater Management District 5, the State agency that manages the aquifer Region 7 concedes "qualifies as a USDW." The method Region 7 chose was not "reasonably calculated to give actual notice … to the persons potentially affected." § 124.10(c)(4).

II. THRESHOLD REQUIREMENTS

A. Standing: 40 C.F.R. § 124.19(a)(2)

Each Petitioner is a person who filed timely written comments on the draft permit during the public comment period that closed April 19, 2026. *See* Iwasiw Comment; Alberg Comment; Makuka Comment; Parsons Comment. Each Petitioner therefore "may file a petition for review as provided in this section" under § 124.19(a)(2) and is not limited to challenging only changes between the draft and final permit.

B. Timeliness — § 124.19(a)(3)

Region 7 served notice of the Final Permit on May 8, 2026. This Petition is timely filed within 30 days of service.

C. Issue Preservation — §§ 124.13 and 124.19(a)(4)(ii)

Each of the six Issues was preserved as required by § 124.13 by at least one Petitioner during the public comment period that closed April 19, 2026; all Petitioners now jointly petition for review of all six. Petitioners Iwasiw and Alberg between them raised the site-characterization and inter-USDW-communication issues (Issues 1–3), the AoR-delineation and model data-quality issue (Issue 4), and the notice issue (Issue 6); Petitioners Gene and Jan Parsons, joined by

Petitioner Alberg, raised the deferral of the 3D-seismic basis for the permit's fault-and-fracture findings (Issue 5); and Petitioner Makuka filed timely comments and joins as a person who commented under § 124.19(a)(2). As § 124.19(a)(4)(ii) requires, each Issue below identifies the comment that raised it, Region 7's response, and why that response is clearly erroneous.

III. STANDARD OF REVIEW

Under 40 C.F.R. § 124.19(a)(4)(i), the Board grants review where a permit condition rests on "a finding of fact or conclusion of law that is clearly erroneous" or on "an exercise of discretion or an important policy consideration that the … Board should, in its discretion, review." The petitioner bears the burden of identifying the contested condition and explaining why review is warranted. § 124.19(a)(4)(ii). The Region's decision must rest on the administrative record, § 124.18, and must "[b]riefly describe and respond to all significant comments on the draft permit … raised during the public comment period," § 124.17(a)(2). Deference to the Region's technical judgment extends only as far as the record supports it: a required Subpart H finding that the record does not support is clearly erroneous under § 124.19(a)(4)(i)(A). And because the deficiencies concern the protection of a regional principal aquifer in one of Region 7's first Class VI permits, they independently present "an important policy consideration" warranting review under § 124.19(a)(4)(i)(B).

IV. STATEMENT OF FACTS

A. The project and the permit. On March 5, 2026, Region 7 released draft UIC Class VI Permit No. KSS151570001 for public comment; the 45-day comment period closed April 19, 2026 (RTC at 3). On April 9, 2026, Region 7 held a 90-minute public information session and

hearing in Pratt, Kansas (RTC at 3). Region 7 issued the Final Permit on May 8, 2026, authorizing Pratt Zero Carbon, LLC ("PZC") to construct CO2 injection well PE IW-1 at 37°41′19.98″N, 98°42′28.36″W in Section 23, Pratt County, Kansas, to sequester CO2 from the adjacent Pratt Energy ethanol facility. Injection is into the carbonate Shawnee and Lansing-Kansas City Groups (reservoirs estimated at 3,282 and 3,804 ft); the confining zones are the Wabaunsee Group (2,847 ft), Heebner Shale, and Douglas Group (the last two at 3,670–3,804 ft) (Permit Application, Attachment G, at 17; Final Permit). The estimated rate is 160,000 metric tons of CO2/year for 12 years, then 50 years of post-injection site care. PECCUS-1 is the second permit of its type issued in Kansas (Alberg Comment at 2). The only substantive change from draft to final was a typographical correction to the emergency-contact table (RTC at 3–4). Region 7 concluded that "none of the comments submitted have raised issues that alter the EPA's basis for determining that it is appropriate to issue a permit…" (RTC at 21).

B. The application's identification of USDWs and their depths. The application's stratigraphic summary (Permit Application, Attachment G, at 17) identifies two named USDWs: the Sappa and Grand Island Formations ("Alluvium, USDW," top <50 ft) and the Fullerton and Holdrege Formations ("Lowermost USDW," top <200 ft); the Whitehorse Formation (~200 ft), Nippewalla Group (~300 ft), and "Summer [sic] Gp" (742 ft) are designated confining systems[1]. The narrative (Attachment G § 1.2.7, at 54–57) describes the Fullerton and Holdrege as "the lowermost formations containing water suitable for common uses," with lowermost-USDW depth varying "between 210 and 260 ft, with an average value of 223 ft" (Figure 1-29 shows a

[1] The application's stratigraphic table labels the 742-ft confining unit "Summer Gp (Stone Corral)"; this is the Sumner Group, as the application's Construction Plan spells it elsewhere. The application likewise refers to the above-zone monitoring interval at ~2,300 ft as both the "Admire Group" (its stratigraphic table and Testing-and-Monitoring narrative) and, in two figure captions, the "Admiral formation." These name the same Pennsylvanian Admire Group; Petitioners use "Admire" throughout, consistent with the application's table.

top depth of ~80 ft), and states that "[t]he Sappa and Grand Island Formations are the main sources of drinking water for the Pratt County, with TDS reported in the range between 158 ppm to 355 ppm." The application's primary source is Layton & Berry, *Geology and Ground-Water Resources of Pratt County*, a 53-year-old publication; the terms "High Plains Aquifer," "Ogallala," "Pliocene," "Pleistocene," "Blanco Formation," and "Meade Formation" appear zero times across the application and the final permit.

C. The permit's shallow groundwater monitoring program. The Testing and Monitoring Plan establishes one in-zone well (PE IZM-1), one above-zone well (PE AZM-1, top at ~2,300 ft in the Admire Group), and five shallow groundwater wells (LUSDW GW1–GW5), which "will be drilled to approximately 150-200 ft below ground surface to monitor the anticipated lowermost USDW, the Fullerton and Holdrege Aquifer" (Permit Application, Attachment C, at 7). The permit identifies no monitoring well targeting the High Plains Aquifer as a distinct unit, no HPA-specific sampling parameters, and no coordination requirement with Kansas Groundwater Management District 5 ("GMD 5"), the State agency that manages HPA use.

D. The High Plains Aquifer in Pratt County (record evidence). Petitioner Iwasiw placed contemporary KGS, KU, GMD 5, USGS, and Kansas Department of Agriculture evidence before Region 7 (Iwasiw Comment at 3–6): the HPA is a regional aquifer system "composed of several smaller units that are geologically similar and hydrologically connected" (KGS PIC 18 (2023)); Pratt County lies within the Great Bend Prairie aquifer, the south-central extension of the HPA composed of Pleistocene units including the Sappa, Grand Island, Fullerton, and Holdrege Formations; a 2022 KU presentation places depth to water at 50–100 ft and saturated thickness at 100–150 ft near the site; and per KGS "an unconformity truncates High Plains Aquifer at a low

angle, where abraded pebbles/cobbles of Ogallala 'cap rock' locally form the lower few feet of the Blanco Formation (Fullerton & Holdrege Members)" (Iwasiw Comment at 6), indicating communication between the HPA and the underlying named units. That evidence also describes the HPA as the State's largest and most heavily used aquifer, averaging 70–80% of Kansas's daily water use (KGS PIC 18 (2023)) and spanning the eight states of Texas, New Mexico, Oklahoma, Colorado, Kansas, Nebraska, Wyoming, and South Dakota (Iwasiw Comment at 4). GMD 5 regulates groundwater use in Pratt County.

E. Public notice and the half-mile mailing radius. Region 7's Response 3a (RTC at 6) states that it "mailed the public notice and fact sheet to property owners within one-half mile of the proposed area of review," published notice in a local newspaper, notified the Kansas Corporation Commission ("KCC") and the Kansas Department of Health and Environment, consulted the City of Pratt, and posted it on its regional website and social media. Petitioner Alberg states the notice ran in "the back pages of the Tri-County Tribune" (Alberg Comment at 1). The half-mile radius does not appear in § 124.10; it is a Region-chosen practice. GMD 5 was not on the direct-notification list (RTC at 6; Iwasiw Comment at 4). By the permit's own modeling, effects extend beyond that radius: the application's Figure at page 76 "shows a pressure pulse reaching over 2 miles in year 3 of injection," and Alberg described one "reaching out as far as 2 ½ to 3 miles" (Alberg Comment at 2). The City of Pratt's ion-exchange water-treatment facility lies "approximately one mile outside the area of review" (RTC at 14) and, per Alberg, "almost directly down gradient of the proposed injection well" (Alberg Comment at 1). The City's comment letter is dated April 22, 2026, three days after the comment-period close (City of Pratt Comment).

F. The operator's pre-permit operational access to site-relevant wells. Three wells PZC controls bear on Issue 4, each documented by a KCC Form ACO-1: PE AZM-1 (API 15-151-22610), the above-zone monitor well, drilled in 2025 and described as "[t]he recently drilled and completed project well … completed with CO2 resistant cement in the caprock" (Project Narrative § 1.4 at 62; ACO-1 filed June 3, 2025; *see* Attachment 1); Rolf #1 (API 15-151-00477), "the closest well (~0.34 miles west of the proposed injection well)" (AoR and CA Plan § 2.3.4 at 48), source of the model's temperature initial conditions (AoR and CA Plan Table 2-9) and one of two AoR-penetrating wells requiring corrective action, re-entered to total depth in 2026 (ACO-1 filed May 14, 2026; *see* Attachment 2); and Swingle #1 (API 15-151-00051), the second AoR-penetrating well requiring corrective action, re-entered in 2026 (total depth ~4,350 ft; ACO-1 filed May 15, 2026; *see* Attachment 3). Each ACO-1 for wells re-entered in 2026 shows that no drill stem test, core, or mud log was obtained. The Pre-Operational Logging and Testing Plan Table 5-1 contemplates drill stem testing, wireline formation testing, pressure-fall-off testing, and coring for PE IW-1, the same techniques available during the three operations above.

G. Region 7's findings on the USDWs and the confining zone. Region 7 identified the lowermost USDW (the Fullerton and Holdrege Aquifers) at "approximately 230 feet below ground surface" (RTC at 10, 12, 14). In the same response, it found that the well's casing protects "all USDWs located at the site, including the High Plains Aquifer which qualifies as a USDW and is located approximately 160 feet below the ground surface" (RTC at 12). The surface casing extends ~800 feet into the Sumner Group, and PZC will install intermediate casing to ~2,860 feet into the Wabaunsee Group (RTC at 12). From the 230-foot figure, Region 7 derived "an additional 570 feet of protection for USDWs at the site" (RTC at 10) and found "approximately

2,600 feet of separation between the lowermost USDW and the top of the upper confining" zone (RTC at 14). As to the confining zone, Region 7 found that "review of the information provided did not identify any such features present in" the area (RTC at 12), and that "[t]he area of review is based on modeling that reflects site-specific data" (RTC at 13).

H. The Area of Review model and its inputs. The AoR's pressure-front component is set by a computed critical-pressure threshold of 303 psi, calculated using Birkholzer et al. (2011) (AoR and CA Plan § 2.3.1; Final Permit). The reservoir pressure gradient of 0.37 psi/ft is attributed to "DST data from nearby wells with well API # 15-151-21589, 15-151-21405, and 15-151-21910" (AoR and CA Plan Table 2-9). Two of those wells lie ~14 miles from PE IW-1 and were drilled in the 1980s. *See* Attachments 5 and 6. The only in-situ pressure measurement the permit describes is a drill stem test "in the Douglas shale at 3,648 ft" — a confining unit, not the reservoir — at the Briggeman-Leal-Trinkle 1 well "located 2.5 miles northwest of the proposed PE IW-1 well," which "equates to a hydrostatic pore pressure gradient of 0.37 psi/ft" (Final Permit). Injection-zone fluid density of 67.2 lb/ft³ is given at AoR and CA Plan Table 2-13; salinity of 110,000 mg/L is an "Estimate from Carr et al., (1986)" (AoR and CA Plan Table 2-9); and temperature initial conditions were estimated using an assumed temperature gradient propagated from the surface, and stated by the operator to be informed by the "Rolf # 1 well log" (AoR and CA Plan Table 2-9). The Project Narrative states that "site-specific geomechanical data for the PECCUS-1 site are absent" (Project Narrative § 1.2.5). By the operator's sensitivity analysis, a lower-salinity case lowers the critical pressure to 249 psi, and the critical-pressure-bounded area expands materially under reduced-salinity and reduced-permeability assumptions (AoR and CA Plan § 2.3.4). The AoR spans 1.39 mi² (AoR and CA Plan § 2.4.1). Of "approximately 26 oil exploration wells" Alberg identified within one

mile of PE IW-1, "[t]wo of these wells are within the AOR" (Alberg Comment at 2). Region 7's buffer analysis 500 feet outside the area of review "yielded five additional oil and gas wells which have been plugged" (RTC at 13). The Post-Injection Site Care plan rests on the premise that "the reservoirs at PECCUS-1 are underpressured to begin with" (PISC Plan).

I. The geochemistry of the injection and confining zones. CO2 is injected into the carbonate Shawnee Group (3,282–3,670 ft) and Lansing-Kansas City Group (3,804–4,165 ft) (Final Permit). The application states that "[t]he reservoirs at PECCUS-1 are predominantly carbonates with limestone being the dominant" lithology (Permit Application, Attachment G, at 58). It also states that "[t]he AoR model currently does not factor in the geochemical effects of CO2 injection" (Permit Application, Attachment B, at 7). Region 7 characterized the confining zones as containing "carbonate constituents" but also "cyclic shale and mudrock/mudstone" layers (RTC at 11).

