State Office of Administrative Hearings

Kristofer S. Monson
Chief Administrative Law Judge

May 25, 2022

Mary Smith
General Counsel
Texas Commission on Environmental Quality
12100 Park 35 Circle, Bldg. F, Room 4225
Austin TX 78753

Re: **SOAH Docket No. 582-22-0489; TCEQ Docket No. 2021-0755-MWD; Application of Kendall West Utility, LLC**

Dear Ms. Smith:

The above-referenced matter will be considered by the Texas Commission on Environmental Quality on a date and time to be determined by the Chief Clerk's Office in Room 201S of Building E, 12118 N. Interstate 35, Austin, Texas.

Enclosed are copies of the Proposal for Decision (PFD) and Proposed Order that have been recommended to the Commission for approval. Any party may file exceptions or briefs by filing the documents with the Chief Clerk of the Texas Commission on Environmental Quality no later than **June 14, 2022**. Any replies to exceptions or briefs must be filed in the same manner no later than **June 24, 2022**.

This matter has been designated **TCEQ Docket No. 2021-0755-MWD; SOAH Docket No. 582-22-0489**. All documents to be filed must clearly reference these assigned docket numbers. All exceptions, briefs and replies along with certification of service to the above parties shall be filed with the Chief Clerk of the TCEQ electronically at http://www14.tceq.texas.gov/epic/eFiling/ or by filing an original and seven copies with the Chief Clerk of the TCEQ. Failure to provide copies may be grounds for withholding consideration of the pleadings.

Sincerely,

Robert H. Pemberton
Administrative Law Judge

Enclosures
cc: Mailing List

SOAH DOCKET NO. 582-22-0489
TCEQ DOCKET NO. 2021-0755-MWD

APPLICATION FROM KENDALL WEST UTILITY, LLC FOR NEW TPDES PERMIT WQ0015787001	**§**	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

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SOAH DOCKET NO. 582-22-0489
TCEQ DOCKET NO. 2021-0755-MWD

APPLICATION FROM KENDALL WEST UTILITY, LLC FOR NEW TPDES PERMIT WQ0015787001	**§** **§** **§**	**BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS**

PROPOSAL FOR DECISION

Kendall West Utility, LLC (Kendall West or Applicant) filed an application (Application) with the Texas Commission on Environmental Quality (TCEQ or Commission) for a Texas Pollutant Discharge Elimination System permit that would allow it to discharge treated effluent from a proposed new wastewater-treatment facility into tributaries of Upper Cibolo Creek in Kendall County. TCEQ's Executive Director (ED) has recommended granting the Application and issuing a draft permit he proposed. The Commission referred the Application to the State Office of Administrative Hearings (SOAH) for a contested-case hearing on twelve issues.

Having considered the evidence relating to these twelve issues in the context of the governing law, the Administrative Law Judge (ALJ) recommends that the Application be approved and the permit issued.

I. INTRODUCTION

A. Regulatory Context

This case concerns TCEQ's exercise of authority delegated from both the Texas Legislature and the federal government to administer the Texas Pollution Discharge Elimination System (TPDES) program, which implements, within TCEQ's jurisdiction, the National Pollution Discharge Elimination System (NPDES), a permitting system established under the federal Clean

Water Act.[1] Chapter 26 of the Texas Water Code requires a person who seeks to discharge wastewater into water in this State to file an application with TCEQ.[2] Title 30 Texas Administrative Code, chapter 305, subchapter C, prescribes the TCEQ's application-filing requirements. Once an application is filed, the ED or delegees review the application in accordance with 30 Texas Administrative Code chapter 281.[3] Based on a technical review, the ED prepares a draft permit that is to be consistent with rules promulgated by the federal Environmental Protection Agency (EPA) and TCEQ, along with a technical summary that discusses the application and significant factual, legal, methodological, and policy questions considered while preparing the draft permit.[4]

A domestic wastewater-treatment facility in Texas is subject to wastewater-discharge permit requirements.[5] Title 30 Texas Administrative Code, chapter 305, subchapter F contains TCEQ's standard permit requirements, which the ED has adapted specifically for use in wastewater-discharge permits.

All wastewater-discharge permits are also subject to regulations found in 30 Texas Administrative Code, chapter 319, which require the permittee to monitor its effluent and report the results as required in the permit.

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[1] *See* 33 U.S.C. §§ 1311(a), 1342(a)(1), (b); 63 Fed. Reg. 51,164 (Sept. 24, 1998); Memorandum of Agreement between the Texas Commission on Environmental Quality and the U.S. Environmental Protection Agency, Region 6 Concerning the National Pollution Discharge Elimination System (TCEQ-EPA MOA), *available at* https://www.epa.gov/sites/default/files/2021-01/documents/attachment_d_-_2020_tpdes_moa_1_002.pdf (last accessed May 2, 2022). To the extent necessary, the ALJ takes official notice of the TCEQ-EPA MOA, which like a statute or rule helps define the legal framework within which this case arises. The ED's objection to any consideration of the TCEQ-EPA MOA, ED Response to Closing Arguments (ED Resp.) at 2, is overruled.

[2] Tex. Water Code §§ 26.027, 121; *see id.* § 26.001(5) (defining "water" and "water in this state" as "groundwater, percolating or otherwise, lakes, bays, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, wetlands, marshes, inlets, canals, the Gulf of Mexico, inside the territorial limits of the state, and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, navigable or nonnavigable, and including the beds and banks of all watercourses and bodies of surface water, that are wholly or partially inside or bordering the state or inside the jurisdiction of the state").

[3] 30 Tex. Admin. Code § 281.2(2).

[4] 30 Tex. Admin. Code § 281.21(b)-(c).

[5] Tex. Water Code ch. 26; *see*, *e.g.*, 30 Tex. Admin. Code chs. 217 (applying to domestic wastewater systems), 305, 307 (applying to all wastewater-discharge permits), 319.

Further, TCEQ has adopted water-quality standards applicable to wastewater discharges in accordance with section 303 of the Clean Water Act[6] and section 26.023 of the Texas Water Code. The latter provision directs TCEQ "by rule [to] set water quality standards for the water in this state" and provides that it "has the sole and exclusive authority" to do so.[7] These standards, known as the Texas Surface Water Quality Standards (Standards), are found in 30 Texas Administrative Code, Chapter 307.

The Standards and other law specific to the referred issues will be discussed further as they become relevant to the analysis.

B. Proposed Facility and Discharge

Kendall West has provided water and wastewater-utility service to a certificated territory of roughly 7,160 acres in (as its name suggests) western Kendall County, an area that encompasses the Tapatio Springs development and resort. To that end, it has leased a wastewater-treatment facility—an activated-sludge-process plant using the extended-aeration mode, originally built in the 1980s—that has been owned at relevant times by Potranco Holdings, Ltd., an entity unrelated to Kendall West (and, as will be explained shortly, owned by one of the Protestants in this case). Kendall West has operated this facility under Texas Land Application Permit (TLAP) No. WQ0012404001, which has authorized it to dispose of treated domestic wastewater effluent, at a daily average flow not to exceed 150,000 gallons per day (or 0.15 million gallons per day (MGD)), via surface irrigation of 100 acres of golf course.[8]

But seeking an alternative to the leased plant, which it planned to replace and abandon, Kendall West applied to TCEQ for new TPDES Permit No. WQ0015787001, which would govern its operation of a proposed new—and larger—Tapatio Wastewater Treatment Facility (Facility) that it would also own. The Facility will be an activated sludge process plant with membrane

[6] 33 U.S.C. § 1313.

[7] Tex. Water Code § 26.023.

[8] Ex. AR-5 at APP 722-23; Ex. CL APP-13; Ex. CL APP-14 at Bates 165.

bioreactors (MBRs). Treatment units in an Interim I phase will include one bar screen, one equalization tank, one pre-aeration basin, one chemical feed system, one anoxic basin, one MBR basin, one process basin, one chlorine contact chamber, one sludge holding tank and one sludge filter press. Treatment units in an Interim II phase will include one bar screen, one equalization tank, two pre-aeration basins, one chemical feed system, two anoxic basins, two MBR basins, two process basins, one chlorine contact chamber, one sludge holding tank and one sludge filter press. Treatment units in the Final phase will include one bar screen, one equalization tank, three pre-aeration basins, one chemical feed system, three anoxic basins, three MBR basins, three process basins, two chlorine contact chambers, one sludge holding tank and one sludge filter press.

The Facility will be located approximately 1,800 feet upstream from the existing plant, 500 feet north of Eagle Drive, and 1,375 feet east-southeast of the intersection of Eagle Drive and Tapatio Drive East. Although it is anticipated that treated wastewater effluent from the Facility will ultimately be reused for golf-course irrigation or other purposes, the TPDES permit being sought would authorize discharge into receiving waters (as opposed to the current permit's restriction to land application) via two outfalls (Outfalls 001 and 002). The combined daily average flow would be up to 0.167 MGD in the Interim I phase, 0.333 MGD in the Interim II phase, and 0.49 MGD in the Final phase.[9]

From Outfall 001, the effluent would be discharged into an unnamed tributary, described as a natural swale draining through an abandoned section of golf course and five small man-made ponds between roughly 0.2 and 0.7 acres in size, before entering Masters Lake, an approximately ten-acre pond along Frederick Creek, about 0.85 miles from the outfall. It would then flow down Frederick Creek for about a mile into a pond of approximately 35 acres, Lake Oz; thence down Frederick Creek roughly another seven miles to its confluence with Upper Cibolo Creek in the town of Boerne. From Outfall 002, the effluent would be discharged into a different unnamed tributary, also described as a natural swale, where it would drain approximately 200 yards to an approximately four-acre inline pond on Frederick Creek, Smith Investment Lake No. 1; thence to a pond of about 1.5 acres, Smith Investment Co. Lake No. 3; thence down Frederick Creek to

[9] Ex. AR-5 at APP 1-106, 723-24, 761-98; Ex. CL APP-12 at Bates 102-04; Ex. CL APP-16.

Masters Lake and on to the same subsequent receiving waters as with Outfall 001. The aforementioned portion of Upper Cibolo Creek is classified under the Standards as Segment 1908 of the San Antonio River Basin, with designated uses of high aquatic life use, public water supply, aquifer protection, and primary contact recreation. The upstream receiving waters are unclassified, and the ED assigned minimal aquatic life use to the Outfall 002 unnamed tributary, limited aquatic life use to the Outfall 001 unnamed tributary, and high aquatic life use to Frederick Creek, Masters Lake, and the Smith Investment Co. lakes.[10]

Effluent limits in the draft permit, based on a thirty-day average, are summarized below:

Phase	**Five-Day Carbonaceous Oxygen Demand ($CBOD_5$)**	**Total Suspended Solids**	**Ammonia Nitrogen**	**Total Phosphorus**	***E. coli***	**Dissolved Oxygen**
Interim I	10 milligrams per liter (mg/L)	15 mg/L	2 mg/L	0.5 mg/L	126 colony-forming units (CFU) or most probable number (MPN) per 100 milliliters (mL)	4 mg/L (min)
Interim II	7 mg/L	15 mg/L	2 mg/L	0.5 mg/L	126 CFU or MPN per 100 mL	4 mg/L (min)
Final	5 mg/L	5 mg/L	1.9 mg/L	0.5 mg/L	126 CFU or MPN per 100 mL	6 mg/L (min)

For all phases, the pH must be in the range of 6 to 9 standard units, and the effluent shall contain a chlorine residual of at least 1 mg/L and not exceed a chlorine residual of 4 mg/L after a detention time of at least twenty minutes, based on peak flow.[11]

[10] Ex. AR-5 at APP 13, 18-20, 47, 102, 107-16, 132, 136, 140, 143, 165-66, 324-26, 763-65; Ex. ED-21; Ex. PR WH-1 at 2-3. A more legible copy of the calculations and maps in ED-21 is provided within Ex. PR-H-2.

[11] Ex. AR-5 at APP 763-65.

C. Procedural History and Posture

TCEQ received the Application on April 17, 2019, and declared it administratively complete on May 22, 2019. The ED completed technical review of the Application on October 24, 2019, and prepared a draft permit that, if approved, would establish the conditions under which the Facility must operate. A Notice of Receipt of Application and Intent to Obtain a Water Quality Permit (NORI) and Notice of Application and Preliminary Decision (NAPD), combined with a Notice of Public Meeting, was published on August 21, 2020, in the *Boerne Star*. A public meeting was held via webinar and telephone on September 21, 2020, and the public comment period closed on the same date.

The ED determined that the Application met the requirements of applicable law and made no changes to the draft permit in response to public comment. TCEQ's Chief Clerk mailed the ED's Decision and Response to Comments on April 30, 2021; the deadline for filing requests for a contested-case hearing or reconsideration of the ED's decision was June 1, 2021. TCEQ received numerous timely filed requests for hearing and reconsideration.

Following an open meeting held on September 8, 2021, the Commission by Interim Order granted requests for a contested-case hearing, referred twelve issues (described in Section I.D. of this proposal for decision (PFD)) to SOAH, and established a 180-day deadline from the date of the preliminary hearing for the SOAH ALJ to issue the PFD.[12] The preliminary hearing convened via Zoom videoconference on November 29, 2021.[13] At the preliminary hearing, the ALJ admitted Exhibits AR-1 through AR-5 as the administrative record, which had also been filed with SOAH previously; determined that SOAH had jurisdiction; named parties; and set the procedural schedule.[14] Admitted as parties—in addition to Kendall West, the ED, and the Office of Public Interest Counsel (OPIC)—were protestants Michael Dillinger, Willis Jay Harpole, Heather and Clint McNew, and Tom Tucker (collectively, Protestants), who are represented by common

[12] Ex. AR-3. A transcript of the preliminary hearing was made by a court reporter and will be cited as "PH Tr. at __."