V. ISSUES PRESENTED FOR REVIEW

Petitioners present the following six issues for review:

1. Region 7 characterized the site's USDWs without characterizing the High Plains Aquifer as a USDW within the AoR, despite conceding the HPA "qualifies as a USDW."
2. Region 7's "approximately 230 feet" lowermost-USDW finding cannot be reconciled with the permit's 150–200-foot monitoring-well interval for that same unit.
3. Region 7 acknowledged "communication between USDWs" without analyzing its consequences for monitoring design, confining-zone integrity, or AoR scope.
4. Region 7 delineated the AoR using the CO2 plume extent after considering a pressure-front-delineated AoR using a critical-pressure threshold whose controlling

inputs are off-site, decades-old, or from the wrong zone; this process produced an AoR that excludes nearby aging legacy wells from pre-injection corrective action.

5. Region 7 made public review of the 3D-seismic fault-and-fracture data contingent on the Director's discretionary decision to modify the permit.
6. Region 7's half-mile direct-mail notice was not "reasonably calculated to give actual notice … to the persons potentially affected."

VI. ARGUMENT

Before turning to individual Issues, Petitioners note that this Petition rests primarily on contradictions internal to Region 7's own administrative record, which are findings the Region itself made that cannot stand together, rather than on disagreements with Region 7's technical judgment. The Board's deference to a Region's technical expertise extends only as far as the record supports it; it does not extend to findings that contradict each other on their face. Region 7's Response to Comments dismisses the HPA as a "regional naming convention[]" that "does not alter the draft permitting decision" (RTC at 9, Response 5c) and then makes a specific finding that the HPA "qualifies as a USDW and is located approximately 160 feet below the ground surface" (RTC at 12, Response 5m). It identifies the lowermost USDW at "approximately 230 feet below ground surface" (RTC at 10, 12, 14) and authorizes monitoring wells designed to terminate at "approximately 150-200 ft below ground surface" (Permit Application, Attachment C at 7) to monitor that same USDW. It acknowledges that "communication between USDWs" exists in the project area (RTC at 10, Response 5f) and then defends the permit's monitoring design, confining-zone integrity finding, and AoR scope on the premise that the USDWs are discrete. Furthermore, it finds the AoR "based on modeling that reflects site-specific data" (RTC

at 13) even though the application concedes that "site-specific geomechanical data for the PECCUS-1 site are absent" (Project Narrative § 1.2.5), and it is precisely those geomechanical data that supply the critical-pressure threshold on which the AoR boundary depends. Furthermore, it accepted that same AoR model even though the application both states that "geochemical changes in rock properties are expected," including "changes in porosity and permeability due to calcite dissolution" that drive the model's predictions (Permit Application, Attachment G at 58), and concedes the model "does not factor in the geochemical effects of CO2 injection" (id., Attachment B at 7). Each contradiction is developed in the Issues that follow. Together they describe a Final Permit issued on a record that cannot reconcile its own findings.

Issue 1: Region 7's site characterization fails four cascading pre-permit requirements of 40 C.F.R. Part 146 Subpart H because the application does not characterize the High Plains Aquifer as a USDW within the AoR.

A. Preservation

Petitioner Iwasiw's comment (Iwasiw Comment at 3–6) preserved this issue with specificity: "The second very important issue in this permit is that Pratt Zero Carbon does not include the High Plains Aquifer/Ogallala Aquifer in their permit, despite overwhelming evidence that this aquifer is at the injection site and beyond. On page 350, under the Site Characterization Section, they briefly mention the Sappa & Grand Island Formations and the Fullerton & Holdrege Formations, sourced from material not updated since 1973. These aren't even Formations in their own right, and are in fact members of the Meade Formation and Blanco Formation, respectively."

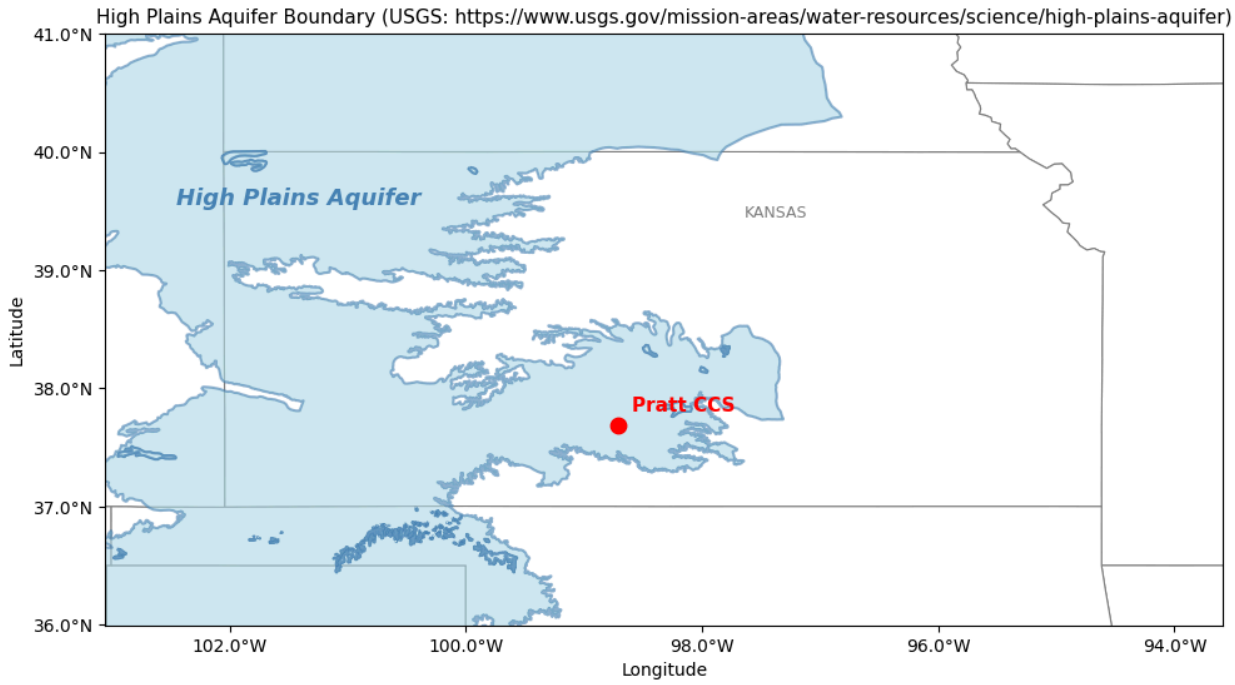

Figure 1. High Plains Aquifer and Pratt Zero Carbon CCS

Petitioner Iwasiw stated that "Pratt County belongs to the Great Bend Prairie of the High Plains Aquifer and falls under the GMD 5" (Iwasiw Comment at 4), asked "why wasn't this major aquifer included in the draft permit when there are resources going back 40 years demonstrating its extent and significance?" (Iwasiw Comment at 4–5), and placed the contemporary KSU, KGS, GMD 5, and USGS record evidence summarized in Section IV.D *supra* before Region 7.

B. Region 7's Response

Region 7 addressed comments related to the HPA in Responses 5c and 5m (RTC at 9 & 12). Response 5c states:

> "EPA acknowledges that some material available on the Kansas Geologic Survey website indicates these are members of the Meade and Blanco Formation, and there is additional information available from KGS which refers to them as formations as well. Regardless

> of regional naming conventions, this discrepancy does not alter the draft permitting decision nor negate that the EPA has found the proposed operations to meet the federal requirements under 40 C.F.R. Part 144 and 146 (Subpart H for Class VI injection wells)."

Response 5m states:

> "The EPA acknowledges the commenter's concern regarding the protection of the High Plains Aquifer but disagrees that it was not considered or protected …. Based on information reviewed, the lowermost USDW identified at the site is the Fullerton and Holdrege Aquifers which occur at approximately 230 feet below ground surface. …[The casing] provides an additional protective layer to all USDWs located at the site, including the High Plains Aquifer which qualifies as a USDW and is located approximately 160 feet below the ground surface."

C. Analysis

Region 7's Response 5m establishes the defect. By the Region's own account, the site contains a USDW (i.e., the HPA, at approximately 160 feet) that is shallower than and distinct from the 230-foot lowermost USDW the application characterizes (RTC at 12). However, the application and Final Permit contain no characterization of that USDW. The term "High Plains Aquifer" appears zero times across the application and the permit (Section IV.B, *supra*); the record includes no map of the HPA's vertical and lateral limits within the AoR, no baseline geochemical data for it, no analysis of whether it "may be endangered" for purposes of the AoR, and no monitoring well designed to detect its endangerment. The 160-foot figure appears in Response 5m without citation to any administrative-record source, and it is in tension with the

contemporary data Petitioner Iwasiw placed before the Region, which put depth to water at 50 to 100 feet and saturated thickness at 100 to 150 feet (Section IV.D, *supra*).

This is clear error, and no deference is owed, because the defect is the absence of a required finding rather than a contestable technical judgment. Sections 146.82(a)(5)–(6) and 146.84(a) require the applicant to map all USDWs within the AoR, supply their baseline geochemistry, and delineate the AoR to where USDWs "may be endangered", which are showings that must be provided to the Director before the permit issues. Where the Region concedes that a USDW exists at the site, the absence of required findings for that USDW is not a matter of competing technical judgment to which the Board defers; the record simply contains no finding for the Board to review, and a required Subpart H determination that the record never makes cannot be sustained. The omission defeats four linked requirements. Petitioners need not establish how the HPA is ultimately classified — whether it is a distinct, shallower USDW, the same unit the application already names under another name, or a connected regional system (the three readings set out in § D below) — because the downstream defects developed below follow under every one of them: the monitoring wells stop short of the 230-foot lowermost USDW the Region itself relies on (Issue 2), the inter-USDW communication the Region concedes goes unanalyzed (Issue 3), and the State agency that manages the regional aquifer received no direct notice (Issue 6).

Requirement 1, § 146.82(a)(5): Maps and stratigraphic cross-sections of all USDWs. The application must provide "[m]aps and stratigraphic cross sections indicating the general vertical and lateral limits of all USDWs, water wells and springs within the AoR, their positions relative to the injection zone(s), and the direction of water movement, where known." The application

supplies a single local cross-section (Figure 1-29) modified from a 1973 KGS Bulletin (Layton & Berry) (Permit Application, Attachment G, at 54-55). It includes no map of the HPA's lateral limits within the AoR, no characterization of regional HPA flow, and no treatment of the HPA as part of a connected overlying aquifer system. Region 7's Response 5e (RTC at 10) defends Figures 1-5 as "adequate for conveying the general stratigraphy of the proposed injection well," but § 146.82(a)(5) requires identification of the vertical and lateral limits of all USDWs within the AoR, which the record does not supply for the HPA.

Requirement 2, § 146.82(a)(6): Baseline geochemical data on all USDWs. This is a requirement distinct from (a)(5)'s spatial characterization: (a)(6) requires chemical baseline data. The application relies primarily on TDS data (158 to 355 ppm) for the Sappa/Grand Island Formations drawn from the 1973 Layton & Berry source (Permit Application, Attachment G, at 54). The record contains no contemporary geochemical analysis of the regional HPA system, no sampling distributed across the HPA's lateral extent within the AoR, and no characterization of the geochemistry of the connected aquifer system that Response 5f acknowledged.

Requirement 3, § 146.81(d): AoR delineation scoped to all USDWs that may be endangered. The AoR is "the region surrounding the geologic sequestration project where USDWs may be endangered by the injection activity." § 146.81(d). The provision uses the plural, "USDWs." Response 5m concedes the HPA "qualifies as a USDW" (RTC at 12), and Response 5f concedes that "communication between USDWs" exists in the project area (RTC at 10). If the HPA is a USDW and is hydraulically connected to the Fullerton/Holdrege unit the permit monitors, the HPA "may be endangered" and must fall within the AoR's scope. The computational AoR model the Region accepted does not analyze endangerment of the HPA as such.

Requirement 4, § 146.90(d)(2): Monitoring program keyed to (a)(6) baseline data. Section 146.90(d)(2) requires the testing-and-monitoring plan to specify monitoring frequency and spatial distribution "based on baseline geochemical data … collected under § 146.82(a)(6) and on any modeling results in the area of review evaluation required by § 146.84(c)." Because no (a)(6) baseline data exist for the HPA (Requirement 2), the (d)(2) monitoring design cannot reflect them; the LUSDW GW1 through GW5 wells are instead designed around the Fullerton/Holdrege unit, with no explanation of how they reflect system-wide baseline geochemical conditions.

The conclusion does not depend on how the HPA is classified, and Response 5c's dismissal of the point as one of "regional naming conventions" that "does not alter the draft permitting decision" (RTC at 9) does not reach it. If the HPA is a separate, shallower USDW, as Response 5m's two depths indicate, the required findings for it are absent. If the HPA and the Fullerton/Holdrege unit are the same unit under different names, Response 5m is internally inconsistent, because the same unit cannot be at both 230 feet and 160 feet, and the discrepancy goes unaddressed (Issue 2, *infra*). If, as KGS states, the HPA is “a regional aquifer system composed of several smaller units that are geologically similar and hydrologically connected” (KGS Public Information Circular 18 (2023)), of which the Sappa, Grand Island, Fullerton, and Holdrege Formations are constituent parts, then characterizing those units in isolation, without the connected system and despite the Region's own acknowledgment that "communication between USDWs" exists (RTC at 10), leaves the §§ 146.82(a)(5) and 146.84(a) showings incomplete. Under each reading, the same four requirements are left unsatisfied.

D. Region 7's Response Is Clearly Erroneous

First, Region 7's response does not resolve the question raised by the record. Under any interpretation, the regulatory showing required by §§ 146.81(d), 146.82(a)(5)–(6), 146.84(a), and 146.90(d) is not fully addressed. Even under the most charitable reading that the application's named units collectively represent the relevant portion of the HPA at the site, the record does not clearly show compliance with the requirements to map all USDWs within the AoR, provide baseline geochemical data for all USDWs, and delineate the region where USDWs may be endangered, particularly in light of acknowledged inter-USDW communication (RTC at 10). The unsupported depth figure in Response 5m and the "regional naming conventions" framing in Response 5c (RTC at 9) do not engage the underlying question of how the regional aquifer system was characterized for permitting purposes and so do not "describe and respond" to a significant comment under § 124.17(a)(2).

Second, the iterative provisions of Subpart H do not cure the absence of the required pre-permit analytical chain. Section 146.87 addresses pre-operational testing and monitoring design; § 146.84(e) requires periodic reevaluation of an existing AoR. Neither provision authorizes after-the-fact identification or characterization of USDWs not initially identified, mapped, and incorporated into the baseline and AoR analyses required under §§ 146.82(a)(5)–(6) and 146.84(a).

Third, the omission is the root cause of concrete defects the record independently confirms. Because the application never recognized the connected regional aquifer system, (i) the only wells monitoring the lowermost USDW were designed around a single named unit and terminate at 150–200 feet, short of the 230-foot depth the Region itself relies on (Issue 2, *infra*); (ii) the

admitted inter-USDW communication was never analyzed for its effect on monitoring design, confining-zone integrity, or AoR scope (Issue 3, *infra*); and (iii) GMD 5, the State agency that manages the aquifer Region 7 concedes "qualifies as a USDW", was never given direct notice (Issue 6, *infra*). Each is a substantive consequence of the missing characterization, and together they show the error affected the protection the permit must provide, not merely the names it uses.

E. Relief

For the reasons set forth above, Petitioners respectfully request that the Board grant review of Issue 1 and:

i. Vacate the Final Permit, in whole or in part, as the Board deems appropriate;

ii. In the alternative, remand the Final Permit to Region 7 with instructions to require Pratt Zero Carbon, LLC to supplement the application with:

   a. Regional maps and stratigraphic cross-sections showing the vertical and lateral limits of the HPA within and adjacent to the AoR, drawn from contemporary KGS, USGS, KU, and GMD 5 hydrogeologic sources, consistent with § 146.82(a)(5);

   b. Contemporary baseline geochemical data for the HPA collected from sampling locations distributed across its lateral extent within the AoR, consistent with § 146.82(a)(6);

   c. A revised AoR analysis under § 146.84(a) that expressly evaluates whether the HPA "may be endangered by the injection activity," including by CO2-laced brine or by pressure-driven brine distant from the CO2 plume, and accounting for the admitted inter-USDW communication; and

d. A revised Testing and Monitoring Plan designed using the new (a)(6) baseline data for the HPA, consistent with § 146.90(d)(2);

iii. Reopen the public comment period under § 124.10 for at least 45 days after supplementation, with direct notice to GMD 5 as the State entity managing the HPA.

Issue 2: Region 7's "230 foot" lowermost USDW finding cannot be reconciled with the permit's "150-200 foot" monitoring well construction interval.

A. Preservation

Petitioner Iwasiw's comment (Iwasiw Comment at 3–7) preserved this issue by submitting contemporary depth data for the regional aquifer system that conflicts with the application's lowermost-USDW characterization, and by reproducing the application's own well-diagram and stratigraphic depths. Petitioner Walter Scott Alberg, PG (Alberg Comment at 1–2) also raised concerns about the adequacy of site characterization with respect to the regional aquifer system that directly impacts the lowermost-USDW determination.

B. Region 7's Response

Region 7 addressed the lowermost-USDW depth in three responses, all of which adopt "approximately 230 feet":

Response 5f (RTC at 10) states:

> "The EPA agrees that unconformities exist and there is communication between USDWs within the project area. However, as required under 40 C.F.R. 146.86(b)(2), to be protective of underground sources of drinking water, proposed injection wells must have a surface casing which extends through the lowermost USDW and be cemented to the

> surface through the use of a single or multiple strings of casing and cement. Information gathered during the permit review indicated the lowermost USDW is approximately 230 feet below ground surface. The proposed surface casing for the injection well extends to approximately 800 feet below ground surface which provides an additional 570 feet of protection for USDWs at the site."

Region 7's reliance on § 146.86(b)(2) answers a different question. That provision is a casing-and-construction standard, requiring one surface casing string to "extend through the base of the lowermost USDW" and be cemented to surface; it governs how the injection well is built, not whether the monitoring wells reach the unit the Region calls the lowermost USDW. Responses 5m and 6c adopt the same 230-foot figure and derive the "2,600 feet of separation" finding from it (RTC at 12, 14; see § IV.G, *supra*). The permit's Testing and Monitoring Plan, however, requires the only five shallow groundwater monitoring wells to terminate above 230 feet: "The LUSDW GW1, LUSDW GW2, LUSDW GW3, LUSDW GW4, and LUSDW GW5 monitoring wells will be drilled to approximately 150-200 ft below ground surface to monitor the anticipated lowermost USDW, the Fullerton and Holdrege Aquifer" (Permit Application, Attachment C, at 7).

C. Analysis

Region 7 identifies the lowermost USDW at approximately 230 feet below ground surface in three responses: Response 5f (RTC at 10), Response 5m (RTC at 12), and Response 6c (RTC at 14). The permit's Testing and Monitoring Plan provides that the five shallow groundwater monitoring wells designated to monitor that unit, LUSDW GW1 through GW5, will be drilled to approximately 150 to 200 feet below ground surface (Permit Application, Attachment C, at 7).

The construction interval therefore terminates 30 to 80 feet above the 230-foot depth Region 7 identifies, and above the 223-foot average depth stated in the application's narrative (Permit Application, Attachment G, at 54). The application's stratigraphic table places the top of the same unit at less than 200 feet (id. at 17). The 150-to-200-foot screened interval therefore sits at or above the top the application's own table assigns the unit (<200 feet), and entirely above the 210-to-260-foot base, so the wells may not reliably monitor the unit at all, let alone its base.

Region 7's two protection findings are calculated from the 230-foot figure. Response 5f measures the 800-foot surface casing against the 230-foot lowermost USDW to find "an additional 570 feet of protection" (RTC at 10), and Response 6c uses the same depth to find "approximately 2,600 feet of separation" between the lowermost USDW and the top of the upper confining zone (RTC at 14).

D. Region 7's Response Is Clearly Erroneous

First, the contradiction is internal to Region 7's own record. The Region uses "approximately 230 feet" as the operative depth of the lowermost USDW, measuring both its "570 feet of protection" and its "2,600 feet of separation" findings from that figure (RTC at 10, 14); however the Region authorizes the only five wells that monitor that unit to terminate at approximately 150–200 feet, short of both the 230-foot depth the Region relies on and the 210–260-foot interval the application itself identifies as the base of the unit (Permit Application, Attachment G, at 54). A monitoring program that does not reach the depth the Region treats as the lowermost USDW cannot be squared with the depth finding on which the permit's own protection determinations rest, and the record nowhere explains why a shallower screened interval suffices. That is a

question of the Region's own numbers, committed to in the Final Permit and the RTC, and it cannot be deferred to pre-operational testing.

Second, the mismatch is itself a monitoring-design defect. The testing-and-monitoring plan must "verify that the geologic sequestration project … is not endangering USDWs" (§ 146.90), and § 146.90(d)(2) keys the monitoring network's spatial distribution to the baseline geochemical data for "all USDWs in the area of review" collected under § 146.82(a)(6). Wells screened at or above the unit's top in places, and entirely above its 210–260-foot base, cannot reliably detect endangerment of the unit the Region identifies as the lowermost USDW, whatever later testing may show, which is a deficiency independent of any deference owed the Region's technical judgment. The defect is also downstream evidence of the Issue 1 failure: had the application characterized the HPA within the regional aquifer system, the monitoring network would have been designed around it under § 146.90(d)(2).

Third, Region 7's response under § 124.17(a)(2) is inadequate. The Region asserts the "230-foot" finding three times without reconciling it with the monitoring program, and the Final Permit contains no change reconciling the depth finding with the monitoring design.

E. Relief

For the reasons set forth above, Petitioners respectfully request that the Board grant review of Issue 2 and:

i. Vacate the LUSDW GW1–GW5 monitoring-well design, and the lowermost-USDW depth determination on which the permit's protection findings rest, to the extent the two cannot be reconciled on the present record;

ii. Remand to Region 7 the lowermost-USDW depth determination and the design of the LUSDW GW1–GW5 monitoring wells, with instructions to reconcile the depth determination with the monitoring-well construction interval in the Testing and Monitoring Plan, either by (a) revising the lowermost-USDW depth determination with citation to specific record evidence supporting the revised figure, or (b) requiring the LUSDW GW1–GW5 wells to be drilled to a depth sufficient to monitor the unit Region 7 identifies as the lowermost USDW, in compliance with § 146.90(d); and

iii. Direct Region 7 to make publicly available, with the revised determinations, the underlying technical analysis supporting the depth(s) chosen, in conformance with § 124.17(a).

Issue 3: Region 7's concession that "communication between USDWs" exists is unaccompanied by any analysis of its consequences.

A. Preservation

Petitioner Iwasiw's comment (Iwasiw Comment at 6) preserved this issue with specificity, observing that in Pratt County the Pliocene-Pleistocene HPA sits unconformably on the underlying confining zone, and that per KGS "an unconformity truncates High Plains Aquifer at a low angle, where abraded pebbles/cobbles of Ogallala 'cap rock' locally form the lower few feet of the Blanco Formation (Fullerton & Holdrege Members)", "meaning, it is likely there is communication between these two formations."

B. Region 7's Response

Region 7's Response 5f, quoted in full in Issue 2, stated that "unconformities exist and there is communication between USDWs within the project area" (RTC at 10), which explicitly acknowledged the communication.

C. Analysis

Region 7's response acknowledges the communication and then pivots immediately to surface-casing depth, which is a different question: surface casing addresses upward migration into the lowermost USDW from below; it does not address communication *among* already-connected USDWs above the confining zone. Once Region 7 has admitted that USDWs in the project area are hydraulically connected, three downstream regulatory questions arise that Region 7's response does not engage:

1. Monitoring design. § 146.90(d)(2) requires that the monitoring frequency and spatial distribution of monitoring wells be "based on baseline geochemical data that has been collected under §146.82(a)(6) and on any modeling results in the area of review evaluation required by §146.84(c)." Where the relevant aquifer system is hydraulically connected, monitoring keyed to a single named unit (the Fullerton/Holdrege at 150–200 feet, which as Issue 2 shows do not even reach that unit's 210–260-foot base) cannot reliably detect endangerment of the connected system at other depths or lateral positions, and the baseline characterization on which adequate spatial distribution depends is the very USDW data the application did not supply (Issue 1, *supra*). Region 7's response says nothing about how connectivity affects monitoring placement or coverage.

2. Confining-zone integrity under § 146.83(a)(2). In hydraulically connected USDWs, a breach or undetected transmissive feature in the confining zone could allow pressure transmission or fluid migration beyond the immediate area of leakage. The Region's confining-zone finding rests on the assertion that "[a] review of the information provided did not identify any such features present in the proposed confining zones within the area of review" (RTC at 12), where "such features" refers to the transmissive faults or fractures § 146.83(a)(2) bars. That finding addresses identification of presently known features but does not analyze the implications of hydraulic connectivity if a transmissive pathway was overlooked or insufficiently characterized.

3. AoR scope under § 146.84(a). Section 146.84(a) defines the AoR as the region where USDWs may be endangered by injection activity. Where hydraulically connected USDWs exist, the extent of potential endangerment may depend on both plume location near the injection interval and on pressure transmission and potential fluid migration through interconnected pathways. Region 7's § 146.84(a) AoR analysis does not address whether hydraulic connections between USDWs could affect where drinking water could be endangered.

D. Region 7's Response Is Clearly Erroneous

First, Region 7's acknowledgment of inter-USDW communication, followed by silence on the downstream implications for monitoring design, well-integrity, and AoR delineation, leaves its response without substantive engagement with those aspects of the comment. A response that acknowledges the physical fact but makes no corresponding analysis of the regulatory consequences does not "describe and respond to" the significant comment within the meaning of § 124.17(a)(2).

Second, the connectivity admission is internally inconsistent with Region 7's defense to Issue 1. If the named units are connected to the broader regional HPA system (as Response 5f admits and KGS authority establishes), characterizing them in isolation cannot satisfy "all USDWs … within the area of review" under § 146.82(a)(5) or "USDWs … may be endangered" under § 146.84(a). The Region cannot maintain both positions.

Third, although Petitioner Iwasiw specifically raised inter-USDW communication and its implications for monitoring, well integrity, and AoR scope, the Final Permit contains no corresponding changes to the monitoring program, confining-zone analysis, or AoR scope. The Board has remanded permits where the Region's response failed to address petitioners' comments or make corresponding permit changes. *See* *In re Gov't of D.C. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 323 (EAB 2002).

E. Relief

For the reasons set forth above, Petitioners respectfully request that the Board grant review of Issue 3 and:

i. Vacate the confining-zone integrity finding under § 146.83(a)(2) as currently supported;
ii. Remand to Region 7 with instructions to require:
    a. An express record analysis of how the admitted inter-USDW communication affects the design of the Testing and Monitoring Plan, including whether monitoring wells must be sited and screened to detect endangerment of the connected aquifer system rather than only one named unit;
    b. A revised § 146.83(a)(2) integrity analysis explicitly addressing the consequences for connected USDWs in the event of any confining-zone failure; and

c. Revisions to the AoR delineation if the connectivity analysis indicates the AoR must be expanded to encompass the hydraulically connected aquifer system; and

iii. Reopen the public comment period under § 124.10 following the revisions.