[13] Notice of Preliminary Hearing (Nov. 19, 2021); SOAH Order No. 2 (Nov. 30, 2021).

[14] SOAH Order No. 2 (Nov. 30, 2021).

counsel from the Save Our Springs Alliance. By agreement, the 180-day deadline for the PFD, which otherwise would have fallen during the Memorial Day weekend, was extended to Tuesday, May 31, 2022, the first business day thereafter.

On December 17, 2021, Kendall West and its associated wastewater treatment plant assets were purchased by a subsidiary of SJW Group, SJWTX, Inc., d/b/a Canyon Lake Water Service Company (CLWSC). The assets conveyed are said to include Kendall West's certificate of convenience and necessity, the TLAP permit authorizing Kendall West to operate the existing wastewater-treatment plant and dispose of the treated effluent via land application, and also the Application at issue in this case.[15] On that same date, representing itself as the successor-in-interest to Kendall West's assets and the Application, CLWSC filed with SOAH a "Notice of Closing" purporting to "substitute[] in as the permit applicant in this proceeding," along with notice of a substitution of counsel.

Subsequently, Protestants moved to dismiss this SOAH proceeding, arguing in part that the "switch" had rendered the Application defective jurisdictionally or procedurally because it had been made solely in Kendall West's name, as both the owner and operator of the Facility, and had not identified CLWSC as either an owner or operator.[16] Both CLWSC and the ED filed responses in opposition. Although now claiming more precisely to be acting "on behalf of Applicant Kendall West," CLWSC also argued that it was now the proper applicant for the Facility and suggested that Protestants had waived their complaint by failing to object when it filed its Notice of Closing or in previous instances when Kendall West had advised the other parties of the then-impending sale.[17] The ED, on the other hand, maintained that Kendall West had continued to be the Applicant in the case, observing that the draft permit lists Kendall West as the Facility's owner and operator, that CLWSC had not submitted an application amendment to substitute itself as the Applicant, and that the prefiled testimony submitted by CLWSC (like various other filings) was styled as being

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[15] Ex. CL APP-12 at Bates 98-100.

[16] AR-5 at APP 3 (identifying Kendall West as the "owner" and sole permit applicant); Protestants Mot. to Dismiss (Feb. 14, 2022); *see* 30 Tex. Admin. Code § 305.43(a) (requiring "the operator and the owner" to submit an application for a TPDES permit).

[17] Applicant Resp. to Protestants Mot. to Dismiss (Feb. 19, 2022) at 1-4, 7-10.

made on Kendall West's behalf. The ED added that "[i]f the draft permit is eventually issued and [CLWSC] intends to replace [Kendall West] as the facility's owner and operator, the correct course of action would be to file an application to transfer the permit under [30 Texas Administrative Code § 305.64]," further cautioning that "[o]wning and operating the facility without being the permit holder would subject [CLWSC] to TCEQ's enforcement powers."[18]

The ALJ heard argument on Protestants' motion to dismiss, along with various other motions and objections filed by the parties, during a prehearing conference convened via Zoom videoconference on February 22, 2022.[19] With respect to the motion to dismiss, the ALJ was persuaded by the ED that Kendall West was still the Applicant in the posture of this proceeding, the party that would have rights and duties under the permit being litigated, and that any issues concerning CLWSC would be for another day or forum.[20] The hearing, and ultimately this PFD, have proceeded based on this threshold conclusion. Accordingly, the ALJ has construed CLWSC's evidence and advocacy as being presented on Applicant Kendall West's behalf (as CLWSC has usually stated explicitly) and has used "Applicant" to refer to actions either by or on behalf of Kendall West.

The hearing on the merits was convened via Zoom videoconference on February 24, 2022, and concluded on February 25, 2022.[21] The record ultimately closed on April 14, 2022, the date on which the last post-hearing written arguments were filed.[22] In post-hearing arguments, only Protestants contest whether the draft permit meets applicable requirements with regard to the issues referred to SOAH.

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[18] ED Resp. to Protestants Mot. to Dismiss (Feb. 18, 2022) at 1-2.

[19] SOAH Order No. 5 (Feb. 16, 2022); SOAH Order No. 6 (Feb. 23, 2022).

[20] SOAH Order No. 6 at 1-2; *see also* Hearing on the Merits Transcript (HOM Tr.) at 51-54.

[21] The transcript of the hearing on the merits was prepared in two volumes, one for each hearing day, but with sequential pagination. Accordingly, all cites are simply to "HOM Tr. at __."

[22] Although the procedural schedule originally prescribed a record-close date of April 4, 2022, corresponding to a deadline for parties to file their written responses to closing arguments, the ALJ has nonetheless opted to consider a short "limited reply" filed by Protestants on April 11, 2022, and a "Reply to Protestants' Untimely Brief" filed by Applicant on April 14, 2022.

D. Referred Issues

As set forth in the Interim Order, the twelve issues referred by TCEQ to SOAH are:

A. Whether the draft permit is protective of groundwater;

B. Whether the draft permit adequately addresses nuisance odor in accordance with 30 Texas Administrative Code § 309.13(e);

C. Whether the draft permit includes adequate provisions to protect the health of the requesters and aquatic and terrestrial wildlife;

D. Whether the draft permit is protective of water quality and the existing uses of the receiving waters in accordance with applicable Texas Surface Water Quality Standards;

E. Whether the draft permit complies with applicable antidegradation requirements;

F. Whether the draft permit includes adequate provisions to protect the requestors' use and enjoyment of their property;

G. Whether the Facility complies with the siting requirements of 30 Texas Administrative Code Chapter 309, Subchapter B, including the required buffer zones for private water wells and potable water-storage tanks;

H. Whether the permit application is substantially complete and contains accurate information;

I. Whether the Applicant adequately demonstrated a need for the proposed facility, as required by Texas Water Code § 26.0282, Consideration of Need and Regional Treatment Options;

J. Whether the draft permit includes sufficient monitoring and reporting requirements, including necessary operational requirements;

K. Whether the draft permit was provided to the U.S. EPA for review as required; and

L. Whether the Applicant substantially complied with all applicable notice requirements.[23]

Each of these issues will be analyzed in Part II of this PFD.

E. Burdens of Proof and Production

The burden of proof on these issues lies with Applicant, by a preponderance of the evidence.[24] However, effective September 1, 2015, the Legislature made significant changes impacting how this burden may be met and the relative evidentiary burden imposed on Protestants as opposing parties. Because the parties' arguments reflect some disagreement or uncertainty regarding this procedural framework,[25] it is helpful to begin with some explanation and analysis of how it works. That entails statutory construction, which presents a question of law, determined *de novo*, that judges generally are to answer based on the ordinary meaning of the words used or any definitions provided, but read in context.[26] The meaning-informing context includes the statute read as a whole, the broader framework of related statutes, and other background law.[27] And judges are to apply these same principles when construing agency rules.[28]

TCEQ referred this case to SOAH under Texas Water Code § 5.556, which governs referral of environmental-permitting cases to SOAH based on a request for a contested-case hearing.[29]

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[23] Ex. AR-3.

[24] 30 Tex. Admin. Code § 80.17(a).

[25] *Compare* Protestants Closing Statement at 8 n.5 *and* Protestants Reply at 2-5 *with* Applicant Closing Arg. at 2-3, Applicant Reply Br. at 8, *and* ED Closing Arg. at 10-11.

[26] *See*, *e.g.*, *In re Office of the Att'y Gen. of Tex.*, 456 S.W.3d 153, 155-56 (Tex. 2015) (orig. proceeding) (per curiam); *In re Ford Motor Co.*, 442 S.W.3d 265, 271 (Tex. 2014) (orig. proceeding).

[27] *See, e.g.*, *Worsdale v. City of Killeen*, 578 S.W.3d 57, 69 (Tex. 2019) ("Statutes cannot be read intelligently if the eye is closed to considerations evidenced in affiliated statutes."); *Ochsner v. Ochsner*, 517 S.W.3d 717, 721 (Tex. 2016) ("We look to the statutory scheme as a whole in order to establish the meaning of [the provision at issue], not to snippets taken in isolation."); *In re Allen*, 366 S.W.3d 696, 706 (Tex. 2012) (presumption that the Legislature acts "with complete knowledge of the existing law and with reference to it" (quoting *Acker v. Texas Water Comm'n*, 790 S.W.2d 299, 301 (Tex. 1990))).

[28] *Texas Comm'n on Envmt'l Quality v. Maverick Cty*, 642 S.W.3d 537, 544 (Tex. 2022) (quoting *Patients Med. Ctr. v. Facility Ins. Co.*, 623 S.W.3d 336, 341 (Tex. 2021), and citing *TGS-NOPEC Geophysical Co. v. Combs*, 340 S.W.3d 432, 439 (Tex. 2011)).

[29] Tex. Water Code §§ 5.551(a), .556.

Consequently, this case is governed by the 2015 legislation, added through Senate Bill (S.B.) 709 and codified in Texas Government Code § 2003.047(i-1) through (i-3).[30] Section 2003.047(i-1) states:

> (i-1) In a contested case regarding a permit application referred under Section 5.556 . . . [of the] Water Code, the filing with [SOAH] of the application, the draft permit prepared by the executive director of the commission, the preliminary decision issued by the executive director, and other sufficient supporting documentation in the administrative record of the permit application establishes a prima facie demonstration that:
>
> (1) the draft permit meets all state and federal legal and technical requirements; and
>
> (2) a permit, if issued consistent with the draft permit, would protect human health and safety, the environment, and physical property.

TCEQ has formally construed Section 2003.047(i-1) by rule specifying that the "prima facie demonstration" described in Section 2003.047(i-1) is established by the "filing of the administrative record as described in § 80.118(c) of this title [30 Texas Administrative Code] (relating to Administrative Record)."[31] In turn, 30 Texas Administrative Code § 80.118(c) prescribes that this "administrative record" includes certified copies of the following documents:

> (1) the items in subsection (a)(1) – (6) of this section, including technical memoranda, that demonstrate the draft permit meets all applicable requirements and, if issued, would protect human health and safety, the environment, and physical property; and
>
> (2) the application submitted by the applicant, including revisions to the original submittal.[32]

The provisions referenced in paragraph (c)(1), subsection (a)(1) through (6) of 30 Texas Administrative Code § 80.118, list the following items as components included in the

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[30] Acts 2015, 84th Leg., R.S., ch. 116 (S.B. 709), §§ 1 and 5, eff. Sept. 1, 2015.

[31] 30 Tex. Admin. Code §§ 80.17(c)(1), .117(c)(1); *accord id.* § 80.127(h) ("the filing of the administrative record as described in § 80.118 of this title (relating to Administrative Record)" establishes the "prima facie demonstration").

[32] 30 Tex. Admin. Code § 80.118(c).

"administrative record": (1) the ED's final draft permit; (2) the ED's decision on the permit application; (3) the summary of the technical review of the permit application; (4) "the compliance summary of the applicant"; (5) copies of the public notices relating to the permit application and affidavits concerning those notices; and (6) "any agency document determined by the [ED] to be necessary to reflect the administrative and technical review of the application."[33]

TCEQ rules further prescribe that the ALJ in a contested-case hearing governed by the S.B. 709 framework "shall admit the administrative record [as defined above] into evidence for all purposes."[34] And, as would be implied by the concept of a "prima facie *demonstration*" that is established by that record, "the applicant's presentation of evidence to meet its burden of proof may consist solely of the filing with [SOAH], and admittance by the judge, of the administrative record [so defined]."[35] But consistent with the commonly understood connotation of a "*prima facie* demonstration," said "demonstration" is subject to being controverted.[36] Per Texas Government Code § 2003.047(i-2):

> (i-2) A party may rebut a [prima facie] demonstration under Subsection (i-1) by presenting evidence that:
>
> (1) relates to . . . an issue included in a list submitted under Subsection (e) in connection with a matter referred under Section 5.556, Water Code [*i.e.*, here, one of the twelve issues referred in the Interim Order]; and
>
> (2) demonstrates that one or more provisions in the draft permit violate a specifically applicable state or federal requirement.

And § 2003.047(i-3) further provides:

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[33] 30 Tex. Admin. Code § 80.118(a).

[34] 30 Tex. Admin. Code § 80.127(h).

[35] 30 Tex. Admin. Code § 80.117(b); *see* Demonstrate. The American Heritage Dictionary of the English Language (5th ed. 2022) ("To show to be true by reasoning or adducing evidence; prove: *demonstrate a proposition*.").

[36] Prima facie. The American Heritage Dictionary of the English Language (5th ed. 2022) ("True, authentic, or adequate at first sight; ostensible: *prima facie evidence.*"); Prima facie case. Black's Law Dictionary (11th ed. 2019) ("The establishment of a legally required rebuttable presumption" and "[a] party's production of enough evidence to allow the fact-trier to infer the fact at issue and rule in the party's favor").

> (i-3) If in accordance with Subsection (i-2) a party rebuts a presumption established under Subsection (i-1), the applicant and the executive director may present additional evidence to support the draft permit.[37]

Although (i-2)'s requirement of a relationship to a referred issue is straightforward, neither the statute nor TCEQ rules elaborate as to the burden that must be met for the evidence to "*demonstrate*[] that one or more provisions in the draft permit violate a specifically applicable state or federal requirement." But the ordinary meaning of "demonstrate" is "[t]o show to be true by reasoning or adducing evidence; prove."[38] In contested-case hearings, like civil trials, the longstanding general or default rule is that facts are deemed proven to exist or to be true by a preponderance of the evidence.[39] And as applied within in the context of the S.B. 709 framework, an opposing party's burden under (i-2) would be to "present[] evidence" that would, as compared to the contents of the administrative record filed with SOAH and admitted into evidence, preponderate in favor of a finding or conclusion that "one or more provisions in the draft permit violate a specifically applicable state or federal requirement," thereby rebutting material facts that would otherwise be deemed proven from the mere filing and admission of the administrative record.[40]

In that event, the applicant and ED would have the right, per (i-3), to "present additional evidence to support the draft permit" to augment or elaborate upon the administrative record. And

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[37] The TCEQ rules implementing these provisions are substantively identical. *See* 30 Tex. Admin. Code §§ 80.17(c), .117(c).