Issue 4: Region 7 accepted an Area-of-Review delineation built on off-site, decades-old, and wrong-zone inputs the applicant never validated, contrary to § 146.84(c)(1), placing the corrective-action obligation for legacy wells on data the record never measured.

A. Preservation

Petitioner Alberg, a geologist and former KCC District #1 Manager/Geologist, preserved both the data-provenance and AoR-size objections. He asked Region 7 for "the reports such as fall off tests, DST results, pressure tests, Electric logs, rock samples" from the test well (Alberg Comment at 1), and, identifying "approximately 26 oil explora[t]ion wells" within a mile of PE IW-1 of which only "[t]wo … are within the AOR," said he was "wondering if the AOR should be expanded" (id. at 2). Petitioner Iwasiw preserved the deferred-characterization objection, protesting that the operator was "waiting on their stratigraphic well PE AZM-1 to 'gather site specific data'" and that "[t]his is not how a permit application works" (Iwasiw Comment at 2).

The challenged inputs appear in the AoR and CA Plan, Project Narrative, and PISC Plan that formed part of the draft permit; so the Issue was reasonably ascertainable and is preserved under § 124.13 and § 124.19(a)(4)(ii). The clear-error showing rests on those application materials. The appended KCC Form ACO-1 records corroborate it: the ACO-1 for PE AZM-1 (filed June 3, 2025) predates the comment period, and the Rolf #1 and Swingle #1 records (filed May 14 and 15, 2026), which postdate it, are offered subject to official notice.

B. Region 7's Response

Region 7 consolidated its response at Comments 4a and 6a (RTC at 7, 13), finding the AoR "based on modeling that reflects site-specific data" and disagreeing "that additional analysis outside the buffer is necessary to ensure USDW non-endangerment." To the AoR-size comment it offered a 500-foot buffer analysis that "yielded five additional oil and gas wells which have been plugged" (RTC at 13) and a commitment to later reevaluation; it did not address Alberg's roughly 26 wells. It answered the deferral objection at Response 5b (RTC at 9) by invoking § 146.87(b) pre-operational testing and post-permit AoR reevaluation. The Response to Comments says nothing about the data underlying the 0.37 psi/ft pore-pressure gradient.

C. Analysis

The AoR is a composite of the CO2 plume and the pressure-front plume, and in the permit the CO2 plume controls. The operator delineated a 1.39-square-mile AoR set by the CO2 plume, with the critical-pressure plume forming a 0.26-square-mile sub-area inside it (AoR and CA Plan § 2.3.2). Both plumes are computed from the same subsurface inputs, and Subpart H conditions their use on data quality: the model must "[t]ake into account … data quality, and their possible impact on model predictions." § 146.84(c)(1)(ii); see also § 146.84(c)(1)(i). Every input that fixes the pressure-front threshold is borrowed, whether off-site, stale, or from the wrong formation (point 1, *infra*). The CO2 plume that actually sets the boundary rests on no firmer footing: the operator reports it is "most sensitive to initial oil saturation" (AoR and CA Plan § 2.1.3), a value taken from analog and literature sources because "there were no available core analyses for this specific project location" (AoR and CA Plan § 2.1.4). The operator's sensitivity analysis shows both the pressure-front and CO2-plume boundaries change widely with these inputs; however, the operator validated no assumed input against site data. The operator never

varied the controlling pressure gradient and corresponding critical-pressure threshold and instead relied on the value obtained from a four-decade-old DST (*see* Attachment 4) that was not confirmed to have reached steady state. Section 146.84(c)(1)(ii) requires the model to take that data quality and its impact into account. Quantifying how far the boundary moves with inputs it never measured does not satisfy the rule.

1. Every controlling input is either off-site, stale, and/or from the wrong formation. The critical-pressure threshold is a function of five inputs: the lowermost USDW's pressure and depth, as well as the injection zone's pressure, fluid density, and depth, with fluid density derived from salinity and temperature. No input used by the operator comes from the site.

- *Injection-zone pressure.* The 0.37 psi/ft gradient is attributed to "DST data from nearby wells with well API # 15-151-21589, 15-151-21405, and 15-151-21910" (AoR and CA Plan Table 2-9), but the KCC completion records for two of those wells (Kerr #1 and Chinn #1) show them drilled in the 1980s and located approximately 14 miles from the project (Attachments 5–6, offered subject to official notice; illustrated in Attachment 7 (well-location map)), and the operator identifies no measurement taken from them. The only in-situ datum the permit describes is a drill stem test in the Douglas Shale, a confining unit rather than the reservoir, at Briggeman-Leal-Trinkle 1, 2.5 miles away (Final Permit; Attachment 4). That measurement governs confining-zone pressure under § 146.82(a)(3)(iv); the operator repurposed it as the injection-zone gradient that drives the threshold. Although the shut-in pressure was reported, its static-reached status was not established.
- *Fluid density.* The injection-zone fluid density of 67.2 lb/ft³ is not a site measurement; it is "estimated by using the formulation proposed by McCutcheon et al. (1993)," which

derives density from the same values assumed for assumed salinity, temperature, and pressure (AoR and CA Plan Table 2-13). That density implies a hydrostatic gradient of roughly 0.466 psi/ft, well above the 0.37 psi/ft used, and the two reconcile only if the reservoir is underpressured. The operator asserts that condition ("the reservoirs at PECCUS-1 are underpressured to begin with," (PISC Plan at 4)) but never measured it at the site, so the underpressure premise on which both the gradient and the PISC non-endangerment finding depend is unverified.

- *Salinity* (110,000 mg/L) is an estimate from Carr et al., 1986 (Table 2-9), a regional, four-decade-old report on a different formation (Carr et al., 1986).
- *Temperature* is not a site measurement but an assumed value: the 103°F used at the 4,110 ft injection depth is a 70°F surface temperature projected downward at an assumed 0.8°F/100 ft gradient (Table 2-9); the application attributes it to the Rolf #1 well-log header, but that gradient does not reproduce the header's reported 112°F at 4,526 ft.
- *Lowermost-USDW pressure* is drawn from regional and literature sources (Table 2-13), and the HPA is never characterized as a USDW at all (Issue 1, *supra*).

One drill stem test with a recovered fluid sample at any injection-zone well on site would have supplied four of these inputs at once; the operator obtained none (Attachments 1-3).

2. The operator's own sensitivity analysis shows the boundary is acutely sensitive to inputs it never measured, and the analysis it ran was too narrow to support the conclusions it drew. The operator concluded that "base case is a reasonable approximation of the actual system" and that the critical-pressure plume, "even with 225% increase, … is a subset of the AoR" (AoR and CA Plan § 2.3.4). Neither conclusion is supported, because the operator tested a range far narrower than its data's own uncertainty and left a controlling input untested. The critical-pressure plume

was "most sensitive to the storage zone's absolute permeability," which a 30% reduction expands by more than 225% (Id). But the operator had no site permeability: "[t]here were no available core analyses for this specific project location," so permeability rests on analog and literature values. Because carbonate permeability ranges over orders of magnitude (Lucia, 1995; Male & Duncan, 2020), a plus-or-minus-30% sweep samples only a sliver of the plausible range, and the "subset" relationship is demonstrated within that sliver and nowhere else; at a permeability an order of magnitude below base case, which no site data excludes, the critical-pressure plume could exceed the CO2 plume and control the AoR. The pore-pressure gradient compounds the problem. It directly sets the initial injection-zone pressure (Pi) that enters the critical-pressure threshold calculation; even a small change in the gradient produces a large change in the assumed formation pressure and, through it, in the computed critical-pressure threshold and the extent of the pressure front. The operator nonetheless left the gradient at a single borrowed value and excluded it from the sensitivity sweep, which varied permeability, salinity, oil saturation, irreducible water saturation, and grid-block size, but not the gradient. A sensitivity analysis that brackets an extremely uncertain, non-site input within plus-or-minus 30% and leaves a controlling input untested does not "[t]ake into account … data quality, and their possible impact on model predictions" (§ 146.84(c)(1)(ii)). Attachment 8 (well-location and pressure-front map) illustrates the point: at the operator's inputs the 303-psi pressure front (red) sits well inside the permitted CO_2-plume AoR (magenta), but a pressure-gradient error of only 0.03 psi/ft expands that front (orange) past the permitted AoR boundary — bringing additional deep legacy wells within the zone that §§ 146.84(c)(2)–(3) would require the operator to identify and assess (*see* Attachment 8).

3. Regarding inputs that control the threshold, the operator concedes there is no site data, and the Region's general "site-specific data" finding does not reach them. Region 7 found the AoR "based on modeling that reflects site-specific data" (RTC at 13). Whatever that statement establishes about the site geology and static model, it does not reach the pressure inputs that drive the threshold, because the Project Narrative concedes that "site-specific geomechanical data for the PECCUS-1 site are absent" and that the operator accordingly "used drill stem test (DST) data, regional assumptions, and literature" instead (§ 1.2.5). The controlling inputs thus have no site basis by the operator's own account, a point that requires no deference to technical expertise (§ 124.19(a)(4)(i)(A)) and that the Region never addressed in defending the delineation.

4. The defect is present and concrete, and post-permit testing cannot cure it. The AoR must satisfy § 146.84(c)(1) at issuance, and it fixes the initial corrective-action set: §§ 146.84(c)(2)–(3) require the operator to identify "all penetrations … in the area of review that may penetrate the confining zone(s)," describe each, and determine the adequacy of plugging of abandoned wells; § 146.84(d) requires corrective action on all wells in the AoR determined to need it. The permit implements this through a phased plan: artificial penetrations "within the AoR identified in Attachment B" are plugged and abandoned "according to the Phased Corrective Action Plan timeline (included in Attachment B) or at the Director's discretion as operational data indicates the necessity to plug and abandon the APs prior to interaction with the plume, whichever occurs first," and "[i]njection activities may be halted should incomplete/insufficient corrective actions risk interaction with the plume" (Final Permit, Part F.2(a), (c)). That phased, plume-triggered regime operates only on wells already inside the delineated AoR and listed in Attachment B. The consequence is structural: a boundary drawn too

small by unmeasured inputs does not defer the omitted wells to a later phase; it excludes them from the mandatory § 146.84(c)(2) inventory — regardless of whether they appear in public well records; so they are never assessed under (c)(3), never reach corrective action under (d), and never trigger the plume-interaction halt under Part F.2(c).

The scale of what an under-bounded AoR omits is concrete on this record. By the operator's count, the storage-complex well search returned ten wells, only two of them deep oil and gas wells that penetrate toward the confining zone; the rest are shallow water wells of 63 to 165 feet (AoR and CA Plan § 2.4.1). However, of the approximately 26 oil-exploration wells Alberg identified within roughly one mile of PE IW-1, only two lie within the 1.39 mi² AoR (Alberg Comment at 2). The controlling CO2-plume boundary is, by the operator's own sensitivity analysis, acutely sensitive to inputs it never measured (most notably initial oil saturation; § C.2, *supra*), and the smaller critical-pressure plume could itself expand to control the AoR under permeability values that no site data excludes (id.). As Attachment 8 shows, the deep penetrations (completed below ~3,282 ft, the top of the storage complex) cluster around the project, and the count swept into the corrective-action inquiry under §§ 146.84(c)(2)–(3) rises with any expansion of the boundary the unmeasured inputs control. The boundary thus determines not just where injection occurs but how many legacy penetrations enter the corrective-action inquiry at all.

Reevaluation does not cure the defect, because § 146.84(e) re-runs the same model on the same unmeasured inputs; it cannot correct an error that lives in those inputs. The site data are not merely deferred; they are absent from the record now. As the operator’s own submitted KCC well-completion records reflect (Attachments 1–3, offered subject to official notice), the operator drilled PE AZM-1 in 2025 and re-entered Rolf #1 and Swingle #1– wells that are also the closest

legacy wells to the project injection site (Attachments 1–3, 7 & 8) in May 2026 without taking a single drill stem test, core, or fluid sample, although the operator's Pre-Operational Logging and Testing Plan Table 5-1 lists each technique. Neither § 146.84(e) reevaluation nor the Part F.2(c) plume-interaction halt cures the defect: both run on the same model, so reevaluation only repeats the computation on the same unmeasured inputs, and the halt is calibrated to the same unreliable plume. §§ 146.84(e) and 146.87 refine a delineation that satisfied § 146.84(c)(1) at issuance; they do not supply one that did not (Standard of Review, *supra*).

D. Region 7's Response Is Clearly Erroneous

First, accepting an AoR model that adopts borrowed, unvalidated inputs whose impact the operator's own sensitivity analysis was too narrow to bound is a clear error under § 124.19(a)(4)(i)(A). The model does not "take into account … data quality, and their possible impact on model predictions" as § 146.84(c)(1)(ii) requires, and the Region's finding that the AoR "reflects site-specific data" (RTC at 13) cannot be reconciled, as to those inputs, with the applicant's concession that they "are absent" (Project Narrative § 1.2.5). That reconciliation requires no deference.

Second, Region 7 also failed to "describe and respond to all significant comments." § 124.17(a)(2). It said nothing about the provenance of the 0.37 psi/ft gradient, including its source wells, the confining-zone origin of the only described measurement, and the missing static-reached status, though Alberg expressly requested the underlying DST, falloff, and pressure-test reports (Alberg Comment at 1). It answered Alberg's one-mile, roughly 26-well AoR-size comment with a 500-foot buffer that found five plugged wells (RTC at 13), a narrower

question than the one raised. Silence on the input that most controls the threshold, and an answer to a smaller question than the comment asked, are each an independent failure to respond.

The Region's remaining answer, that post-permit testing and § 146.84(e) reevaluation will later supply what the record lacks, does not cure a delineation that fails § 146.84(c)(1) now, for the reasons in point 4 of the Analysis, *supra*.

E. Relief

Petitioners respectfully request that the Board grant review of Issue 4 and:

i. Vacate the Final Permit, in whole or in part as the Board deems appropriate; or

ii. In the alternative, remand to Region 7 with directions to require Pratt Zero Carbon, LLC to:

   a. Obtain *in situ* pore-pressure measurement(s) at PE IW-1 (or a co-located pre-injection well) of sufficient duration to reach static formation pressure within the Shawnee and Lansing-Kansas City Groups, and collect site brine samples for salinity, density, and ionic-composition analysis, before re-delineating the AoR;

   b. For each well at AoR and CA Plan Table 2-9 (API 15-151-21589, 15-151-21405, and 15-151-21910), disclose the formation tested, depth, FSIP, distance from PE IW-1, test date, and static-reached status, and explain its contribution to the 0.37 psi/ft derivation;

   c. Perform a sensitivity analysis on the pore-pressure gradient, temperature, fracture gradient, and USDW density comparable to the salinity sensitivity at AoR and CA Plan § 2.3.4;

d. Re-delineate the AoR using the site-measured inputs and, within the corrected boundary, identify and address all confining-zone-penetrating wells under §§ 146.84(c)(2)–(3) and (d), including consideration of the approximately 26 wells within one mile identified in the Alberg Comment; and

iii. Reopen the public comment period under § 124.10.

Issue 5: Region 7 conditioned public review of the 3D seismic fault-and-fracture data, which Region 7 concedes bears on the § 146.83(a) confining-zone finding, on the Director's discretionary determination, foreclosing the comment right that § 124.10 guarantees.

A. Preservation

Petitioners Gene and Jan Parsons, who are Section 23 landowners (Parsons Comment), preserved this issue with specificity, objecting that the application on which the public was asked to comment omitted the seismic basis for the permit's fault-and-fracture findings:

"This proposal uses a Computational Modeling Approach. There is not an actual seismic study included in this application…. We do not understand how a permit can be given for a project of this nature when the seismic information is unknown as of this date" (Parsons Comment at 2).

Petitioner Walter Scott Alberg, PG, reinforced the same concern, asking that EPA conduct "a thorough review of the permit, geology of the area, … injection well design, including any new seismic and any other available material gathered for this project," all of which should be "thoroughly evaluated prior to the injection permit being issued" (Alberg Comment at 2). Together, the comments preserved the objection that the factual basis for the § 146.83(a)

confining-zone finding — the seismic fault-and-fracture data — was not before the public when it commented and was deferred to a point after issuance.

B. Region 7's Response

Region 7 addressed the seismic issue in Response 5j (RTC at 11):

"This proposed draft permit grants PZC the ability to construct the well and includes requirements to obtain information confirming the site-specific information. In addition to this information being obtained by core recovery and analysis, this also includes **obtaining 3D seismic information to confirm the geologic structure of the area**. An authorization to inject will not be issued until the site-specific information obtained (core data, seismic, geochemical, etc.) has been reviewed by the Director. **If new data indicate changes need to be made to the permit to ensure the protection of USDWs, the modifications will be open to the public for review and comment.**" (Emphasis added.)

Region 7 made a parallel commitment in Response 5i (RTC at 11), addressing seismic surveys being conducted near Petitioners Parsons' property line:

"If new information is obtained through core data and the area of review expands, then this would constitute a major permit modification which would trigger a new public comment period."

C. Analysis

Region 7's own responses establish three facts that, taken together, define the defect. *First*, the 3D seismic data is substantive information bearing on USDW protection: Region 7 mandates its acquisition precisely "to confirm the geologic structure of the area" (Response 5j), the structure

that the § 146.83(a)(2) "free of transmissive faults or fractures" finding turns on. *Second*, that data does not yet exist and was not in the record provided to public for comment; the application's fault-and-fracture assessment under § 146.82(a)(3)(ii) rests on regional and legacy oil-field data rather than site-specific subsurface imaging. *Third*, whether the public will ever see or comment on the seismic-based assessment depends entirely on a discretionary determination by the Director: according to Response 5j, only "[i]f new data indicate changes need to be made," and under Response 5i, only if "the area of review expands."

Under § 124.10, the public's opportunity to comment precedes and informs the agency's substantive permit decision; the fact sheet required by § 124.8 must "set forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permit," and § 146.82(a)(3)(ii) places the fault-and-fracture assessment in the *application* the public comments on. Region 7's mechanism inverts that order, making the public's right to comment on the factual basis for the § 146.83(a) finding contingent on, and subsequent to, the Director's own conclusion that the basis warrants a permit change. If the Director concludes no modification is required, no public review occurs, even if the seismic data reveals features bearing on the "free of transmissive faults or fractures" determination, and even though the AoR-expansion trigger of Response 5i would never fire for a fault that affects containment without enlarging the plume footprint.

D. Region 7's Response Is Clearly Erroneous

First, the deferral removes a core factual basis for the § 146.83(a) finding from the public-comment process that § 124.10 guarantees, and it substitutes a discretionary, agency-controlled gate. Petitioners do not object to pre-operational testing given that the Class

VI program contemplates iterative data collection; rather, Petitioners object to conditioning the public's comment right on the Director's unilateral judgment about the significance of data the public has not seen. A comment right that the permittee's regulator may switch off by deciding, without public input, that the new data changes nothing is not the comment right § 124.10 provides.

Second, Region 7's narrower Response 5i commitment, which stated that AoR expansion would trigger a new comment period, does not cure the defect. Seismic data may reveal a transmissive fault or fracture bearing on the 146.82(a)(3)(ii) assessment or the § 146.83(a) confining-zone finding without expanding the AoR. The trigger Region 7 offers is therefore not coextensive with the universe of seismic findings that bear on USDW protection, and the public's comment right cannot turn on a trigger narrower than the regulatory determinations the data informs.

E. Relief

For the reasons set forth above, Petitioners respectfully request that the Board grant review of Issue 5 and:

i. Remand to Region 7 with instructions to require, as a condition of the permit, that the completed 3D seismic acquisition and the resulting fault-and-fracture assessment be placed in the administrative record and made available for public comment under § 124.10 before any authorization to inject issues — not contingent on the Director's determination that a permit modification is required; and

ii. Direct Region 7 to treat seismic findings bearing on the § 146.82(a)(3)(ii) assessment or the § 146.83(a) confining-zone finding as warranting public review whether or not they expand the AoR.

Issue 6: Direct-mail notice limited to one-half mile was not "reasonably calculated to give actual notice" given the AoR and surrounding affected resources.

A. Preservation

Petitioner Walter Scott Alberg, PG (Alberg Comment at 1) preserved this issue with specificity, observing "the lack of attendance by the public on this matter, especially the lack of any City of Pratt, County of Pratt and any State of Kansas agencies such as the KDHE District personnel at this meeting," noting that the only notification "was in the back pages of the Tri-County Tribune," and identifying that "the city is in the planning stages of building an Ion Exchange treatment facility almost directly down gradient of the proposed injection well" (Alberg Comment at 1).

B. Region 7's Response

Region 7 addressed the notice issue in Response 3a, stating that it "mailed the public notice and fact sheet to property owners within one-half mile of the proposed area of review," published notice in a local newspaper, notified the Kansas Corporation Commission and KDHE, consulted the City of Pratt, and posted the materials online (RTC at 6).

Response 6c (RTC at 14–15) acknowledged that the proposed City of Pratt ion-exchange facility lies "approximately one mile outside the area of review."

C. Analysis

The half-mile direct-mail radius does not appear in § 124.10; it is a Region-chosen practice for this permit, subject to the standard in § 124.10(c)(4) that the Region "shall" use "any other

method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it."

That standard is objective and prospective. It asks whether the method the Region chose was reasonably calculated, at the time of notice, to reach the persons potentially affected, not whether any particular person ultimately learned of the proceeding by other means. That certain commenters at or near the radius found their way into the record therefore neither establishes that the method was adequate nor cures its under-inclusiveness; it says nothing about the persons the method left out. Measured against the affected area this permit defines, the half-mile radius was not reasonably calculated, for three independent reasons drawn from the facts set out in § IV.E, *supra*.

1. The State entity managing the affected aquifer was not on the notice list at all. Region 7 notified the Kansas Corporation Commission and the Kansas Department of Health and Environment but did not notify Groundwater Management District 5 (§ IV.E, *supra*), the State agency that administers use of the HPA in Pratt County and that manages the aquifer Region 7's Response 5m concedes "qualifies as a USDW" at the site (RTC at 12). GMD 5 is plainly a "person potentially affected" by an injection authorization below the aquifer it regulates, yet the chosen method did not reach it.

2. The modeled pressure front extends well beyond the noticed radius. By the application's own modeling, the pressure front extends well past one-half mile — on the order of two to three miles, reaching 2 ½ to 3 miles by year three of injection (§ IV.E, *supra*). Property owners in the annulus between one-half mile and the modeled pressure-front edge are "persons potentially

affected" within the meaning of § 124.10(c)(4), and a method scoped to one-half mile was not calculated to reach them.

3. The principal regional drinking-water facility lies a mile beyond the radius and down-gradient. The City of Pratt's planned ion-exchange water-treatment facility, which will serve the regional public drinking-water supply, sits approximately one mile outside the area of review and almost directly down-gradient of the proposed injection well (§ IV.E, *supra*). Region 7 points to its "consult[ation]" with the City (Response 3a), but consultation with a municipality's staff is not the § 124.10(c)(4) inquiry, which asks whether the *method* of notice was reasonably calculated to reach the persons potentially affected. That the City's comment was dated three days after the comment period closed (§ IV.E, *supra*) confirms the point rather than answering it: even the one potentially affected entity the Region engaged informally was not dated within the formal notice the rule requires. A method that leaves the regional drinking-water provider to comment late, and the downgradient property owners and GMD 5 not at all, was not "reasonably calculated to give actual notice … to the persons potentially affected."

D. Region 7's Response Is Clearly Erroneous

First, § 124.10(c)(4) is mandatory and substantive, not a procedural minimum: the Region "shall" use methods "reasonably calculated to give actual notice … to … persons potentially affected." On this AoR, the chosen half-mile method excluded the State agency managing the affected aquifer, the owners in the area that the Region's own modeling identifies as within the pressure front, and the regional drinking-water facility a mile down-gradient. A method that omits those persons is not "reasonably calculated" within the meaning of the rule, and Region 7's reliance on consultation with the City of Pratt (Response 3a) does not cure the defect.

Second, the under-inclusive notice undermines the completeness of the very administrative record on which the Final Permit must rest under § 124.18. The appropriate remedy is to reopen the comment period on adequate notice so that the persons the method failed to reach (most plainly, GMD 5) can be heard, independent of the disposition of Issues 1–6.

E. Relief

Petitioners respectfully request that the Board grant review of Issue 6 and:

i. **Remand** to Region 7 with instructions to reopen the public comment period on adequate notice, and specifically to:
    a. Provide direct notice to Kansas Groundwater Management District 5 as the State entity managing the HPA in the Great Bend Prairie management area;
    b. Expand the direct-mail radius to encompass, at a minimum, property owners within the modeled substantial increase in formation pressure identified in the application (which Petitioner Alberg observed is 2 ½ to 3 miles), and to include the proposed City of Pratt ion-exchange water-treatment facility;
    c. Provide individualized notice to property owners within Section 23, Pratt County, including Petitioners Gene and Jan Parsons identified in the Parsons Comment; and
    d. Re-publish notice in a newspaper of broader regional circulation in addition to the Tri-County Tribune; and
ii. **Direct** that the reopened comment period be not less than 45 days following the expanded notice, matching the 45-day period Region 7 used for the original draft.

VII. INDEPENDENT GROUNDS FOR POLICY REVIEW

Independently of the clear-error grounds developed in Section VI, this Petition presents recurring, structural questions warranting the Board's discretionary review under § 124.19(a)(4)(i)(B). PECCUS-1 is the second UIC Class VI permit ever issued in Kansas; it sits over the HPA, a regional principal aquifer underlying eight states that supplies 70–80% of Kansas's daily water use (KGS PIC 18 (2023)); and it is among the first wave of forthcoming ethanol-CCS Class VI applications across the Midcontinent driven by 45Q tax credits and sited on carbonate reservoirs overlying the same regional aquifer system. Region 7's approach in this Permit will likely set a template for that queue. Board guidance is warranted on four cross-cutting questions:

1. The minimum pre-permit characterization required of Class VI applications overlying regional aquifer systems under §§ 146.82(a)(5), 146.82(a)(6), and 146.84(a), where the application characterizes named units in isolation without addressing the connected regional aquifer system the Region itself acknowledges (Issues 1-3).

2. The relationship between pre-permit § 146.84(c)(1) characterization and post-permit § 146.87 verification of foundational AoR inputs in carbonate reservoirs, including the proper limits of selective conservatism under § 146.84(c)(1)(ii) and the boundary between characterization and refinement under § 146.84(e) (Issue 4).

3. Whether public review of substantive site-characterization data acquired post-permit may be made contingent on the Director's discretionary modification determination**,** displacing the comment guarantees of § 124.10 (Issue 5).

4. The minimum acceptable scope of direct-mail notice under § 124.10(c)(4) for Class VI permits affecting regional principal aquifers, where the affected area substantially exceeds the immediate well location (Issue 6).

Petitioners respectfully request that the Board grant review on these questions independently of the clear-error grounds above and issue a memorandum opinion articulating standards on each.

VIII. RELIEF REQUESTED

For each Issue, Petitioners have identified the specific corrective action they seek in that Issue's Relief paragraph. In summary, Petitioners respectfully request that the Board:

- **Grant review** of UIC Class VI Permit No. KSS151570001;
- **Vacate** the Final Permit, in whole or in part as the Board deems appropriate, with instructions to Region 7 to undertake the corrective actions identified in each Issue's Relief paragraph above;
- **In the alternative**, **remand** the Final Permit to Region 7 with instructions to address each Issue as specified in its respective Relief paragraph above (Issues 1–6);
- **Direct** Region 7 to provide opportunity for public comment on any revised determinations before issuing a new final permit decision, with direct notice to GMD 5 and additional parties identified in Issue 6;
- **Order** such further relief as the Board deems just and proper.