[38] Demonstrate. The American Heritage Dictionary of the English Language (5th ed. 2022).

[39] *See Granek v. Texas St. Bd. of Med. Examn'rs*, 172 S.W.3d 761, 777 (Tex. App.—Austin 2005, no pet.) (in context of rejecting application of clear-and-convincing proof standard, observing that "no doctrine is more firmly established than that issues of fact are resolved by a preponderance of the evidence"); *Southwestern Pub. Servs. Co. v. Pub. Util. Comm'n of Tex.*, 962 S.W.2d 207, 213-14 (Tex. App.—Austin 1998, pet. denied) (discussing "well-established rule that the standard of proof for any administrative agency finding can never be less than a preponderance of the evidence" (citing *Beaver Express Serv., Inc. v. Railroad Comm'n of Tex.*, 772 S.W.2d 768, 775 n.3 (Tex. App.—Austin 1987, writ denied)).

[40] *Accord* 40 Tex. Reg. 9688 (Dec. 25, 2015) (explaining, in regard to TCEQ's rules implementing S.B. 709, that while the burden of proof remains with the applicant, that burden can be met "by the submittal of the administrative record to and its admittance into the evidentiary record by SOAH, subject to rebuttal as provided in new Texas Government Code § 2003.047(i-2). In addition, SB 709 does not establish the evidentiary standard for any party in a CCH, nor does it provide any direction to SOAH or the commission to establish a new standard for the rebuttal demonstration in new Texas Government Code § 2003.047(i-2). Because CCHs are similar to non-jury civil trials in district court, the evidentiary standard in CCHs for permit applications is 'preponderance of the evidence.'").

based on this larger totality of the evidence to weigh against any rebuttal evidence, the applicant could still carry its burden of proof on the contested issue by a preponderance of the evidence.[41] That is to say, the burden of proof on the ultimate merits of the issue remains with the applicant. In this respect, an opposing party's burden under (i-2) is akin to one of production rather than proof in the sense of ultimate persuasion.[42]

But to the extent this burden-shifting scheme might create some thorniness in application, the ALJ would note that neither the statute nor TCEQ rules require the applicant to rely solely on the administrative record unless and until it is rebutted. Rather, the applicant may present any additional evidence to support the permit once the administrative record is admitted.[43] To the extent an applicant does so, the S.B. 709 analysis, as a practical matter, could reduce simply to weighing the totality of competing evidence presented by both sides, as contemplated by (i-3), and determining whether the applicant carried its burden of proof on each contested issue.

As noted previously, Exhibits AR-1 through AR-5 were filed with SOAH and admitted into evidence as the administrative record.[44] There were no objections to either the filing or the admission into evidence.[45] Consequently, Applicant is deemed to have met its burden of proof

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[41] In other words, the standard of proof under both (i-2) and (i-3) is preponderance of the evidence, but the scope of the evidence considered in the inquiry can change, as does the party that bears the burden. The change in scope of evidence is somewhat analogous to the situation where a civil defendant moves for a directed verdict at the close of a plaintiff's direct evidence, is denied, then presents its own evidence. Because the scope of the evidence is expanded by the defendant's evidence, defendant must reurge its directed-verdict motion at the conclusion of its evidence in order to preserve it. *See Majeed v. Hussain*, Cause No. 03-08-00679-CV, 2010 WL 417472, at *3-5 (Tex. App.—Austin Oct. 22, 2010, no pet.) (mem. op.).

[42] The ALJ acknowledges that this formulation differs somewhat from that articulated in some prior SOAH PFDs addressing the S.B. 709 framework, in which ALJs have suggested that the rebuttal burden is one of producing legally sufficient evidence, similar to the burden placed upon a summary-judgment nonmovant in the face of a sufficient motion. In fact, the ALJ initially perceived the framework the same way, including when ruling on prehearing motions, but came to the above conclusions following further study. However, the differences may be of little practical consequence in many cases.

[43] 30 Tex. Admin. Code § 80.117(c)(2) ("The applicant, protesting parties, the public interest counsel, and the executive director may present evidence after admittance of the administrative record by the judge."); *see also id*. § 80.117(b) ("the applicant's presentation of evidence to meet its burden of proof *may* consist solely of the filing with [SOAH], and admittance by the judge, of the administrative record" (emphasis added)).

[44] Exs. AR-1 through AR-5; PH Tr. at 10-12.

[45] PH Tr. at 12.

based on the "prima facie demonstration," subject to Protestants' opportunity to rebut by "presenting evidence" relating to a referred issue and that, as compared to the administrative record, would preponderate in favor of a contrary finding or conclusion that "one or more provisions in the draft permit violate a specifically applicable state or federal requirement." Further, while not conceding that Protestants met their rebuttal burden, Applicant, and also the ED, presented evidence beyond the administrative record regarding referred issues. Accordingly, the ALJ has sometimes focused his analysis simply on whether, with respect to each violation Protestants claim and any referred issue it would implicate, Applicant met its burden of proof based on the totality of evidence ultimately presented. Any interim burden-shifting steps are addressed only to the extent they present potentially material contested questions.

II. ANALYSIS OF REFERRED ISSUES

A. Impacts of Discharge (Referred Issues A, C, D, E, and F)

Protestants complain chiefly of perceived direct or indirect adverse environmental impacts from the discharge that would be allowed under the draft permit. Of particular concern to Protestants is the draft permit's limit on total phosphorus (TP) (0.5 mg/L TP in each of the Facility's three phases) and the absence of any limit on total nitrogen (TN). Protestants also assert that concentrations of dissolved oxygen (DO) in the receiving waters will also be materially decreased.

1. Legal Background

The immediate legal context for these complaints, and for the draft permit provisions they implicate, is formed principally by the Standards. The Standards declare overarching policy purposes that include "maintain[ing] the quality of water in this state consistent with public health and enjoyment, propagation and protection of terrestrial and aquatic life, operation of existing industries, and taking into consideration economic development of the state."[46] To these ends, the

[46] 30 Tex. Admin. Code § 307.1.

Standards prescribe narrative and numerical criteria that vary depending on the type of effluent being discharged and the nature of the receiving waters.[47]

The narrative criteria include, as potentially relevant here, "surface waters must be maintained in an aesthetically attractive condition" and "[n]utrients from permitted discharges or other controllable sources must not cause excessive growth of aquatic vegetation that impairs an existing, designated, presumed, or attainable use."[48] Numerical criteria include specific minimum levels of DO concentrations that are deemed sufficient to support existing, designated, presumed, and attainable categories of "aquatic life uses" in a water body.[49] "High" aquatic life use represents "highly diverse" habitat characteristics and high degrees of species diversity and richness.[50] In contrast, "limited" aquatic life use represents "uniform" habitat characteristics and low species diversity and richness, while "minimal" aquatic life use is characterized by the absence of habitat and species.[51] The corresponding DO criteria for each aquatic life use are a 24-hour DO mean of at least 5.0 mg/L for high aquatic life use, at least 2.0 mg/L DO for minimal aquatic life use, and at least 3.0 mg/L DO for limited aquatic life use.[52]

As noted previously, the relevant portion of Upper Cibolo Creek has been "classified" under the Standards as Segment 1908 of the San Antonio River Basin, with a site-specific use designation of high aquatic life use, as well as primary contact recreation, public water supply, and aquifer protection.[53] As for the upstream "unclassified" receiving waters, the Standards presume

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[47] 30 Tex. Admin. Code § 307.4.

[48] 30 Tex. Admin. Code § 307.4(b)(4), (e).

[49] 30 Tex. Admin. Code §§ 307.4(h), .7(b)(3), .10 & Appx. A.

[50] 30 Tex. Admin. Code § 307.7(b)(3) & Figure TAC § 307.7(b)(3)(A)(i).

[51] 30 Tex. Admin. Code § 307.7(b)(3) & Figure TAC § 307.7(b)(3)(A)(i). Conversely, an "exceptional" category is reserved for "outstanding natural variability" in habitat characteristics, "exceptional or unusual" species assemblage, and "exceptionally high" diversity and species richness. 30 Tex. Admin. Code § 307.7(b)(3) & Figure TAC § 307.7(b)(3)(A)(i). As discussed shortly, the ED categorized the aquatic-life uses of the receiving waters in this case as "high," "limited," or "minimal," and did not apply the "exceptional" category to any of them. Although Protestants emphasize what they term the "pristine" quality of the receiving waters, the ALJ does not understand them to contest the ED's categorization of the receiving waters as no higher than high aquatic-life use.

[52] 30 Tex. Admin. Code § 307.7(b)(3) & Figure TAC § 307.7(b)(3)(A)(i).

[53] 30 Tex. Admin. Code § 307.10 & Appx. A.

aquatic life uses (and corresponding DO criteria) based on the waters' status as freshwater rather than saltwater and one of three alternative generic categorizations of their flow: (1) perennial waters, which are presumed to have high aquatic life use (and must be supported by the 5.0 mg/L DO mean); (2) intermittent streams, which are presumed to have minimal aquatic life (and to require at least 2.0 mg/L DO); and (3) intermittent streams with perennial pools, which are presumed to have limited aquatic life use (and to require at least 3.0 mg/L DO).[54]

In addition to these criteria, TCEQ's antidegradation rule, set forth in § 307.5 of the Standards, prescribes three categories or "tiers" of policy concern and review, two of which are relevant here. Under "Tier 1," "[e]xisting uses and water quality sufficient to protect those existing uses must be maintained," with such "uses" being the same designated uses as with the aforementioned water-quality criteria.[55] All pollution that could cause an impairment of water quality is subject to Tier 1 reviews, which must include a preliminary determination of a water body's existing uses and criteria, if these have not been determined previously.[56]

"Tier 2" reviews, by contrast, apply to all pollution that could cause degradation of water quality where water quality exceeds levels necessary to support propagation of fish, shellfish, terrestrial life, and recreation in and on the water (termed "fishable/swimmable quality").[57] Under Tier 2:

> No activities subject to regulatory action that would cause degradation of waters that exceed fishable/swimmable quality are allowed unless it can be shown to the commission's satisfaction that the lowering of water quality is necessary for important economic or social development.[58]

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[54] 30 Tex. Admin. Code §§ 307.4(h), .7(b)(3) & Figure TAC § 307.7(b)(3)(A)(i). An "intermittent stream" is defined as a stream having a zero flow for at least one week during most years and, where flow records are available, a stream with a seven-day, two-year low flow of less than 0.1 cubic feet per second. 30 Tex. Admin. Code § 307.3(a)(34). An intermittent stream with perennial pools is one that maintains "persistent pools" even when flow in the stream is less than 0.1 cubic feet per second. 30 Tex. Admin. Code § 307.3(a)(35). *See also* 30 Tex. Admin. Code § 307.3(a)(49) (defining "presumed use" as "[a] use that is assigned to generic categories of water bodies (such as perennial streams)."

[55] 30 Tex. Admin. Code § 307.5(b)(1).

[56] 30 Tex. Admin. Code § 307.5(c)(2)(A).

[57] 30 Tex. Admin. Code § 307.5(b)(2), (c)(2)(B).

[58] 30 Tex. Admin. Code § 307.5(b)(2).

For these purposes, "[d]egradation is defined as a lowering of water quality by more than a de minimis extent, but not to the extent that an existing use is impaired" (as would be prohibited under Tier 1).[59] TCEQ has not adopted any further definition of "degradation" or "de minimis," but the Third Court of Appeals has summarized the Tier 2 inquiry as follows:

> [S]tated generally, to determine whether the proposed regulated activity will result in degradation of water quality, TCEQ rules require a comparison of the baseline water-quality conditions with the conditions that will exist once the permitted activity begins. If the comparison shows no change in water quality, a water-quality improvement, or a de minimis—*i.e.*, "trifling" or "negligible"—lowering of water quality, the antidegradation policy is not implicated. If, however, the comparison shows a loss in water quality that is more than de minimis, the activity will not be allowed absent a showing that the loss is necessary for important economic or social development.[60]

Of final note, the Standards contemplate the existence of "standards implementation procedures" consisting of "methods and protocols" in a "guidance document," "*Procedures to Implement the Texas Surface Water Quality Standards* (RG-194), as amended and approved by the commission and EPA."[61] The current and applicable version of this document, commonly termed the "Implementation Procedures" or "IPs,"[62] was approved by the Commission and EPA in 2010.[63] The IPs state that "[t]his document explains procedures the TCEQ uses when applying the Standards to permits issued under the TPDES program" and "should be interpreted as guidance and not as a replacement to the rules."[64] However, the Standards include cross-references to the IPs, including a proviso stating that "[f]or TPDES permits for wastewater, the process for the

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[59] 30 Tex. Admin. Code § 307.5(b)(2).

[60] *Robertson Cty: Our Land, Our Lives (RCOLOL) v. Tex. Comm'n on Envmt'l Quality*, Cause No. 03-12-00801-CV, 2014 WL 3562756 at *8 (Tex. App.—Austin July 17, 2014, no pet.) (op. on reh'g) (quoting De minimis. Black's Law Dictionary 524 (10th ed. 2014)).