The filing of this Petition stays the effect of all contested conditions of the Final Permit by operation of 40 C.F.R. § 124.16(a)(1). Moreover, because PE IW-1 is a new injection well, §

124.16(a)(1) provides that "the applicant shall be without a permit for the proposed new … injection well … pending final agency action." PZC is therefore not authorized to commence construction or injection on the new well until the Board acts.

IX. CONCLUSION

Region 7's Final Permit authorizes Pratt Zero Carbon to inject carbon dioxide into carbonate reservoirs more than 3,000 feet beneath Pratt County, below the HPA, the regional aquifer system that supplies 70–80% of Kansas's daily water use (KGS PIC 18 (2023)), for twelve years, followed by fifty years of post-injection site care.

The administrative record cannot support that decision. First, the permit mischaracterizes the USDWs Subpart H requires it to protect: it never characterizes the HPA as a USDW within the Area of Review, despite Region 7's concession that the HPA "qualifies as a USDW" at the site; its 230-foot lowermost-USDW finding cannot be reconciled with the 150–200-foot LUSDW GW1–GW5 monitoring interval; and it acknowledges communication between USDWs without analyzing its consequences. Second, it builds the Area of Review on a critical-pressure threshold whose controlling inputs are off-site, decades-old, or drawn from the wrong zone, contrary to the data-quality conditions § 146.84(c)(1) places on the model. Third, the permit commits two procedural defects: it forecloses the public-comment right § 124.10 guarantees by making review of the deferred 3D-seismic fault-and-fracture data, which is the basis for the § 146.83(a) confining-zone finding, contingent on the Director's discretionary modification decision; and it rests on a half-mile direct-mail notice radius that does not reach the affected regional drinking-water resources or the State agency that manages them.

The Safe Drinking Water Act, 42 U.S.C. § 300h(b)(1), and 40 C.F.R. Part 146 Subpart H impose substantive pre-permit requirements that, on this record, were not satisfied; each defect rests on a clearly erroneous finding, an important policy consideration warranting review, or both. 40 C.F.R. § 124.19(a)(4)(i). Petitioners respectfully request that the Board grant review and vacate the Final Permit, in whole or in part as the Board deems appropriate, or in the alternative remand for the corrective action specified in Section VIII and in each Issue's Relief paragraph above.

Dated: June 4, 2026

Respectfully submitted,

DocuSigned by:
Alexis Iwasiw
C9C1C35A3BD7465...

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Signed by:
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Pro se Petitioners

Petitioners authorize Alexis Iwasiw to receive service on all Petitioners' behalf.

CERTIFICATE OF COMPLIANCE WITH WORD LIMIT

Pursuant to 40 C.F.R. § 124.19(d)(1)(iv) and (d)(3), I, Alexis Iwasiw, Lead Petitioner, certify on behalf of all Petitioners that this Petition for Review complies with the 14,000-word limit. The Petition contains ~13,700 words, exclusive of the table of contents, table of authorities, this certificate of compliance, the certificate of service, and the attached documents. The word count was determined by the word-processing system used to prepare this document.

Dated: June 4, 2026

DocuSigned by:
Alexis Iwasiw
C9C1C35A3BD7465...

Alexis Iwasiw, Lead Petitioner

CERTIFICATE OF SERVICE

I, Alexis Iwasiw, Lead Petitioner, certify on behalf of all Petitioners that on June 4, 2026, I caused to be served a true and correct copy of the foregoing Petition for Review, together with all attachments, on the following parties by first-class U.S. mail and electronic service where indicated:

Regional Administrator, EPA Region 7 U.S. Environmental Protection Agency, Region 7 11201 Renner Boulevard Lenexa, Kansas 66219 *By: first-class U.S. mail*

Pratt Zero Carbon, LLC, Attn: David Mog, 10333 NE 30th St., Pratt, Kansas 67124 *By: first-class U.S. mail*

Pratt Zero Carbon, LLC, c/o Corporation Service Company (Registered Agent) 1100 SW Wanamaker Rd, Suite 103, Topeka, Kansas 66604 *By: first-class U.S. mail*

Dated: June 4, 2026

DocuSigned by:
Alexis Iwasiw
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Alexis Iwasiw, Lead Petitioner

Attachment 1

KCC Form ACO-1 (Well Completion or Recompletion Report and Log), PE AZM-1 (API 15-151-22610), filed June 3, 2025

Accessed June 1, 2026 from:
https://kgsimages.blob.core.windows.net/kolar/filer_3/public/2025-06/kolar_images.images.img/sid=1277125126.pdf

Confidentiality Requested:
☐ Yes ☐ No

CONFIDENTIAL

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

Form ACO-1
January 2018
Form must be Typed
Form must be Signed
All blanks must be Filled

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____+ __ __ __ __

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

☐ New Well ☐ Re-Entry ☐ Workover

☐ Oil ☐ WSW ☐ SWD
☐ Gas ☐ DH ☐ EOR
☐ OG ☐ GSW
☐ CM *(Coal Bed Methane)*
☐ Cathodic ☐ Other *(Core, Expl., etc.)*: _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

☐ Deepening ☐ Re-perf. ☐ Conv. to EOR ☐ Conv. to SWD
☐ Plug Back ☐ Liner ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #: _____
☐ Dual Completion Permit #: _____
☐ SWD Permit #: _____
☐ EOR Permit #: _____
☐ GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
_____	_____	_____

API No.: _____

Spot Description: _____

___-___-___-___ Sec. _____ Twp. _____S. R. _____ ☐East ☐West

_____ Feet from ☐ North / ☐ South Line of Section

_____ Feet from ☐ East / ☐ West Line of Section

Footages Calculated from Nearest Outside Section Corner:

☐ NE ☐ NW ☐ SE ☐ SW

GPS Location: Lat: _____ *(e.g. xx.xxxxx)* , Long: _____ *(e.g. -xxx.xxxxx)*

Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? ☐ Yes ☐ No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____S. R. _____ ☐ East ☐ West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

☐ **Confidentiality Requested**
Date: _____
☐ **Confidential Release Date:** _____
☐ **Wireline Log Received** ☐ **Drill Stem Tests Received**
☐ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☐ **I** ☐ **II** ☐ **III** **Approved by:** _____ **Date:** _____

Attachment 2

KCC Form ACO-1, Rolf #1 (API 15-151-00477), filed May 14, 2026

Accessed June 1, 2026 from:
https://kgsimages.blob.core.windows.net/kolar/filer_3/public/2026-05/kolar_images.images.img/sid=1310865796.pdf

Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1
January 2018
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____+ __ __ __ __

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

☐ New Well ☐ Re-Entry ☐ Workover

☐ Oil ☐ WSW ☐ SWD
☐ Gas ☐ DH ☐ EOR
☐ OG ☐ GSW
☐ CM *(Coal Bed Methane)*
☐ Cathodic ☐ Other *(Core, Expl., etc.)*: _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

☐ Deepening ☐ Re-perf. ☐ Conv. to EOR ☐ Conv. to SWD
☐ Plug Back ☐ Liner ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #: _____
☐ Dual Completion Permit #: _____
☐ SWD Permit #: _____
☐ EOR Permit #: _____
☐ GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
_____	_____	_____

API No.: _____

Spot Description: _____

___-___-___-___ Sec. _____ Twp. _____S. R. _____ ☐East ☐West

_____ Feet from ☐ North / ☐ South Line of Section

_____ Feet from ☐ East / ☐ West Line of Section

Footages Calculated from Nearest Outside Section Corner:

☐ NE ☐ NW ☐ SE ☐ SW

GPS Location: Lat: _____ *(e.g. xx.xxxxx)* , Long: _____ *(e.g. -xxx.xxxxx)*

Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? ☐ Yes ☐ No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____S. R. _____ ☐ East ☐ West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

☐ **Confidentiality Requested**
Date: _____
☐ **Confidential Release Date:** _____
☐ **Wireline Log Received** ☐ **Drill Stem Tests Received**
☐ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☐ **I** ☐ **II** ☐ **III** **Approved by:** _____ **Date:** _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ ☐ East ☐ West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken *(Attach Additional Sheets)*	☐ Yes	☐ No	☐ Log	☐ Sample
Samples Sent to Geological Survey	☐ Yes	☐ No	Formation (Top), Depth and Datum	
Cores Taken	☐ Yes	☐ No	Name	Top / Datum
Electric Log Run	☐ Yes	☐ No		
Geologist Report / Mud Logs	☐ Yes	☐ No		
List All E. Logs Run:				

CASING RECORD ☐ New ☐ Used

Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose: ____ Perforate ____ Protect Casing ____ Plug Back TD ____ Plug Off Zone	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives

1. Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☐ No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? ☐ Yes ☐ No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/ Injection:	Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)* _____				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL: Top / Bottom
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*
TUBING RECORD: Size:		Set At:		Packer At:	

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Pratt Energy, LLC
Well Name	ROLF 1
Doc ID	1946575

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	24	301	Class A	225	None

Attachment 3

KCC Form ACO-1, Swingle #1 (API 15-151-00051), filed May 15, 2026

Accessed June 1, 2026 from:
https://kgsimages.blob.core.windows.net/kolar/filer_3/public/2026-05/kolar_images.images.img/sid=1311004658.pdf

KOLAR Document ID: 1946872

Confidentiality Requested:
☐ Yes ☐ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1
January 2018
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____+ __ __ __ __

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

☐ New Well ☐ Re-Entry ☐ Workover

☐ Oil ☐ WSW ☐ SWD
☐ Gas ☐ DH ☐ EOR
☐ OG ☐ GSW
☐ CM *(Coal Bed Methane)*
☐ Cathodic ☐ Other *(Core, Expl., etc.)*: _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

☐ Deepening ☐ Re-perf. ☐ Conv. to EOR ☐ Conv. to SWD
☐ Plug Back ☐ Liner ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #: _____
☐ Dual Completion Permit #: _____
☐ SWD Permit #: _____
☐ EOR Permit #: _____
☐ GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
_____	_____	_____

API No.: _____

Spot Description: _____

___-___-___-___ Sec. _____ Twp. _____S. R. _____ ☐East ☐West

_____ Feet from ☐ North / ☐ South Line of Section

_____ Feet from ☐ East / ☐ West Line of Section

Footages Calculated from Nearest Outside Section Corner:

☐ NE ☐ NW ☐ SE ☐ SW

GPS Location: Lat: _____ *(e.g. xx.xxxxx)* , Long: _____ *(e.g. -xxx.xxxxx)*

Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? ☐ Yes ☐ No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____S. R. _____ ☐ East ☐ West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

☐ **Confidentiality Requested**
Date: _____
☐ **Confidential Release Date:** _____
☐ **Wireline Log Received** ☐ **Drill Stem Tests Received**
☐ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☐ **I** ☐ **II** ☐ **III** **Approved by:** _____ **Date:** _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ ☐ East ☐ West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken *(Attach Additional Sheets)*	☐ Yes	☐ No	☐ Log	☐ Sample
Samples Sent to Geological Survey	☐ Yes	☐ No	Formation (Top), Depth and Datum	
Cores Taken	☐ Yes	☐ No	Name	Top / Datum
Electric Log Run	☐ Yes	☐ No		
Geologist Report / Mud Logs	☐ Yes	☐ No		
List All E. Logs Run:				

CASING RECORD ☐ New ☐ Used

Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose: ____ Perforate ____ Protect Casing ____ Plug Back TD ____ Plug Off Zone	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives

1. Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☐ No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? ☐ Yes ☐ No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/ Injection:	Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)* _____				
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL: Top / Bottom
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*

TUBING RECORD: Size: Set At: Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	Pratt Energy, LLC
Well Name	SWINGLE 1
Doc ID	1946872

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	24	308	Class A	250	None

Attachment 4

KCC record Q0084781, Briggeman-Leal-Trinkle 1 (API 15-151-21589)

Accessed June 1, 2026 from:
https://kgsimages.blob.core.windows.net/web/web_1/WebDocs/Documents2/2014_12_01_KCC/Q0084781.pdf

Kansas

CARD MUST BE TYPED

NOTICE OF INTENTION TO DRILL

(see rules on reverse side)

CARD MUST BE SIGNED

Starting Date: 3-18-85 (month day year)

API Number 15- 151-21,589-00-00

OPERATOR: License # 5107

Name H-30, Inc.

Address 251 N. Water, Suite 10

City/State/Zip Wichita, KS 67202

Contact Person Dean Britting

Phone (316) 263-2043

CONTRACTOR: License # 5107

Name H-30, Inc.

City/State Wichita, KS

SE SE NW (location) Sec 10 Twp 27 S, Rge 13 ☐ East ☒ West

2970 Ft North from Southeast Corner of Section

2970 Ft West from Southeast Corner of Section

(Note: Locate well on Section Plat on reverse side)

Nearest lease or unit boundary line 2310 feet.

County Pratt

Lease Name Briggeman-Leal-Trinkle Well# 1

Domestic well within 330 feet: ☐ yes ☒ no

Municipal well within one mile: ☐ yes ☒ no

Well Drilled For:	Well Class:	Type Equipment:
☒ Oil ☐ Swd	XX Infield	☒ Mud Rotary
☐ Gas ☐ Inj	☐ Pool Ext.	☐ Air Rotary
☐ OWWO ☐ Expl	☐ Wildcat	☐ Cable

If OWWO: old well info as follows:

Operator

Well Name

Comp Date Old Total Depth

Projected Total Depth 4550 feet

Projected Formation at TD Arbuckle

Expected Producing Formations Arbuckle

Depth to Bottom of fresh water 215 feet

Lowest usable water formation Unconsolidated

Depth to Bottom of usable water 250 feet

Surface pipe by Alternate: 1 ☒ 2 ☐

Surface pipe to be set 250+ feet

Conductor pipe if any required feet

Ground surface elevation 1935 est. feet MSL

This Authorization Expires 9/15/85

Approved By RCH/KCC 3/15/85

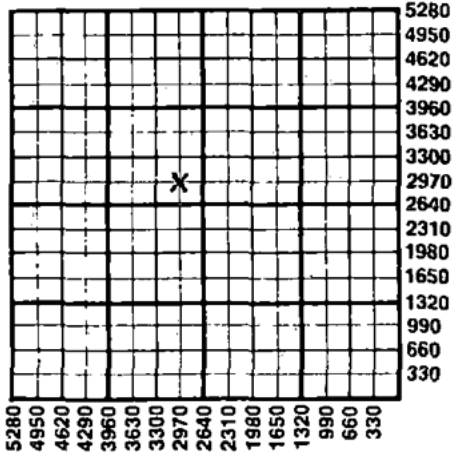
I certify that we will comply with K.S.A. 55-101, et seq., plus eventually plugging hole to K.C.C. specifications.

Date 3-11-85 Signature of Operator or Agent Abigail A. White Title Agent

Form C-1 4/84

Must be filed with the K.C.C. five (5) days prior to commencing well
This card void if drilling not started within six (6) months of date received by K.C.C.

A Regular Section of Land
1 Mile = 5,280 Ft.



Important procedures to follow:

1. Notify District office before setting surface casing.
2. Set surface casing by circulating cement to the top.
3. File completion forms ACO-1 with K.C.C. within 90 days of well completion, following instructions on ACO-1, side 1, and including copies of wireline logs.
4. Notify District office 48 hours prior to old well workover or re-entry.
5. Prior to plugging, prepare a plugging plan, then obtain agreement from the appropriate district office for an approved plugging plan.
6. Submit plugging report (CP-4) to K.C.C. after plugging is completed.
7. Obtain an approved injection docket number before disposing of salt water.
8. Notify K.C.C. within 10 days when injection commences or terminates.
9. If an alternate 2 completion, cement in the production pipe from below any usable water to surface within 120 days of spud date.

State Corporation Commission of Kansas
Conservation Division
200 Colorado Derby Building
Wichita, Kansas 67202
(316) 263-3238

Attachment 5

KCC Form ACO-1, Chinn #1 (API 15-151-21910), filed December 19, 1988

Accessed June 1, 2026 from:
https://kgsimages.blob.core.windows.net/web/web_1/WebDocs/Documents2/2016_03_01_KCC/Q0156769.pdf

SIDE ONE

STATE CORPORATION COMMISSION OF KANSAS
OIL & GAS CONSERVATION DIVISION
WELL COMPLETION OR RECOMPLETION FORM
ACO-1 WELL HISTORY
DESCRIPTION OF WELL AND LEASE

5

API NO. 15- 151-21,910 - 00-00

County Pratt

SE SW NW Sec. 15 Twp. 29S Rge. 14 [X] West [ ] East

2970 Ft North from Southeast Corner of Section
4290 Ft West from Southeast Corner of Section
(Note: Locate well in section plat below)

Lease Name Chinn Well # 1

Field Name

Producing Formation

Elevation: Ground 1997 KB 2005

Operator: License # 09408
Name Trans Pacific Oil Corporation
Address 410 One Main Place
City/State/Zip Wichita, KS 67202

Purchaser

Operator Contact Person Alan D. Banta
Phone (316) 262-3596

Contractor: License # 05841
Name Trans Pac Drilling, Inc.

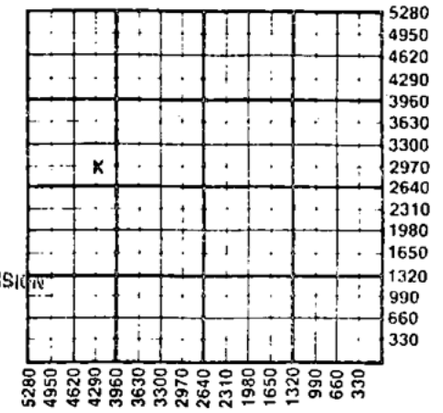
Wellsite Geologist Ernie Morrison
Phone (316) 262-3596

Designate Type of Completion
[ ] New Well [ ] Re-Entry [ ] Workover

[ ] Oil [ ] SWD [ ] Temp Abd
[ ] Gas [ ] Inj [ ] Delayed Comp.
[X] Dry [ ] Other (Core, Water Supply etc.)

If OWWO: old well info as follows:
Operator
Well Name
Comp. Date Old Total Depth

Section Plat



RECEIVED
STATE CORPORATION COMMISSION
DEC 19 1988
12-19-88
CONSERVATION DIVISION
Wichita, Kansas

WELL HISTORY

Drilling Method:
[X] Mud Rotary [ ] Air Rotary [ ] Cable

11/15/88	11/25/88	11/26/88
Spud Date	Date Reached TD	Completion Date
4,700'		
Total Depth	PBTD	

Amount of Surface Pipe Set and Cemented at 337 feet
Multiple Stage Cementing Collar Used? [ ] Yes [X] No
If yes, show depth set feet
If alternate 2 completion, cement circulated
from feet depth to w/ SX cmt
Cement Company Name
Invoice #

WATER SUPPLY INFORMATION

Disposition of Produced Water: [ ] Disposal
Docket # [ ] Repressuring

Questions on this portion of the ACO-1 call:
Water Resources Board (913) 296-3717

Source of Water:
Division of Water Resources Permit #

[ ] Groundwater Ft North from Southeast Corner
(Well) Ft West from Southeast Corner of
Sec Twp Rge [ ] East [ ] West

[ ] Surface Water Ft North from Southeast Corner
(Stream, pond etc) Ft West from Southeast Corner
Sec Twp Rge [ ] East [ ] West

[ ] Other (explain)
(purchased from city, R.W.D. #)

INSTRUCTIONS: This form shall be completed in triplicate and filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 120 days of the spud date of any well. Rule 82-3-130, 82-3-107 and 82-3-106 apply.
Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form. See rule 82-3-107 for confidentiality in excess of 12 months.
One copy of all wireline logs and drillers time log shall be attached with this form. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature Alan D. Banta
Title Vice President Date 12/12/88

Subscribed and sworn to before me this 12 day of December 19 88
Notary Public Sondra J. Follis
Date Commission Expires May 13, 1991

SONDRA J. FOLLIS
NOTARY PUBLIC
STATE OF KANSAS
My Appt. Exp. 5-13-91

K.C.C. OFFICE USE ONLY
F [ ] Letter of Confidentiality Attached
C [ ] Wireline Log Received
C [ ] Drillers Timelog Received
Distribution
[✓] KCC [ ] SWD/Rep [ ] NGPA
[✓] KGS [ ] Plug [ ] Other (Specify)

12-19-88

Sec. 15 Twp. 29 Rge. 14W

Form ACO-1 (5-86)

SIDE TWO

Operator Name Trans Pacific Oil Corporation Lease Name Chinn Well # 1

Sec. 15 Twp. 29S Rge. 14 ☐ East ☒ West County Pratt

WELL LOG

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken ☒ Yes ☐ No
Samples Sent to Geological Survey ☒ Yes ☐ No
Cores Taken ☐ Yes ☒ No

DST #1 3954-99 30-30-30-30
Stg blo thru-out Rec: 40' SOCGM (5% O)
120' OSGMCW 540' GW ISIP 1433# FSIP 1417#
IFP 81-179# FFP 239-322#

DST #2 (Lans "B") 4036-65/60/45/120/45 GTS in 5" 194 MCF, incr 227 MCF 2nd open 317 decr 303 MCF & Stab. Rec.120' GM ISIP 1429# FSIP 1387# IFP 64-82# FFP 84-92#

DST #3 4572-4587 (Simpson Sand) /15-30-15-30
Rec. 10'M ISIP 30# FSIP 32# IFP 28-28#
FFP 32-32#

DST #4 4570-4593 (Simpson Sand)/30-30-30-30
Rec. 50' M with few O spks. ISIP 711#
FSIP 220# IFP 40-42# FFP 48-48#

DST #5 4568-4617 (Simpson Sand)/30-45-30-45
Stg Blo thru out Rec. 60' SOCM (3% O 97% W)
120' OSWM 420' W

DST #6 4665-4700' (Arb)/45-45-45-45
Fair Blo thru out Rec. 50' SOCM 370' SW
ISIP 1569# FSIP 1555# IFP 69-126#
FFP 154-198#

Formation Description
☐ Log ☒ Sample

Name	Top	Bottom
Anhy (Base)	837	(+1168)
HB	3818	(-1813)
Brn Lm	3998	(-1993)
Lans	4015	(-2010)
BKC	4382	(-2377)
Miss	4478	(-2473)
Viola	4498	(-2493)
Simp Sd	4587	(-2582)
Arb.	4663	(-2658)
RTD	4700	(-2658)

CASING RECORD ☐ New ☐ Used
Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (in O.D.)	Weight Lbs/Ft.	Setting Depth	Type of Cement	#Sacks Used	Type and Percent Additives
Surface		8 5/8	20#	337'	60/40	225	3% CC 2% GEL

PERFORATION RECORD

Shots Per Foot	Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used)	Depth

TUBING RECORD Size Set At Packer at Liner Run ☐ Yes ☐ No

Date of First Production | Producing Method ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other (explain)

	Oil	Gas	Water	Gas-Oil Ratio	Gravity
Estimated Production Per 24 Hours	Bbls	MCF	Bbls	CFPB	

METHOD OF COMPLETION Production Interval

Disposition of gas: ☐ Vented ☐ Sold ☐ Used on Lease
☐ Open Hole ☐ Perforation
☐ Other (Specify)
☐ Dually Completed
☐ Commingled

Trans Pacific Oil Corporation
410 One Main Place
Wichita, Kansas 67202

DRILLERS LOG

1 Chinn
15-29S-14W
Pratt County
Kansas

Spud Date: 11-15-88
Comp.Date: 11-26-88

0-342	Sand & Clay
342-1175	Red Bends Clay
1175-2535	Shale & Lime
2535-2933	Shale & Lime
2933-3675	Shale & Lime
3675-4000	Shale & Lime
4000-4369	Lime & Shale
4369-4587	Shale & Lime
4587-4700	Shale & Lime
4700-	T.D.

Surface Pipe: Ran 8 jts 8 5/8" 20# Set at @337'
Cemented w/225 SXS 60/40 Pozmix 3% CC 2% GEL

Plugging: 865' w/50 SXS
360' w/40 SXS
40' w/10 SXS
15 SXS In Rat Hole
15 SXS In Mouse Hole
10 SXS In Water Well

AFFIDAVIT

STATE OF KANSAS
COUNTY OF SEDGWICK

Alan D. Banta of lawful age does swear and state that the facts and statements herein are true and correct to the best of his knowledge.

Alan D. Banta

Subscribed and sworn to before me this 12th day of December 19 88

My Commission Expires:

Notary Public
Sondra J. Follis

SONDRA J. FOLLIS
NOTARY PUBLIC
STATE OF KANSAS
My Appt. Exp. 5-13-91

Attachment 6

KCC Form ACO-1, Kerr #1 (API 15-151-21405), filed February 22, 1984

Accessed June 1, 2026 from:
https://kgsimages.blob.core.windows.net/web/web_1/WebDocs/Documents2/2016_03_01_KCC/Q0156760.pdf

TYPE

SIDE ONE

AFFIDAVIT OF COMPLETION FORM

ACO-1 WELL HISTORY

Compt.____

(Rules 82-3-130 and 82-3-107)
This form shall be filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within ninety (90) days after the completion of a well, regardless of how the well was completed.

FOR INFORMATION REGARDING THE NUMBER OF COPIES TO BE FILED AND APPLICATIONS REQUIRING COPIES OF ACO-1 FORMS SEE PAGE TWO (2), SIDE TWO (2) OF THIS FORM.

F ____ Letter requesting confidentiality attached.

C XX Attach ONE COPY of EACH wireline log run (i.e. electrical log, sonic log, gamma ray neutron log etc.)***Check here if NO logs were run_____.

PLEASE FILL IN ALL INFORMATION. IF NOT AVAILABLE, INDICATE. IF INFORMATION LATER BECOMES AVAILABLE, SUBMIT BY LETTER.

LICENSE # 5046 EXPIRATION DATE June 30, 1984

OPERATOR Raymond Oil Company, Inc. API NO. 15-151-21,405-00-00

ADDRESS One Main Place, Suite 900 COUNTY Pratt

Wichita, Kansas 67202 FIELD ____

** CONTACT PERSON Pat Raymond PROD. FORMATION ____

PHONE 316/267-4214

PURCHASER ____ LEASE Kerr

ADDRESS ____ WELL NO. #1

WELL LOCATION NE NE NW

DRILLING CONTRACTOR White & Ellis Drilling, Inc. 330' Ft. from North Line and

ADDRESS 401 E. Douglas, Suite 500 2310' Ft. from West Line of

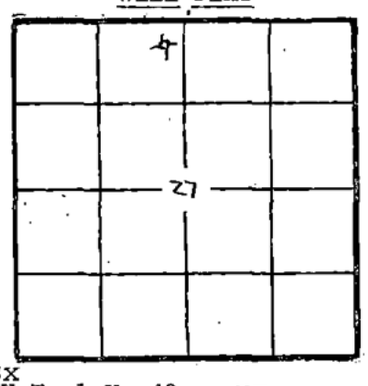
Wichita, Kansas 67202 the NW (Qtr.) SEC 27 TWP 29 RGE 14 (W).