[61] 30 Tex. Admin. Code §§ 307.2(e), .3(a)(66).

[62] *RCOLOL*, 2014 WL 3562756 at *8 n.44.

[63] This version of the IPs is included in the record as Ex. ED-5.

[64] Ex. ED-5 at 12.

antidegradation review and public coordination is described in the standards implementation procedures."[65]

2. Permit Background

Before turning to the parties' arguments, it is also helpful to understand the analytical and decisional process through which the draft permit was developed. This additional context is not materially disputed, at least as a matter of procedural or historical events.

The disputed provisions of the draft permit are rooted largely in the work of Jeff Paull, an aquatic scientist with the Standards Implementation Team of the Water Quality Section of TCEQ's Water Quality Division. Working from information supplied in the Application as well as external resources like online mapping software with aerial photography, Mr. Paull performed a technical review in which he verified the outfall locations, discharge routes, and receiving waters; ascertained or confirmed that Upper Cibolo Creek Segment 1908 was a classified segment, its designated uses (which include high aquatic life use, as noted previously), and corresponding criteria under the Standards; and made a preliminary determination of the flow statuses, uses, and criteria for the unclassified receiving waters within three miles of the outfall locations.[66] According to Mr. Paull, the three-mile range is the "standard distance" and "typical practice" his team uses when assigning uses and aquatic life use criteria, adding that he used this measure rather than a shorter one that the IPs would generally prescribe based on the discharge volume.[67] As for the water bodies within the three-mile range, Mr. Paull determined that the Outfall 002 unnamed tributary was an intermittent stream, that the Outfall 001 unnamed tributary was an intermittent stream with perennial pools (the five small golf-course ponds), and that Frederick Creek, Masters Lake, and Smith Investment Co. Lake Nos. 1 and 3 were each perennial water bodies. Based on

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[65] 30 Tex. Admin. Code §§ 307.5(c)(1)(A); *see also RCOLOL*, 2014 WL 3562756 at *8 (noting that TCEQ's antidegradation reviews "are performed under" the IPs, "which, stated generally, explains the procedures TCEQ uses when applying Chapter 307, including the antidegradation rule, to wastewater discharge permits").

[66] Ex. ED-2 (Paull Dir) at 7, 9.

[67] Ex. ED-2 at 8; *see* Ex. ED-5 at 12-13 (estimated downstream DO impact of 1.1 miles for a permitted flow greater than 0.20 and less than 0.50 MGD, subject to adjustment based on site-specific data).

these respective flow determinations and the freshwater composition of the waters, Mr. Paull assigned each water body the aquatic life use presumed under the Standards (minimal for the Outfall 002 tributary, limited for the Outfall 001 tributary, and high for the others), and the DO criteria corresponding to each aquatic-life use (2.0, 3.0, and 5.0 mg/L, respectively).[68]

The DO criteria determined by Mr. Paull were then used as the target or goal in mathematical modeling calculations performed by the Water Quality Section's Water Quality Assessment Team that were intended to ascertain the levels of various pollutants that could be present in the effluent while still maintaining the DO criterion levels in the respective water bodies.[69] Three pollutants considered to be "major oxygen-related pollutants" (*i.e.*, potentially impacting instream DO levels) were examined: five-day biochemical oxygen demand or five-day carbonaceous biochemical oxygen demand ($CBOD_5$), ammonia nitrogen, and DO in the effluent itself.[70] A method known as the QUAL-TX model was used. According to Gunnar Dubke, an engineer and modeler who made the team's ultimate recommendations regarding effluent limits,[71] mathematical modeling is a "standard analytical tool" for evaluating the water-quality impacts from wastewater discharges, as is the QUAL-TX model's use on the types of water bodies involved here, whose reaches are both "advective" (unobstructed or free flowing) and "pooled" (slower moving and generally deeper due to natural or man-made obstructions).[72]

Inputs into the model included the effluent limits for $CBOD_5$, ammonia nitrogen, and DO as proposed in the Application; estimates of pond and pool dimensions, derived from historical aerial imagery and geographic information system software, and calculations of those bodies' hydraulics based on those dimensions; and values established in the IPs for kinetic rates, assumed

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[68] Ex. ED-2 at 8-9; *see also* Ex. ED-6; Ex. AR-5 at APP 165.

[69] Ex. ED-3 (Dubke Dir.) at 2-3.

[70] Ex. ED-3 at 3. As described in simple terms by Mr. Dubke during the hearing, $CBOD_5$ is basically food for oxygen-consuming bugs, ammonia-nitrogen causes a chemical reaction that takes oxygen out of the water, and there's DO in the discharge itself. HOM Tr. at 278-29 (Dubke Cross).

[71] The modeling was initially performed by engineer and modeler Mark Rudolph, but was reassigned to Mr. Dubke following Mr. Rudolph's retirement. Ex. ED-3 at 4; *see also* Ex. ED-7, Ex. ED-8.

[72] Ex. ED-3 at 2, 6.

ambient water quality (*i.e.*, without the discharge), and default hydraulics.[73] Assumptions included ambient concentrations of 6 mg/L DO in the receiving waters (the modeler did not take any actual measurements, although this was said to be normal practice)[74] but also zero baseflow, which meant that the flow in the unnamed tributaries was assumed to consist solely of discharge (and thus no dilution there).[75] The modeling ended 0.71 km downstream from Outfall 1 (immediately below the fifth and final golf-course pond, before the tributary reached Master's Lake) and 0.41 km downstream from Outfall 2 (immediately downstream of Smith Investment Co. Lake No. 3) because, Mr. Dubke explained, modeling predicted that the assumed ambient concentrations of the three pollutants would be achieved or regained near those areas.[76]

According to Mr. Dubke, the modeling indicated that the effluent limits proposed in the Application would not be stringent enough to maintain the desired DO levels recommended by Mr. Paull. The inputs were then adjusted so as to identify the levels of $CBOD_5$, ammonia nitrogen, and DO that would achieve the DO criteria for all modeled segments below each outfall; then the more restrictive of the respective limits as to each pollutant was incorporated into the draft permit.[77]

Regarding the high-aquatic-use area below Outfall 2, the modeling determined that the modified effluent limits would, as to each phase, achieve the following DO concentrations in the respective segments:

Phase	**Smith Investment Co. No. 1**	**Smith Investment Co. No. 3a**	**Smith Investment Co. No. 3b**
Interim 1	5.20 mg/L	5.48 mg/L	6.22 mg/L
Interim 2	4.88 mg/L	5.10 mg/L	5.96 mg/L
Final	4.80 mg/L	4.96 mg/L	5.78 mg/L[78]

[73] Ex. ED-3 at 6-7.

[74] HOM Tr. at 282, 295.

[75] HOM Tr. at 299.

[76] Ex. ED-3 at 7; *see* Ex. ED-5 at 83-99; Ex. ED-19; Ex. ED-20.

[77] Ex. ED-3 at 7; *see* Ex. ED-7; Ex. ED-8; Ex. ED-9 at 3; Ex. 10 at 2-4; Ex. ED-20; Ex. ED-21; Ex. PR-H-2.

[78] Ex. ED-21; Ex. PR-H-2. The modeling distinguished two portions of Lake No. 3, a 0.06-acre portion (a) from a downstream 1.48-acre portion (b).

Although some of these measures were less than the 5.0 mg/L criterion level (Lake No. 1 in both the Interim 2 and Final phases and No. 3a in the Final Phase), Mr. Dubke explained that, per internal guidelines that his team followed, a DO concentration as low as 4.8 mg/L was deemed compliant.[79] He also acknowledged that the modeling was aimed solely at ensuring compliance with the DO criteria, which in turn were aimed at preserving aquatic-life uses, and did not specifically address antidegradation.[80]

In addition to determining the receiving waters' flow characteristics, presumptive uses, and corresponding DO criteria, Mr. Paull performed additional analyses that included a "nutrient screening." He utilized a worksheet and underlying methodology prescribed in the IPs for assessing local effects of discharges on the Standards' narrative criteria that "[n]utrients from permitted discharges or other controllable sources must not cause excessive growth of aquatic vegetation that impairs an existing, designated, presumed, or attainable use."[81] This methodology prescribes, as a "rough guide," an evaluation for seven miles downstream for a discharge of greater than 0.25 MGD and less than 1.0 MGD, the range that would apply to the Facility.[82] The focus of that evaluation is on determining whether a TP limit should be imposed. According to the IPs, "[c]onsiderations for nutrient impacts focus on TP rather than nitrogen because "substantially less data on total nitrogen has been collected in Texas reservoirs, streams, and rivers"; "phosphorus is a primary nutrient in freshwaters, although nitrogen can be limiting during parts of the year"; "nitrogen can be fixed directly from the atmosphere by most of the noxious forms of blue-green algae"; and "available waste treatment technologies make reducing phosphorus more effective than reducing nitrogen as a means of limiting algal production."[83] However, "[e]ffluent limits for total nitrogen can be considered in certain situations when existing or projected nitrogen levels

[79] HOM Tr. at 290-91.

[80] HOM Tr. at 293-94.

[81] Ex. ED-2 at 10-11; Ex. ED-5 at 47-54; Ex. ED-17; *see* 30 Tex. Admin. Code § 307.4(e).

[82] Ex. ED-5 at 47; Ex. ED-17 at 1.

[83] Ex. ED-5 at 29-30.

would result in . . . growth of nuisance aquatic vegetation."[84] Mr. Paull analyzed only whether a TP limit should be imposed.

Per the IPs, a TP limit is "potentially indicated" by a new discharge of 0.25 MGD or more to "perennial, shallow, relatively clear streams with rocky bottoms or other substrates that promote the growth of attached vegetation," to "streams with long, shallow, relatively clear perennial impoundments," or "where receiving streams appear to be especially sensitive to nutrient increases."[85] In that event, the screener is to examine several "site-specific screening factors":

- The maximum discharge volume;
- Instream dilution, as reflected in the percentage concentration of effluent compared to base flow;
- The type of steam bottom, as it bears upon sensitivity to growth of attached algae;
- The receiving waters' depths, with shallow versus deep depths being deemed more sensitive to the growth of attached vegetation;
- Relative clarity and how it bears upon sensitivity to nutrient enrichment, with "relatively clear water" with a usually visible bottom being deemed most sensitive;
- The extent to which sunlight can reach the water's surface *vis a vis* shading, with more sunlight deemed to equate to higher sensitivity to growth of aquatic vegetation;
- Flow characteristics (intermittent, intermittent with perennial pools, perennial) as they bear upon their capacity to sustain permanent aquatic environments;
- The presence of impoundments smaller than 10 surface acres (which would be analyzed under standards applicable to reservoirs) but larger than 300 feet in length, or smaller impoundments that exceed 20% of the affected reach (such as the golf-course ponds below Outfall 1), which "can also increase the level of concern for eutrophication impacts";
- Consistency with another discharge permit in the area, which has a 0.5 mg/L TP limit; and

[84] Ex. ED-5 at 30.

[85] Ex. ED-5 at 47.

- The fact that TP is listed as a nutrient of concern in Segment No. 1908.

The screener is to assign each factor a "low," "moderate," or "high" level of concern and corresponding respective numerical values of 3, 4, and 5.[86] If the average is greater than 4, a TP limit is "probably needed," and "possible" if between 2 and 4.[87]

In this case, Mr. Paull's nutrient-screening analysis yielded an average score of 4, and he determined that a TP limit should be imposed.[88] The IPs provide that "[i]f an effluent limit for TP is indicated, the screening factors and levels of concern are used to help determine the specific effluent limit for TP, and that such a limit "is recommended based on reasonably achievable technology-based limits, with consideration of the sensitivity of the site."[89] The IPs further state that a "typical" TP limit for permitted flows of less than 0.5 MGD would be 1.0 mg/L; and that the "typical" limit for a discharge between 0.5 and 3.0 MGD would be between 1.0 and 0.5 mg/L; but also makes these subject to upward or downward adjustment based on site-specific factors.[90] Mr. Paull recommended a TP limit of 0.5 mg/L (the restrictive end of the "typical" range of limits for discharges between 0.5 and 3.0 MGD) for all three phases of the Facility, perceiving that it "should help prevent the excess accumulation of algae in the receiving waters by reducing the nutrient load in the water bodies that are sensitive to [TP]" and was based on the flow volume and the IPs, considering "reasonably achievable technology-based effluent limits" and "the sensitivity of the site."[91] This was the limit ultimately proposed in the draft permit.[92]

Mr. Paull also attested to performing a Tier 1 antidegradation analysis as to the receiving waters within the three-mile range and a Tier 2 analysis as to those deemed to have high aquatic life use (*i.e.*, Masters Lake, Smith Investment Co. Lake Nos. 1 and 3, and Frederick Creek). He

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[86] Ex. ED-5 at 48-52; Ex. ED-17.

[87] Ex. ED-5 at 52; Ex. ED-17 at 2.

[88] Ex. ED-2 at 10-11; Ex. ED-17 at 2.

[89] Ex. ED-5 at 29, 52.

[90] Ex. ED-5 at 29.

[91] Ex. ED-2 at 11.

[92] *See* Ex. ED-6 at 1; Ex. ED-10 at 2-4.

determined that the existing water-quality uses he had previously identified would not be impaired by the permitting action so long as the Facility complied with the effluent limits being recommended and other requirements of the draft permit.[93] Likewise, assuming that the Facility complied with the recommended effluent limits and draft permit requirements, Mr. Paull determined that "no significant degradation of water quality is expected" in Masters Lake, Smith Investment Co. Lake Nos. 1 and 3, and Frederick Creek.[94] These determinations were later adopted by the ED.[95] The ED and staff did not address whether any lowering of water quality was "necessary for important economic or social development," as would be required under Tier 2 upon a determination that the permitted activity, while not impairing an existing use as prohibited under Tier 1, would nonetheless be more than de minimis lowering (*i.e.*, degradation).