PLUGGING CONTRACTOR White & Ellis Drilling, Inc.

ADDRESS 401 E. Douglas, Suite 500

Wichita, Kansas 67202

WELL PLAT



(Office Use Only)
KCC ✓
KGS ✓
SWD/REP__
PLG.____
NGPA____

TOTAL DEPTH 4679' PBTD ____

SPUD DATE 1-8-84 DATE COMPLETED 1-23-84

ELEV: GR 1973' DF 1976' KB 1978'

DRILLED WITH (CABLE) (ROTARY) (AIR) TOOLS.

DOCKET NO. OF DISPOSAL OR REPRESSURING WELL BEING USED TO DISPOSE OF WATER FROM THIS LEASE ____.

Amount of surface pipe set and cemented 343 w/200 SX DV Tool Used? --.

TYPE OF COMPLETION THIS AFFIDAVIT APPLIES TO: (Circle ONE) - Oil, Shut-in Gas, Gas, (Dry), Disposal, Injection, Temporarily Abandoned. If OWWO, indicate type of re-completion ____. Other completion ____. NGPA filing ____.

ALL REQUIREMENTS OF THE STATUTES, RULES AND REGULATIONS PROMULGATED TO REGULATE THE OIL AND GAS INDUSTRY HAVE BEEN FULLY COMPLIED WITH.

A F F I D A V I T

Wm. M. Raymond, being of lawful age, hereby certifies that:

I am the Affiant, and I am familiar with the contents of the foregoing Affidavit. The statements and allegations contained therein are true and correct.

Wm. M. Raymond
(Name)
Wm. M. Raymond, President

SUBSCRIBED AND SWORN TO BEFORE ME this 10th day of February, 19 84.

SHIRLEY WILKIE
STATE NOTARY PUBLIC
Sedgwick County, Kansas
My Appt. Exp. 1-29-88

Shirley Wilkie
(NOTARY PUBLIC)
Shirley Wilkie

MY COMMISSION EXPIRES: January 29, 1988

RECEIVED
STATE CORPORATION COMMISSION
2-22-84
FEB 22 1984
CONSERVATION DIVISION
Wichita, Kansas

** The person who can be reached by phone regarding any questions concerning this information.

SIDE TWO

ACO-1 WELL HISTORY

OPERATOR Raymond Oil Company, Inc. LEASE Kerr SEC. 27 TWP. 29S RGE. 14 (W)

FILL IN WELL INFORMATION AS REQUIRED: WELL NO. 1

Show all important zones of porosity and contents thereof; cored intervals, and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

SHOW GEOLOGICAL MARKERS, LOGS RUN, OR OTHER DESCRIPTIVE INFORMATION.

FORMATION DESCRIPTION, CONTENTS, ETC.	TOP	BOTTOM	NAME	DEPTH
____Check if no Drill Stem Tests Run.				
X Check if samples sent to Geological	Survey			
			LOG	TOPS
0 - 7 Cellar			Admire	2962'
7 - 205 Sand			Brn. Lime	3990'
205 - 277 Clay, Sand			BKC	4390'
277 - 1020 Shale			Viola	4514'
1020 - 1424 Clay, Shale			Simp. Sd.	4554'
1424 - 2140 Shale, Lime			Arbuckle	4652'
2140 - 2555 Shale			LTD	4680'
2555 - 2714 Shale, Lime				
2714 - 2905 Lime, Shale				
2905 - 3230 Shale, Lime				
3230 - 3710 Lime, Shale				
3710 - 3835 Shale, Lime				
3835 - 3972 Lime, Shale				
3972 - 3990 Sand				
3990 - 4054 Lime, Shale				
4045 - 4560 Lime				
4560 - 4625 Conglomerate				
4625 - 4679 Lime				
4679 RTD				
DST#1 - 3972'- 3990' 30-60-45-80. Rec. 480' GSY SW, IFP 91- 218; ISIP 1519, FFP 227-409; FSIP 1498# Temp. 122°.				
DST#2 - 4346' - 4362' 30-60-30-50 GTS/5 min., GA 63,500, Decreased to 55200, 2nd GA 77,800, Stab. 40,000 CFG (cont'd)				
If additional space is needed use Page 2,				

Report of all strings set — surface, intermediate, production, etc. CASING RECORD (New) or ~~(Used)~~

Purpose of string	Size hole drilled	Size casing set (in O.D.)	Weight lbs/ft.	Setting depth	Type cement	Sacks	Type and percent additives
Surface	14¾	8-5/8	20#	343	common	200	3% cc 2% Gel

LINER RECORD			PERFORATION RECORD		
Top, ft.	Bottom, ft.	Sacks cement	Shots per ft.	Size & type	Depth interval

TUBING RECORD		
Size	Setting depth	Packer set at

ACID, FRACTURE, SHOT, CEMENT SQUEEZE RECORD

Amount and kind of material used	Depth interval treated

SHIRLEY WILKIE
STATE NOTARY PUBLIC
Sedgwick County, Kansas
My Appt. Exp.

Date of first production	Producing method (flowing, pumping, gas lift, etc.)	Gravity
D&A		

Estimated Production -I.P.	Oil bbls.	Gas MCF	Water % bbls.	Gas-oil ratio CFPB.

Disposition of gas (vented, used on lease or sold) Perforations

PAGE TWO (Side One) ACO-1 WELL HISTORY

OPERATOR Raymond Oil Company, Inc. LEASE NAME Kerr SEC. 27 TWP. 29S RGE. 14 (E) (W)

FILL IN WELL LOG AS REQUIRED: WELL NO. 1

Show all important zones of porosity and contents thereof; cored intervals, and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries.

SHOW GEOLOGICAL MARKERS, LOGS RUN, OR OTHER DESCRIPTIVE INFORMATION.

FORMATION DESCRIPTION, CONTENTS, ETC.	TOP	BOTTOM	NAME	DEPTH
DST#2 (Cont'd) Rec'd 90' GM w/SO in tool IFP 45 - 45; ISIP 1451; FFP 42 - 58; FSIP 1361 Temp 116° DST #3 - 4544 - 4560 - Misrun. DST #4 - 4544 - 4560 30-60-45-60 Rec'd 2350' SW IFP 141 - 635; ISIP 1072, FFP 762 - 960; FSIP 1072. Temp 116° D & A - Plugged 1-23-84				

RECEIVED
STATE CORPORATION COMMISSION
FEB 22 1994
CONSERVATION DIVISION
Wichita, Kansas

INSTRUCTIONS FOR FILING ACO-1 WELL HISTORY FORMS

When to File - Number of Copies

PLEASE FILL OUT ALL INFORMATION. IF INFORMATION IS NOT AVAILABLE, INDICATE. IF INFORMATION LATER BECOMES AVAILABLE, SUBMIT BY LETTER.

ACO-1 Well history forms are required on all wells, regardless of how completed. (Rule 82-3-130)

PRODUCING AND TEMPORARILY ABANDONED WELLS:
(File 2 copies)

OIL WELLS: An oil well shall be considered completed when the first new oil is produced through well head equipment into lease tanks from the producing interval after the production string has been run. For information regarding oil wells, contact Tom Leiker or Elisabeth Wannow.

GAS WELLS: A gas well shall be considered completed when the well is capable of producing gas through well head equipment from the producing zone after the production string has been run. Shut-in gas wells also require 2 copies. For information regarding gas wells, contact Richard Smith or Jim Hemmen.

TEMPORARILY ABANDONED WELLS: For information, contact Duane Rankin.

ACO-1 WELL HISTORY FORMS WITH APPLICATIONS:

PLUGGING: File 3 (THREE) copies. A dry hole shall be considered completed when all provisions of plugging are complied with. ACO-1 should be filed with one copy each of form CP-1 and CP-4. For information regarding plugging, contact Allaweas Winfrey (western range) or Diana Crockett (eastern range).

SALT WATER DISPOSAL and INJECTION: File 4 (FOUR) copies. These should be sent with two copies of form U-1. For information regarding SWD or injection wells, contact Lu VonFeldt.

NGPA: File 4 (FOUR) copies. These should be filed with one original and two copies of NGPA application forms. For information, contact Becky Norris or Bob Tilton.

REQUESTING CONFIDENTIALITY:

Only 1 (ONE) copy of the ACO-1 should be filed with a letter attached for each well on which information is to be held confidential. ALL of the information should be completed on the form. Only information on Side One will be of public record. Side Two will be held confidential. On wells which are Docketed, confidentiality is waived. Plugging forms CP-1 and CP-4 cannot be held confidential.

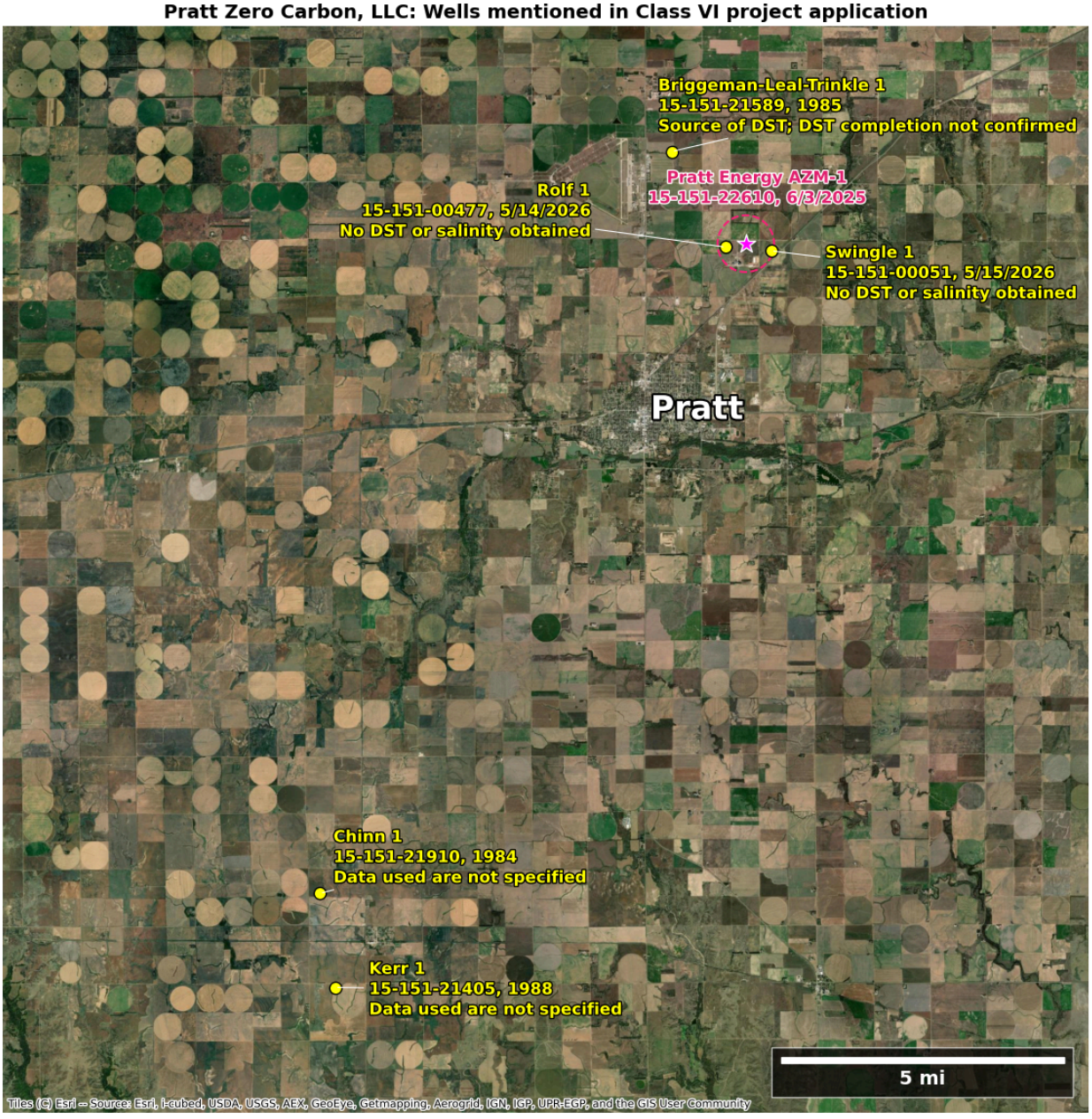
To order additional forms or request information, call (316) 263-3238.

PLEASE KEEP THIS SHEET FOR REFERENCE.

Attachment 7

Location, API numbers, and dates of latest ACO-1 filing of wells mentioned in the project application. See other attachments for ACO-1s. Well coordinates from KCC well records; base imagery © Esri. Plot is demonstrative; prepared by Petitioners.

Pratt Zero Carbon, LLC: Wells mentioned in Class VI project application



Attachment 8

Map of documented wellbores completed below ~3,282 ft (the top of the storage complex) near PE AZM-1, by completion era, shown against the permitted Area of Review, the operator's modeled pressure front, an estimated pressure front under a perturbed gradient, and a hypothetical ~1.25-mile-radius AoR. Base satellite imagery © Esri. The permitted AoR (magenta) is reproduced from AoR & Corrective Action Plan, Figure 2-19 (maximum modeled CO_2-plume extent). The operator's maximum pressure front (red) is reproduced from AoR & Corrective Action Plan, Figure 2-20 (critical pressure = 303 psi). The estimated pressure front (orange) is derived by Petitioners from the modeled pressure gradients in AoR & Corrective Action Plan, Figure 2-17, assuming a pressure gradient of 0.4 psi/ft. Well locations and completion depths (the basis on which wells were filtered) are from the Kansas Geological Survey (KGS). Figure is demonstrative, prepared by Petitioners; offered subject to official notice.

Figure on next page.

Pratt Energy AZM-1 — Wells >3,282 ft by Completion Era