3. Protestants' Evidence and Argument

Protestants' central theme is that the draft permit and the ED's underlying analyses fail to take account of "pristine" baseline water conditions that, in their view, would be dramatically and detrimentally altered by the permitted discharge. Relatedly, Protestants contend that the ED and staff have reflexively followed and applied the IPs in a manner obvious to these baseline conditions and what they view as the actual requirements of the governing substantive law, further distinguishing (and somewhat dismissing) the IPs as mere procedural guidelines. On the other hand, Protestants also rely on certain portions of the IPs and accuse the ED of selectively ignoring those guidelines while following others.

In support of their contentions about baseline conditions, Protestants' expert, Dr. Lauren Ross, cited TCEQ monitoring data taken from three stations in Frederick Creek downstream from the proposed discharge and a station on Upper Cibolo Creek upstream from Boerne. According to Dr. Ross, "almost all" of these measurements—27 of 29 measurements from the Frederick Creek stations and 30 of 32 measurements from the Upper Cibolo Creek station—

[93] Ex. ED-2 at 10; ED-6.

[94] Ex. ED-2 at 10; ED-6 at 2.

[95] Ex. ED-2 at 10; ED-9 at 2.

showed TP levels that were below the detection limit (*i.e.*, the minimum amount that would reliably register on the testing instrumentation being used), 0.02 mg/L. This is not surprising, according to Dr. Ross, because the geology of Frederick Creek is calcerous and alkaline, contributing to low TP concentrations in baseflow and runoff and causing streams to be "phosphorus limited," *i.e.*, that nutrient controls the pace at which algae and other aquatic plants are produced.[96]

Although thus regarding TP as the primary limiting nutrient, Dr. Ross further testified that baseline levels of TN were also very low. While acknowledging that TN was not directly measured at the two stations, Dr. Ross referenced measurements of two components, ammonia nitrogen, and nitrate nitrogen (which she described as the largest component of TN). At the Frederick Creek stations, according to Dr. Ross, 29 of 29 measures of ammonia nitrogen were below the detection limit of 0.1 mg/L, as were six of ten nitrate nitrogen measurements, with the detectible measures of the latter generally being less than or equal to about 0.05 mg/L. At the Upper Cibolo Creek station, she added, 27 of 32 measures of ammonia nitrate were below the detection limit, and 26 measurements of nitrate nitrogen had an average concentration of 0.22 mg/L.[97]

Dr. Ross also referenced various regional studies, including one attesting that the receiving waters are within an area designated by the EPA as "Ecoregion IV," and more specifically within subecoregion 30 and the Balcones Canyonlands of the Edwards Plateau. According to Dr. Ross, this study reflects "relevant stream reference conditions" for nutrient concentrations that include 8 *micro*grams per liter (µ/L) for TP—a microgram being one-thousandth of a milligram—and 0.27 mg/L for TN.[98]

Dr. Ross pointed out that the draft permit's TP limit of 0.5 mg/L would be many times higher—as much as 50 to 100 times more—than the baseline phosphorus levels indicated by the studies and measures she had referenced. Dr. Ross further observed that the draft permit did not limit TN at all, and opined that that "typical ranges" for TN in effluent from an activated sludge

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[96] Ex. PR-LR-1 (Ross Dir.) at 10-12, 26; HOM Tr. at 66-67.

[97] Ex. PR-LR-1 at 11, 21, 26.

[98] Ex. PR-LR-1 at 10, 12.

wastewater treatment process with a membrane bioreactor and biological nutrient reduction (the type of process to be used at the Facility) would be between 3 and 10 mg/L. "Even allowing for some additional organic nitrogen not accounted for in [the available] measures" of nitrate nitrogen and ammonia nitrogen, Dr. Ross concluded that TN in effluent from the Facility "would certainly be significantly higher than current levels in Frederick Creek."[99]

The result, Dr. Ross reasoned, would be dramatic changes in the receiving waters' chemical composition, with significantly increased concentrations of TP and TN. And these changes, she added, would be particularly acute in the unnamed tributaries below the outfalls, intermittent streams that would have little or no base flow—and thus little or no dilution—for extended periods of time.[100]

In turn, Dr. Ross opined, this "nutrient loading" or "nutrient pollution" of TP and TN would fuel a number of adverse effects in the receiving waters. Dr. Ross described these perceived impacts in terms of three different "trophic" classes or boundaries under which surface waters are distinguished based on "nutrient state." According to Dr. Ross, an "oligotrophic" state is "associated with the highest water quality, clear water, high dissolved oxygen concentrations, and excellent aquatic animal habitat." The "opposite," Dr. Ross continued, is "eutrophic" surface water, which she described as "the most degraded," "high in nutrients" that "produce high concentrations of algae and microscopic organisms that prevent penetration of sunlight," lower in dissolved oxygen concentrations, and thus "usually murky" and "less supportive of fish and other aquatic life." The third category, per Dr. Ross, is "mesotrophic," an "intermediate state" between oligotrophic and eutrophic. Dr. Ross acknowledged that TCEQ has not adopted or incorporated the trophic-class distinctions, *per se*, in any Standard, rule, or guideline, or but insisted they are "universally understood as designations of water quality."[101]In Dr. Ross's view, the receiving waters' low TP and TN levels "indicate water in its most pristine, oligotrophic class." She further opined that the increases in TP and TN under the draft permit would exceed levels shown in various

[99] Ex. PR-LR-1 at 12-13, 21, 26-27.

[100] Ex. PR-LR-1 at 19, 20, 21-22.

[101] Ex. PR LR-1 at 10, 14, 22; HOM Tr. at 59-61.

scientific studies to demark the "boundary" between the oligotrophic and mesotrophic class, the concentration of nutrients that would cause the former class of water to change to the latter. In more direct terms, according to Dr. Ross, the TP and TN increases would cause algal growth, shift the composition of plant and fish species present, turn clear to murkier, and generally defile these "pristine" Hill Country water bodies.[102]

Dr. Ross also presented opinions regarding DO levels in the receiving waters. While acknowledging the absence of available data regarding DO measurements in Frederick Creek and other waters downstream from the two outfalls, Dr. Ross cited as the "most representative information" 18 DO measurements taken at the Upper Cibolo Creek station. These measurements, according to Dr. Ross, ranged from 3.9 mg/L to 11 mg/L, but with 16 of the 18 exceeding 5 mg/L, and an average of 6.7 mg/L. Dr. Ross contrasted these DO measurements with the 5 mg/L DO goal of the effluent limits as determined by staff's modeling.[103]

Relying entirely or principally on these factual or evidentiary premises, Protestants contend that the draft permit violates several specific state or federal legal requirements within the scope of referred issues. (In terms of the S.B. 709 framework, Protestants' evidence and arguments would implicate whether they have rebutted Applicant's prima facie demonstration as to those requirements and, if so, whether Applicant can meet its ultimate burden of proof thereon).

a. Antidegradation (Issue E)

In their primary point of emphasis, Protestants contend that the above-described anticipated changes to the receiving waters' TP and TN levels and resultant effects on aquatic-life forms and water clarity would, within the meaning of TCEQ's antidegradation rule—and quite plainly, in their view—amount to a "lowering of water quality" in Frederick Creek, Masters Lake, and the Smith Investment Co. lakes that is more than "de minimis."[104] If that contention is valid, it would

[102] Ex. PR LR-1 at 10, 14, 15-19, 20-22; *see* Ex. PR LR-7; Ex. PR LR-8; Ex. PR LR-9.

[103] Ex. PR-LR-1 at 20-21.

[104] Protestants Closing Statement at 9-31; Protestants Reply at 6-10.

follow that the draft permit violates Tier 2 of that rule, as the ED did not purport to determine or show that such lowering of water quality is "necessary for important economic or social development," as the rule would require in that event.[105]

Protestants profess to ground these conclusions in a plain-meaning construction of TCEQ's antidegradation rule—including the ordinary meaning of "de minimis" as denoting "trifling" and too minor to warrant consideration—further informed by the context of federal law from which the rule ultimately derives. "The starting point for this case," they urge, is Congress's declared purpose in the Clean Water Act to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[106] To that end, they observe, the Act established the NPDES permitting regime; that the TPDES represents TCEQ's administration and enforcement of the NPDES in this State under authority delegated by Congress and the EPA; and that when administering the TPDES, TCEQ is obliged to ensure compliance with the Act and adopt standards no less stringent that those established in the Act and EPA's rules.[107] These underlying federal standards, Protestants emphasize, include the EPA's Antidegradation Policy, under which the Tier 2 standard requires that the quality of "fishable/swimmable" waters "shall be maintained," and that "lower water quality" equals "degradation," with no explicit de minimis threshold or qualification as in the Texas rule.[108]

Against this federal backdrop, and in order to remain consistent with it, Protestants reason, the de minimis standard under Tier 2 of TCEQ's antidegradation rule must be "interpreted narrowly" to mean *no* lowering of water quality, which in their view squares with the Clean Water Act's policy goal of maintaining and protecting water quality.[109] Protestants also refer the ALJ to

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[105] *See* 30 Tex. Admin. Code § 307.5(b)(2).

[106] Protestants Closing Statement at 3 (quoting 33 U.S.C. § 1251(a)); *see also id*. at 9.

[107] Protestants Closing Statement at 10 (citing 33 U.S.C. § 1342(b); 40 C.F.R. § 123.35).

[108] Protestants Closing Statement at 11-12 (citing 40 C.F.R. § 131.12).

[109] Protestants Closing Statement at 13.

an EPA guidance document that, in their view, supports that conclusion.[110] On the other hand, Protestants also acknowledge that EPA has permitted states to utilize a "de minimis" or "significance" threshold before requiring the Tier 2 balancing of interests.[111] In this regard, they point to additional EPA guidance reflecting that while the agency has afforded states "some discretion in determining what constitutes a significant lowering of water quality" and "has accepted a range of options to defining a significance threshold over which a full antidegradation review is required," one "workable and protective" EPA-approved approach has looked to whether a discharge will consume more than 10% of a water body's preexisting available "assimilative capacity," which is the difference between the applicable water-quality criterion for a pollutant parameter and the ambient water quality for that parameter when it is better than the criterion.[112] Similarly, in her testimony, Dr. Ross stated that "[a] general Tier 2 screening criterion for new discharges is whether the proposed discharge would use more than 10% of the existing assimilative capacity."[113] In fact, she and Protestants urge that TCEQ has even adopted a version of this standard in the IPs, quoting the following language: "New discharges that use 10% or greater of the existing assimilative capacity are not automatically presumed to constitute potential degradation but will receive further evaluation."[114]

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[110] Protestants Closing Statement at 13-14 (citing U.S. Environmental Protection Agency, Water Quality Standards Handbook: Chapter 4: Antidegradation [Handbook] at 9 (2012)). While the Handbook disclaims any legally binding effect or that it changes or substitutes for any provision of a rule or the Clean Water Act, *see* inside cover page, it explains Tier 2 as follows:

> The antidegradation review requirements of this provision of the antidegradation policy are triggered by any action that would result in the lowering of water quality in a high-quality water. Such activities as new discharges or expansion of existing facilities would presumably lower water quality and would not be permissible unless the State conducts a review [balancing the economic and social need for the activity with the benefit of maintaining water quality above that required for "fishable/swimmable" water].

Id. at 9.

[111] Protestants Closing Statement at 13-14 (citing Ephraim S. King, Environmental Protection Agency, Tier 2 Antidegradation Reviews and Significance Thresholds [Memorandum]).

[112] Memorandum at 1, 1-3.

[113] Ex. PR LR-1 at 20.

[114] Ex. PR LR-1 at 20 & n.20; Protestants Closing Statement at 26, 29; Protestants Limited Reply at 2-3; *see* Ex. ED-5 at 64.

Under their view of this 10% threshold, Dr. Ross and Protestants conclude that the draft permit would allow degradation through a discharge that consumes more than 10% of the receiving waters' assimilative capacity of TP and TN, because the discharge will often be the entirety of the water, or nearly so, flowing through the two unnamed tributaries into either Masters Lake or Smith Lake No. 1.[115] More generally, Protestants urge that multi-fold increases in TP and TN concentrations, with the resultant adverse impacts on plant and animal life they foresee, are more than a de minimis lowering of water quality, and quite obviously so.

Protestants further claim material loss of assimilative capacity as to DO concentration. As the relevant measure of assimilative capacity, they point to the difference between (1) the 5.0 mg/L DO criterion that would apply in the high-aquatic-life-use water bodies below Outfall 2[116] and (2) either of two higher baselines, 6.7 mg/L (the average measurement at the Cibolo Creek station, cited by Dr. Ross) or 6.0 mg/L (TCEQ's modeling assumption). Protestants further emphasize that TCEQ's calculations predicted that DO levels in the high-aquatic-life-use bodies being modeled (Smith Investment Co. Lake Nos. 1, 3a, and 3b) would drop to as low as 4.80 mg/L. Even if 4.80 mg/L is deemed the equivalent of 5.0 mg/L, Protestants reason, TCEQ's own calculation show that the draft permit would (in these areas) consume 100% of the assimilative capacity as to DO (the amount by which the baseline level exceeds the 5.0 mg/L criterion), regardless of which of the two baselines is used.[117] Protestants add, similarly, that DO levels will drop more than 0.5 mg/L from either baseline, which in their view fits one of several examples cited by the IPs of where degradation is deemed "likely to occur."[118]

As perhaps already apparent, the ALJ has overruled the ED's objections to his consideration of the two aforementioned EPA documents. These documents, copies of which Protestants have attached to their briefing, are, if not analogous to rules, at least akin to secondary authorities that may inform the ALJ's analysis of the governing law, in much the same manner as one might cite or consult a court case from another jurisdiction or a law review article. In either case, they are not an attempt to interject new facts that were not within the evidence or matters officially noticed during the hearing.

[115] Ex. PR LR-1 at 20-21; Protestants Closing Statement at 15, 27.

[116] As explained previously, there was no DO modeling of the high-aquatic-use areas below Outfall 1 because the modeling indicated that ambient DO levels would be achieved upstream from those areas.

[117] Ex. PR-LR-1 at 20-21; Protestants Closing Statement at 29-30.

[118] Protestants Closing Statement at 29; *see* Ex. ED-5 at 66.

While terming the asserted Tier 2 violation "most obvious," Protestants also urge that the draft permit would violate Tier 1 by allowing phosphorus increases that will fuel growth in aquatic vegetation and shift species composition in the receiving waters, which in their view will rise to the level of impairing existing aquatic-life uses there.[119] Protestants add that the same violation is "very likely" from the TN increases also.[120] Conversely, Protestants also assert that the ED has effectively collapsed the Tier 2 inquiry into Tier 1 by focusing solely on impairment of uses and not on whether a more-than-de minimis lowering of water quality has occurred.[121]

b. Standards (Issue D)

Relying on materially the same rationale as with the asserted Tier 1 violation, Protestants urge that the draft permit would not be protective of water quality and the existing uses of the receiving waters, as the Standards require.[122]

c. Groundwater (Issue A)

Because the draft permit is not protective of surface water quality, Protestants argue, it is likewise not protective of groundwater.[123] Although Protestants and Applicant presented dueling expert testimony regarding the precise underground hydrology that would come into play,

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[119] Protestants Closing Statement at 31-33.

[120] Protestants Closing Statement at 30.

[121] Protestants Closing Statement at 4-5, 27-29.

In further support of their arguments, Protestants have emphasized the district court's letter opinion in *Save Our Springs Alliance, Inc v. Texas Commission on Environmental Quality*, Cause No. D-1-GN-19-003030. As Protestants acknowledge, however, the judgment in this case has been appealed and (at least as of the morning of this PFD's issuance) is now pending before the Eighth Court of Appeals, Cause No. 08-20-00239-CV. Consequently, any persuasive value of the court's analysis remains to be seen, and the ALJ disagrees with Protestants that it represents binding precedent. (Nor, at this juncture, would any ruling from the Eighth Court be final and binding were it to come by the time this PFD issues). However, the ALJ has reviewed and considered the letter nonetheless, along with the appellate briefing, for whatever illumination it might provide him regarding the governing law.

Similarly, the ALJ has examined the 2021 proposal for decision in SOAH Docket No. 582-20-1895, also cited by Protestants, albeit while keeping in mind that the Commission has since remanded that case back to SOAH and not yet acted on the ALJs' second or supplemental PFD.

[122] Protestants Closing Statement at 34-35.

[123] Protestants Closing Statement at 35; Protestants Reply at 10-11.

Protestants premise their arguments on their contention that the permit would fail to protect surface water quality.[124]

d. Life and Health (Issue C)

Drawing further on the same factual premises as with Issue D, Protestants argue that the draft permit fails to include adequate provisions to protect aquatic life, terrestrial life, and their own health.[125] In this regard, Protestants also rely on additional testimony from Dr. Ross that certain algal blooms can be noxious or toxic and that the water-treatment methods to address them can raise cancer risks in humans.[126]

e. Protestants' Use and Enjoyment of Their Properties (Issue F)

Finally, citing materially the same rationales as with Issues C and D, Protestants urge that the draft permit fails to include provisions to protect their use and enjoyment of their properties.[127] In this regard, Protestants also presented the testimony of Mr. Harpole, Protestant, who either directly or indirectly—through his ownership of Potranco Holdings (the same entity that owns the wastewater-treatment facility Applicant has leased)—owns the land surrounding Masters Lake and on both sides of Frederick Creek for roughly one mile downstream. Mr. Harpole testified that he maintains rental cabins on the property; that the "clean and clear lake is the main attraction"; and that he, family, and cabin renters use the lake and creek for water recreation than includes fishing.[128]

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[124] Protestants Closing Statement at 35; Protestants Reply at 10-11.

[125] Protestants Closing Statement at 33.

[126] Ex. PR-LR-1 at 14-15.

[127] Protestants Closing Statement at 37-38.

[128] Ex. PR-WH-1 at 2-3. *See also* Ex. PR-WH-8 (photo depicting a trophy-size bass that a renter caught from the lake).

4. Applicant's Evidence and Argument

Applicant argues that Protestants failed to rebut its prima facie demonstration on the issues concerning the discharge and its potential effects, and that it also presented additional evidence that would meet its burden of proof. In the latter regard, Applicant relies chiefly on the testimony of water-quality expert James Machin. While emphasizing that the background levels of TP in the receiving waters (as opposed to other area waterways) had not been determined, Mr. Machin acknowledged that in his experience, "most" baseline unimpacted stream phosphorus concentrations in the Texas Hill Country would be something less than the "very common" detection limit of 50 µ/L (*i.e.*, .005 mg/L).[129] He similarly did not have data showing the background DO concentrations for Frederick Creek and its lakes, but noted that TCEQ normally assumed 6 mg/L.[130] He also agreed that there would be no DO concentration to be measured where there was zero flow in the intermittent streams and that "the impacts of the discharge" would be "maximum" there.[131] However, Mr. Machin opined that the draft permit complied with antidegradation requirements and the Standards, included adequate protections of Protestants' health and aquatic and terrestrial life, and was protective of groundwater, emphasizing effluent-quality requirements that were "very stringent" in his experience.[132] He described the draft permit as requiring "rather extreme" and "excellent quality" "tertiary treatment," further contrasting it with the existing TLAP permit, which required only the minimum "standard secondary treatment" allowing 20 mg/L of $CBOD_5$ and total suspended solids and imposing no limits on TP or ammonia-nitrogen.[133]

With regard to TP or TN limits specifically, Mr. Machin opined that because nitrogen was already "abundant," its addition to receiving waters "won't make any difference" in the growth of

[129] HOM Tr. at 134-36, 161 (Machin Cross).

[130] HOM Tr. at 165.

[131] HOM Tr. at 164-65, 172.

[132] Ex. CL APP-3 (Machin Dir.) at Bates 38-54.

[133] HOM Tr. at 142.

aquatic vegetation.[134] In contrast, he acknowledged that adding phosphorus, the limiting nutrient, "will make some difference" and that "it doesn't take much phosphorus to cause more aquatic vegetation growth."[135] He also granted that TCEQ had previously imposed a TP limit of 0.15 mg/L in a discharge permit and that he was advocating a limit below 0.5 mg/L in another permitting case, albeit in regard to a "very large discharge" of 2 MGD into a lake that served as a municipality's water supply.[136] However, he termed the draft permit's 0.5 mg/L TP limit "very stringent," observing that it was lower than the 1.0 mg/L limit generally prescribed under the IPs for the Facility's discharge volume (0.49 MGD) and typical of larger discharges, assuming such a limit is needed at all.[137] He noted that "many" TCEQ discharge permits did not have a TP limit.[138]

Mr. Machin also opined that phosphorus tended to be removed from the water column physically through attachment to particulate matter and settling in sediment, through uptake by plants and sometimes animals, and also through chemically reacting with the alkaline, limestone-containing soils and stream bottom to form apatite, a calcium phosphate mineral that is "essentially what's in your teeth and bones."[139] Consequently, he attested, based on his experience, the phosphorus levels one mile downstream from the Facility's outflows, in Frederick Creek, would be below the 50 µ/L/.005 mg/L detection level.[140] All told, Mr. Machin reasoned, Protestants' concerns about algal growth and cyanotoxins were "speculative at best" and "unlikely to occur."[141]

Mr. Machin further asserted that the QUAL-TX model used to predict DO was reliable and had been used by TCEQ "in hundreds if not thousands of permits."[142] He added that he had run

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[134] HOM Tr. at 155.

[135] HOM Tr. at 155.

[136] HOM Tr. at 133-34; HOM Tr. at 174-76 (Machin Redir.).

[137] Ex. CL APP-3 at Bates 42, 51; *see* Ex. ED-5 at 29.

[138] Ex. CL APP-3 at Bates 52.

[139] HOM Tr. at 146-48; Ex. CL APP-3 at Bates 52.

[140] HOM Tr. at 148-49.

[141] Ex. CL APP-3 at Bates 51; *see* Ex. ED-5 at 29.

[142] Ex. CL APP-3 at Bates 49-50, 52.

the model himself, using the ED's inputs, and had reached the same results.[143] He acknowledged that he had not visited the discharge site to verify the accuracy of the ED's inputs regarding the depth and other features of the receiving waters, but regarded the inputs as "reasonable."[144]

Elaborating as to the basis for his opinion about antidegradation, Mr. Machin testified that "[t]he fact that [DO] will be maintained at concentrations that support a healthy aquatic life community along with the stringent $CBOD_5$, ammonia-nitrogen, and [TP] limitations will mean that the resource will continue to reflect a 'fishable and swimmable' condition," which in turn "means that antidegradation mandates are met, and that uses are protected."[145] He also regarded TP levels as an important factor in the antidegradation analysis.[146] Mr. Machin did not have a "specific definition" of an impact from phosphorus that would be more than de minimis, though he noted that the IPs list a number of considerations in the antidegradation analysis, apparently referring to the portion of the IPs that cited examples of when degradation is said to be likely or unlikely to occur.[147] With regard to TP levels, however, Mr. Machin observed that the underlying Standard regarding nutrients was narrative and "not something that is easily quantified."[148] He drew a contrast to a situation where the water-quality impact "could be quantified to some degree" and "Tier 2 often applies," "where you have an existing discharge, where there is an increase in a proposed discharge and whether it's going to take up a significant amount of the available assimilative capacity of the stream."[149] He also noted the example of a discharge into a water-supply reservoir.[150] "None of these circumstances apply in this case," he maintained, so the Tier 2 inquiry "becomes basically a judgment call."[151] Given "the narrative standard," "modeling showing that the DO standards will not be violated," and "the imposition of an extremely low

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[143] HOM Tr. at 127-29.

[144] HOM Tr. at 129, 171-72.

[145] Ex. CL APP-3 at Bates 54.

[146] HOM Tr. at 155.

[147] HOM Tr. at 156; *see* Ex. ED-5 at Bates 65-66.

[148] HOM Tr. at 156.

[149] HOM Tr. at 160-61.

[150] HOM Tr. at 160.

[151] HOM Tr. at 157, 160.

phosphorus concentration and low ammonia," Mr. Machin determined that "it was very reasonable for the TCEQ to conclude that there would be a de minimis impact on water quality."[152]

In addition to relying on Mr. Machin's opinions, Applicant criticizes Dr. Ross's testimony for utilizing, in lieu of the IPs, a trophic-system characterization that TCEQ has not adopted as a measure of water quality.[153] Applicant also insists that Dr. Ross's analysis is founded on mere "assumptions" unsupported by data collected from the receiving waters or effluent from a comparable facility, effectively "generaliz[ing] discharge permits to claim that effluent limits are one size fits all," again contrary to the IPs.[154] More generally, in Applicant's view, Protestants are "attempt[ing] to use this contested case to reinvent the TPDES permitting process to incorporate standards and policies that have not been adopted by the TCEQ."[155]

While granting that "Protestants may have presented some evidence that the level of certain material in the water may marginally fluctuate," Applicant urges that "this is distinct from demonstrating that the water will be degraded by more than a de minimis amount. The relevant question . . . is not whether there was any change in any individual pollutant, but whether the change affected water quality."[156] Applicant also disputes that the IP language referencing 10% of assimilative capacity applies in this case.[157] In its view, that standard applies only to discharge permits for which TCEQ assigns "mixing zones," which is done only for domestic discharges exceeding 1 MGD.[158]

In addition to these arguments, Applicant disputes that the draft permit would, in any event, allow any infringement of Protestants' use and enjoyment of their properties, or that any of Protestants would be at risk from chlorination of drinking water that would supposedly be required

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[152] HOM Tr. at 156-57.

[153] Applicant Closing Arg. at 9; Applicant Reply at 2.

[154] Applicant Closing Arg. at 9-11.

[155] Applicant Closing Arg. at 1-2, 9.

[156] Applicant Reply at 6.

[157] Applicant Reply to Untimely Brief at 1-2.

[158] *See* Ex. ED-5 at 64, 70.

by algal blooms, urging that each Protestant obtains their water from wells.[159] Applicant also emphasizes testimony from its hydrogeology expert, Matthew Uliana, that the discharge "will most likely be much better quality than the native groundwater."[160]

5. ED's Evidence and Argument

To elaborate on the various steps and underlying reasoning that led to the draft permit, the ED presented the testimony of Messrs. Paull and Dubke and also Gordon Cooper, the permit coordinator who is overseeing the permit process.[161] In addition to explaining the permit's development, previously summarized, these witnesses opined to the effect that the process had followed the Standards and IPs and that the permit would, therefore, protect water quality and existing uses in accord with the Standards, as well as human health and wildlife, groundwater, and/or Protestants' use and enjoyment of their properties.[162] The ED advances essentially the same argument in briefing.[163]

Mr. Paull, who had performed the analysis, also opined that the draft permit complied with TCEQ's antidegradation requirements.[164] Elaborating, he "believe[d] our guidance tells us . . . to keep nuisance algae down basically," referencing the narrative criterion for nutrients in the Standards.[165] Mr. Paull testified that he looked to this narrative criterion in the manner he believed to be prescribed in the IPs, relying on the IPs as his sole source of guidance, and did not directly reference or consider the Clean Water Act or EPA guidance, though was unaware of any differences between the respective standards.[166]

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[159] Applicant Closing Arg. at 5 (citing Ex. CL APP-5 (Uliana Dir.) at 13).

[160] Applicant Closing Arg. at 8, 12-13.

[161] Ex. ED-1 at 5 (Cooper Dir.); HOM Tr. at 185 (Cooper Cross).

[162] Ex. ED-1 at 13-16, 17-18; Ex. ED-2 at 11-13; Ex. ED-3 at 8-9.

[163] ED Closing Arg. at 8-10, 11-17, 18-19.

[164] Ex. ED-3 at 14.

[165] HOM Tr. at 226-27.

[166] HOM Tr. at 217-19, 256-58.

Mr. Paull did not utilize the IP threshold that looks to 10% of available assimilative capacity, believing it to be inapplicable when addressing nutrients as opposed to "some sort of numeric analysis."[167] He also did not consider any "[a]dditional factors for the antidegradation reviews" that "can be considered as appropriate" under the IPs "to further address potential nutrient impacts of concern to sensitive water bodies," nor, as the IPs also allowed, "site-specific screening factors to assess eutrophication potential rated in terms of low, moderate, or high."[168] Consequently, while he "imagine[d]" that the receiving waters' baseline phosphorus levels were "fairly low, as lots of receiving waters in that area tend to be,"[169] he denied knowing or ever determining that baseline, emphasizing that TCEQ had no numerical criteria for phosphorus and suggesting that the IPs did not require him to know the baseline level.[170]

Likewise, Mr. Paull made no specific determination of the level of phosphorus that would begin to impair aquatic life use or increase growth of algae and vegetation, reasoning that the IPs did not guide him to do so.[171] He acknowledged that his scoring of the various factors in his nutrient screen relied on a series of judgment calls and that a different, equally qualified individual might have scored the factors differently.[172] Similarly, Mr. Paull also agreed that the IPs and nutrient-screen worksheet did not prescribe the specific TP limit to be imposed, leaving it to the analyst's judgment.[173] When asked whether that judgment should be grounded in science, Mr. Paull answered that he had "no opinion on that" and that he was "not a part of" developing the guidance on which he had relied.[174] However, he insisted that the draft permit's 0.5 mg/L TP limit should allay any concerns about nutrient enrichment causing algal growth "because it's consistent with our IPs and it's consistent with similar permits in similar areas."[175] Further, while acknowledging

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[167] HOM Tr. at 242-43.

[168] HOM Tr. at 230-31; *see* Ex. ED-5 at Bates 26-27.

[169] HOM Tr. at 239-42 (Paull Cross).

[170] HOM Tr. at 239-42.

[171] HOM Tr. at 244-46.

[172] HOM Tr. at 247-50.

[173] HOM Tr. at 254-55.

[174] HOM Tr. at 255.

[175] HOM Tr. at 267.

that 100% of the waters in the tributaries and their pools could consist of effluent from the Facility during summer months,[176] Mr. Paull maintained that the draft permit should prevent algal growth even during these critical low-flow conditions, as the DO modeling had assumed zero base flow in the intermittent streams.[177]

Similarly, while he acknowledged that the IPs were procedural guidelines rather than the rules themselves, Mr. Cooper insisted the IPs were nonetheless instructions on how to implement the rules into the permit and didn't think it possible that one could follow the IPs and yet fail to comply with the Standards.[178] However, he denied involvement in or knowledge of how TCEQ had developed the IPs, offering that agency employees who "are not here today . . . could probably answer that question a lot better than I can."[179] In regard to antidegradation specifically, Mr. Cooper—who had attested to performing approximately 195 permit reviews for TCEQ over 14 years—acknowledged that he was unaware of the agency ever having determined that a proposed permit would lower water quality by more than a de minimis amount.[180]

Regarding the IPs, the ED argues that they "have been designed to ensure the Standards, and therefore the Clean Water Act, are being implemented adequately."[181] Elaborating, the ED observes that the IPs are rooted in a requirement under the Clean Water Act that states adopt a continuous planning process that includes a plan for implementing the state's water-quality standards.[182] This process, the ED adds, resulted in the IPs, which required and received approval from both the Commission and EPA.[183] The ED further champions the IPs as enabling TCEQ to "to take a consistent approach when reviewing applications and to implement the Standards in a

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[176] HOM Tr. at 236.

[177] HOM Tr. at 267.

[178] HOM Tr. at 188-89.

[179] HOM Tr. at 207-08.

[180] HOM Tr. at 196-99. While indicating that such a determination likely would have been made before the permit in question ever reached him in the agency's review process, Mr. Cooper thought he would have heard of it. HOM Tr. at 197-99.

[181] ED Resp. at 5.

[182] ED Resp. at 5 (citing 33 U.S.C. § 1313(e)(1), (3)(F); 40 C.F.R. § 130.5(b)(6)).

[183] ED Resp. at 5 (citing 30 Tex. Admin. Code § 307.2(e); Ex. ED-5 at 12).

manner that has been approved by the Commission and the EPA" while also allowing for "site-specific assessments based on the available information" and "case-by-case determinations."[184] Were TCEQ to "implement[] a procedure that falls outside the IPs," the ED urges, it "would be subject to strict scrutiny and possible rejection, as it would not be part of the document that tells the public how TCEQ will be implementing the Standards, and it has not been approved by the Commission or EPA."[185]

The ED also criticizes the analyses presented by Dr. Ross and Protestants as inconsistent with the IPs and logically flawed. With respect to TP, the ED asserts that none of Protestants' data came from the stream reaches assessed by TCEQ, pointing out that one study actually came from the Brazos and Trinity River basins, that the Upper Cibolo Creek measurements were taken upstream from its confluence with Frederick Creek, and that the measurements from Frederick Creek were taken beyond the three-mile parameters used by Mr. Paull.[186] The ED contrasts staff's "site-specific review of the discharge routes," following the IPs, which "is important because the addition of a parameter alone [such as TP] is not enough to show that water quality will be lowered; the location plays an important role in determining the parameter's impact on the ecosystem."[187] Relatedly, the ED urges that Protestants fail to distinguish between the draft permit's concentration-based effluent limits and what the actual concentration of a given pollutant will be in the receiving waters.[188] The ED observes that if the background TP concentration in the receiving waters is below 0.5 mg/L, then the concentration of that pollutant in the effluent will dilute as it mixes with the receiving waters.[189] In this regard, the ED cites Mr. Machin's opinion that TP in the effluent will naturally attenuate from the receiving waters and drop to nondetectable levels within a mile downstream from the outfalls.[190] The ED also emphasizes that Mr. Paull opted

[184] ED Resp. at 5 (citing Ex. ED-5 at 12-13, 26, 40, 72).

[185] ED Resp. at 5.

[186] ED Resp. at 5-6.

[187] ED Resp. at 6.

[188] ED Resp. at 6-7.

[189] ED Resp. at 7.

[190] ED Resp. at 7.

for "the most protective [TP] limit recommended by the IPs," one that was also found in another discharge permit in the same area, 0.5 mg/L.[191]

The ED also agrees with Applicant that the 10% assimilative-capacity analysis did not apply to Mr. Paull's Tier 2 review for TP, urging that this standard only applies where mixing zones are established for domestic discharges of at least 1 MGD and only with respect to pollutants for which TCEQ has set a numerical criterion.[192] The ED further points out that the same portion of the IPs state that "[t]he screening procedure for nutrients" is explained in an earlier section, and urge that this is what Mr. Paull properly followed.[193]

The same basic flaws are present in Protestants' arguments regarding DO, the ED argues.[194] The ED additionally maintains that the DO modeling in this case actually distinguished it from the example Protestants cited in the IPs of when degradation is "likely to occur," which states in full: "[i]ncreased loading of oxygen-demanding substances that is projected to decrease [DO] more than 0.5 mg/L for a substantial distance in a water body that has exceptional quality aquatic life and a relatively unique and potentially sensitive community of aquatic organisms."[195] The modeling, the ED urges, showed that ambient DO levels would return only 0.71 km downstream for Outfall 1 and 0.41 km downstream for Outfall 2—"not a substantial distance" according to the ED, who also observes that none of the assessed receiving waters had been classified as having "exceptional aquatic life use."[196] While acknowledging that water quality will not necessarily "remain exactly as it currently is," given the initial drops in DO levels, the ED denies that any such changes amount to degradation or an impairment of uses.[197]

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[191] ED Resp. at 6.

[192] ED Resp. at 7.

[193] ED Resp. at 7 (citing Ex. ED-5 at 64).

[194] ED Resp. at 7-8.

[195] ED Resp. at 8; *see* Ex ED-5 at 66.

[196] ED Resp. at 7-8.

[197] ED Closing Arg. at 16-17; ED Resp. at 8.

As for TN, the ED again criticizes Protestants' data, terming it "not specific" to the three-mile assessed portion of the discharge route and also lacking any TN measurements.[198] The ED also emphasizes that TCEQ generally focuses on TP rather than TN, for the reasons stated in the IPs (summarized previously).[199] While acknowledging that the IPs contemplate situations where limiting TN may be appropriate, the ED urges that "ED staff clearly did not think those situations existed here" and that "[g]iven the lack of information and challenges with limiting [TN] to control nuisance vegetation growth, [TN] did not need to factor into the antidegradation review."[200]

As the ED sees it, the antidegradation issue "[u]ltimately . . . comes down to one question—what does it mean to lower water quality?" The ED urges that a mere showing that a given parameter will be added to a water body does not suffice, in and of itself, but rather that "some level of harm" must result for degradation to occur, which in Tier 2 would be some "harm" short of impairing a use, and that impacts of a parameter can vary among different water bodies. The ED then reasons, "This is why TCEQ ultimately decided to not define de minimis when it added that phrase to the antidegradation rule—the question of whether there will be degradation ends up being a site-specific call." The ED concludes by touting the analysis made by Mr. Paull, who "drew on his eight years of experience reviewing these types of applications, applied the Commission- and EPA- approved Standards to the [A]pplication, and concluded that, with all the protections proposed by himself and the other ED staff [that were] incorporated into the draft permit, the proposed discharges should not lower water quality to the extent that degradation will occur."[201]

6. OPIC's Position

Based on the evidence presented by the other parties, OPIC concludes that the draft permit will protect water quality and existing uses in accordance with the Standards; protect groundwater,

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[198] ED Resp. at 8.

[199] ED Resp. at 8 (citing Ex. ED-5 at 29-30).

[200] ED Resp. at 8.

[201] ED Resp. at 8.

aquatic wildlife, and Protestants' health and their use and enjoyment of their property, and comply with applicable antidegradation requirements.[202] Regarding antidegradation, OPIC perceives that Protestants were not "question[ing] whether the ED followed existing TCEQ antidegradation review procedures that focus on the classification of stream segments and impairment of existing uses," but were instead challenging "whether current antidegradation review procedures adequately protect water quality."[203] That challenge, OPIC suggests, "could be addressed through legislation or rulemaking."[204]

7. ALJ's Analysis

The ALJ will begin with Protestants' primary focus, their contention that the draft permit fails to comply with TCEQ's antidegradation rule, with particular emphasis on Tier 2. Resolution proves to turn largely on construction of that rule, and the principles that guide that inquiry have been summarized back in Part I.E of this PFD.

Tier 1 of TCEQ's antidegradation rule requires that "[e]xisting uses and *water quality* sufficient to protect those existing uses shall be maintained."[205] Tier 2, in turn, requires a balancing of interests if there is "degradation," and "degradation" is defined as a "lowering of *water quality* by more than a de minimis extent"[206] (which would ordinarily denote a "lowering of *water quality*" exceeding a "trifling" or "negligible" degree, as the Third Court of Appeals has observed).[207] Consequently, one must determine what the critical operative term "water quality" means, and the parties' arguments reflect competing underlying views. Protestants, particularly, emphasize what seems to them an obvious and self-apparent unity or equivalence between "water quality" and various characteristics of "pristine" or "oligotrophic" streams coursing through our beautiful Texas

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[202] OPIC Closing Arg. at 5-13.

[203] OPIC Closing Arg. at 12.

[204] OPIC Closing Arg. at 12.

[205] 30 Tex. Admin. Code § 307.5(b)(1) (emphasis added).

[206] 30 Tex. Admin. Code § 307.5(b)(2) (emphasis added).

[207] *RCOLOL*, 2014 WL 3562756 at *8.

Hill Country. Yet while the meaning of "water" may be clear,[208] the meaning of "water *quality*" is (with apologies for the metaphor) considerably murkier. For although "quality" as used here would in concept denote a "superiority of kind" or a "degree or grade of excellence,"[209] the word in itself does not carry any inherent or Platonic connotation of any specific standard or benchmark, any more than "quality control" or "quality time," without more, would do. Rather, "water *quality*" begs the question as to how such "quality" is to be measured. By what definition, scale, or method of determination?

The answer lies (as if often true of the meaning of legal texts)[210] in the larger statutory and regulatory context in which the term is used. This includes, importantly, Texas Water Code § 26.023, the statute that directs TCEQ "by rule [to] set water quality standards for the water in this state" (*i.e.*, the Standards) and—perhaps even more importantly—delegates to TCEQ "the sole and exclusive authority" to do so.[211] That is to say, "water quality," as far as Texas law is concerned, or at least the Texas law that this SOAH ALJ is obliged to follow here, refers to the definitions or measures prescribed in TCEQ's Standards. Whether particular Standards represent arguably good versus bad ideas as a matter of environmental policy, or should have been made more protective or otherwise better written in the view of Protestants (or the ALJ, or anyone else), are matters properly addressed through rulemaking or legislation, as OPIC suggests, rather than in this contested-case hearing. Similarly, while the ALJ agrees with Protestants that the Clean Water Act and EPA regulations may potentially inform the meaning of certain words or concepts appearing in TCEQ's antidegradation rule or other Standards provisions—like the Texas Water Code, they are part of the rules' legal context—this would not extend to authorizing this SOAH ALJ to *de facto* rewrite the rules' text as TCEQ has chosen it. As with policy questions, any asserted conflicts between TCEQ's enactments and federal requirements would be for a different forum. (Yet in this regard, the ALJ would note that the EPA has approved not only the Standards,

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[208] *See* Tex. Water Code § 26.001(5) (defining "water" and "water in this state").

[209] Quality. The American Heritage Dictionary of the English Language (5th ed. 2022).

[210] *E.g.*, *Office of the Att'y Gen. of Tex.*, 456 S.W.3d at 155-56.

[211] Texas Water Code § 26.023. *See also id.* § 26.011 (Commission "shall administer the provisions of this chapter and shall establish the level of quality to be maintained in, and shall control the quality of, the water in this state as provided by this chapter").

but the IPs through which the Standards are implemented, and likewise the draft permit itself, though Protestants seek to contest the procedure through which the draft permit was provided to EPA for approval, as addressed in Part II.E of this PFD).

Rather than attempting a precise or comprehensive single definition, the Standards define "water quality" in terms of certain criteria or attributes, some expressed numerically, other as narrative descriptions. In turn, these criteria of "water quality" inform the use of that phrase within the antidegradation rule—whether "water quality" is "maintain[ed]" versus "lower[ed]" (*i.e.*, whether there is less in terms of some criterion) and also whether or not such "lowering of water quality" is "by more than a de minimis extent," as terms like "de minimis" (or synonyms like "trifling" or "negligible") are themselves relative terms, implying the reference point of some underlying measure or value of "water quality." In this regard, the "lowering of water quality by more than a de minimis extent," defining degradation, could be restated in terms of whether some "lowering of water quality" relative to a given water-quality criterion does or should matter under that criterion.

With this legal framework in mind, the ALJ turns to Protestants' arguments. Protestants emphasize what they anticipate will be substantial increases in TP and TN concentrations in the receiving waters, but TCEQ has not adopted a Standard prescribing any specific numerical criteria for such concentrations as a measure of "water quality." Consequently, there is no particular level of TP or TN concentration that, *per se*, is "water quality" required to be maintained under Tier 1, nor could any increase, in itself, be a "lowering of water quality" within the meaning of Tier 2. Similarly, TCEQ has not adopted any water-quality criterion that is framed in terms of the oligotrophic/mesotrophic/eutrophic continuum that Dr. Ross employed, so the categories are not *per se* a measure of "water quality," nor would any alleged changes from oligotrophic *per se* amount to a "lowering of water quality." However, the substance of Protestants' concerns in this regard would potentially implicate two water-quality criteria that TCEQ has adopted, both expressed narratively: "[n]utrients from permitted discharges or other controllable sources must not cause excessive growth of aquatic vegetation that impairs an existing, designated, presumed,

or attainable use"[212] and "[s]urface waters must be maintained in an aesthetically attractive condition."[213] Protestants also complain that DO levels will be reduced, and these arguments would potentially implicate the Standards' numerical criteria prescribing minimum DO levels deemed to preserve the varying levels of aquatic-life uses. More specifically, Frederick Creek and its lakes, as perennial streams, are presumed to require a 5.0 mg/L DO mean to support a high aquatic life use; the Outflow 1 tributary, as an intermittent stream with perennial golf-course ponds, is presumed to require a 3.0 mg/L DO to support limited aquatic life use; and the Outflow 2 tributary, an intermittent stream, is presumed to require a 2.0 mg/L DO to support minimal aquatic life use.[214]

In the context of Tier 1, the analysis becomes whether there would be any lowering of "water quality" relative to these criteria that would rise to the level of impairing an existing use. In that regard, Dr. Ross and Protestants contend essentially that (1) because the TP or TN concentrations in the discharge will exceed background levels that are typically found in Hill Country waters (as there are no measurements specifically from the receiving waters, or even from within a few miles of them), (2) phosphorus and nitrogen are each nutrients that can contribute to the growth of algae and aquatic vegetation; (3) *ergo* the discharge will fuel a proliferation of algae and/or vegetation in the receiving waters here (4) that will be so significant, and with such detrimentally adverse secondary and tertiary effects, as to impair the existing levels of aquatic-life uses. They do not argue that any decrease in DO levels, in itself, would cause an impairment of uses under Tier 1,[215] although they reference such decreases among the adverse impacts they would attribute to TP and TN.

This analysis, as Applicant points out, fails to take account of such factors as the specific features of the receiving waters in this case; the role of dilution in Frederick Creek and its lakes; the physical, chemical, and biological processes that would tend to reduce the concentration of TP,

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[212] 30 Tex. Admin. Code § 307.4(e).

[213] 30 Tex. Admin. Code § 307.4(b)(4).

[214] 30 Tex. Admin. Code §§ 307.4(h), .7(b)(3)(A)(i) & Figure TAC § 307.7(b)(3)(A)(i).

[215] Protestants Closing Arg. at 29-30, 31-33.

already limited to 0.5 mg/L, to ambient levels, as described by Mr. Machin; and the reasons why changes in TN would tend to have no impact at all. In short, Protestants' theory relies on multiple tiers of speculation and, if even meeting their rebuttal burden, is outweighed by the evidence tending to show that no existing uses will be impaired.

But again, Tier 2 is Protestants' chief focus. With respect to TP and TN, the inquiry becomes whether the draft permit would "lower[] water quality" either by "caus[ing] excessive growth of aquatic vegetation" or by failing to maintain the waters "in an aesthetically attractive condition," to a degree that, while not impairing an existing use, would or should nonetheless be considered "more than a de minimis extent" relative to the respective criterion. The inquiry thus looks to relative terms and concepts ("more than a de minimis extent," *i.e.*, more than "trifling" or "negligible," or to a degree that does or should matter) employed with reference to underlying criteria that are themselves relative terms and concepts—"excessive growth" or "aesthetically attractive"—and also rather subjective (beauty is often said to be in the eye of the beholder, after all). And in the context of a permitting regime, these relative terms and concepts contemplate not only case-by-case factual determinations but also policy choices and some weighing of competing interests.

As for DO levels, Protestants' arguments would at least implicate a criterion expressed in the more tangible form of numbers. However, Tier 2 still requires one to decide whether, how, or why a given decrease in DO levels that does not impact aquatic-life uses (the relevant criterion's focus) would or should nonetheless be considered more than de minimis, not merely a trifling concern or that should matter, relative to the goal of preserving aquatic-life uses. Again, as with TP and TN, the Tier 2 analysis is more closely akin to a prescribed list of policy choices to be made on the facts than a clear-cut legal "yardstick" that can be applied to the facts so as to reach an objectively correct outcome, in the manner that judges would traditionally do.

But based on their reading of the IPs, Protestants advocate a facially brighter-line "de minimis" "lowering of water quality" threshold that looks to whether the discharge consumes 10% of available assimilative capacity with respect to a given pollutant. However, the IPs negate rather

than prescribe the application of that threshold in this case. In insisting that it applies, Protestants are overlooking the context of the language on which they rely. That language appears as the second sentence of the following paragraph:

> New discharges that use less than 10% of the existing assimilative capacity of the water body at the edge of the mixing zone are usually not considered to constitute potential degradation as long as the aquatic ecosystem in the area is not usually sensitive to the pollutant of concern. New discharges that use 10% or greater of the existing assimilative capacity are not automatically presumed to constitute potential degradation but will receive further evaluation.[216]

That is to say, the second sentence's reference to "[n]ew discharges that use 10% or greater of existing assimilative capacity" is a counterpart to the "[n]ew discharges that use 10% of the existing assimilative capacity of the water body at the edge of the mixing zone" and is contextually limited to that same scope. This contextual limitation is further confirmed by additional language that follows. A formula is provided for use "for constituents that have numerical criteria in the [Standards]," with variables that include "the predicted concentration at the edge of the mixing zone" and "the ambient concentration at the edge of the mixing zone." It later discusses how to calculate the variables referencing measures "at the edge of the mixing zone."[217] "Mixing zones," as Applicant emphasizes, are assigned by TCEQ only with permits with domestic discharges exceeding 1 MGD,[218] and there is thus no mixing zone in this case.

Moreover, the same guideline goes on to state that "[t]his screening procedure is not applicable to dissolved oxygen, pH, or temperature." It likewise distinguishes the "[t]he screening procedure for nutrients," such as TP and TN, and provides a cross-reference to an earlier chapter prescribing that procedure.

In short, the IPs' 10%-of-assimilative-capacity threshold has no application to this case, which does not involve a mixing zone and does involve antidegradation issues about nutrients and

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[216] Ex. ED-5 at 64.

[217] Ex. ED-5 at 64.

[218] Ex. ED-5 at 70.

DO levels. And to the extent that Protestants would derive such a requirement from a source other than the IPs, such as federal law, this would effectively augment or rewrite TCEQ's antidegradation rule. While a 10%-of-assimilative-capacity threshold would be a conceivable means of implementing that rule, the rule itself contains no reference to any such standard, which would be in the character of an additional legislative or rule-type standard or specification beyond the objective meaning imparted by the rule's text alone. Accordingly, one must look to some additional textual source for any such threshold, and the only one potentially applicable under Texas law and TCEQ rules would be the IP that (as just demonstrated) would impose it in certain cases unlike this one. The threshold would also seem to be unworkable if applied with respect to the narrative criteria at issue (*e.g.*, when would water become 10% less "aesthetically attractive," as opposed to only 7, 8, or 9%?). Protestants' proposed application of the threshold to TP and TN appears to be premised instead on the relative concentrations of those elements, which as noted is not a water-quality criterion under the Standards.

Ultimately, the ALJ is left only with the mixed questions of fact and more-policy-than-law that comprise the Tier 2 analysis, as identified previously, what Messrs. Paull and Machin both termed, as if somewhat euphemistically, "judgment calls." At least one TCEQ witness in another case apparently even termed Tier 2 degradation a "feeling," [219] and a certainty-seeking lawyer or judge might well term it all, in exasperated futility, "mush." But this is the regime that TCEQ has chosen through its exercise of the "sole and exclusive authority" it has been delegated by the Texas Legislature to "by rule set water quality standards for the water in this state."[220] And the longstanding rule when judges interpret rule or statutes like this, those that leave such room for an administrative agency's exercise of discretion informed by its expertise in its delegated subject matter, is that the agency's construction or application suffices if it does not contradict the provision's plain text and is reasonable.[221]

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[219] Protestants Closing Statement at 24.

[220] Tex. Water Code § 26.023.

[221] *E.g.*, *R.R. Comm'n v. Tex. Citizens for a Safe Future & Clean Water*, 336 S.W.3d 619, 625 (Tex. 2011).

It would not be inconsistent with the plain text of TCEQ's antidegradation rule for the Commission to conclude, as would the ED, that the draft permit will probably not cause a "lowering of water quality by more than a de minimis extent" with respect to either causing "excessive growth of aquatic vegetation" toward impairing a use or failing to maintain surface waters in an "aesthetically attractive condition." The draft permit limits TP levels to 0.5 mg/L even before the discharge hits the receiving waters, and the preponderant evidence showed that any concentration would probably fall below the 50 µ/L/.005 mg/L detection level within a mile of the discharges. There was also persuasive evidence that TN, although not limited in the draft permit, would probably not have any impact, given the preexisting abundance of nitrogen.

The same is true with respect to DO levels. Protestants presented no evidence of DO measurements taken from the receiving waters, and the averages taken from the Cibolo Creek station is a dubious indicator, as the ED points out, because that monitoring station is located several miles away and also upstream from where Frederick Creek joins. But assuming, as Protestants do, that the ED's modeling calculations and its assumption of a 6.0 mg/L ambient concentration should be considered tantamount to admissions of decreases from the ambient concentration, this evidence also reflected that these decreases would be no more than 1.2 mg/L (and generally much less) and would be confined only to Smith Investment Co. Lake Nos. 1 and 3.[222] It would not be inconsistent with the plain text of TCEQ's antidegradation rule for the Commission to conclude that the draft permit will probably not cause a "lowering of water quality by more than a de minimis extent" relative to the criterion requiring 5.0 mg/L to sustain high-aquatic life use.

Nor would this construction and application of the antidegradation rule be unreasonable. The rule directs that the "process for the antidegradation review" is described in the IPs.[223] Protestants assert that the antidegradation review by ED and staff failed to comply with the IPs in two ways. The first is the asserted failure to follow the 10%-of-assimilative-capacity threshold, which as explained previously does not apply in this case. The second is a failure to follow an IP

[222] *See* Table in Part II.A.2 of this PFD.

[223] 30 Tex. Admin. Code § 307.5(c)(1)(A).

guideline that, in Protestants' view, identifies a decrease of more than 0.5 mg/L in DO (which under staff's modeling calculations and assumptions would have occurred in Smith Investment Co. Lake Nos. 1 and 3) as an example where degradation is deemed likely to occur. On the contrary, the full text of the example to which they allude refers to "[i]ncreased loading of oxygen-demanding substances that is projected to decrease [DO] by more than 0.5 mg/L for a substantial distance in a water body that has exceptional quality aquatic life and a relatively unique and potentially sensitive community of aquatic organisms."[224] As the ED observes, DO in this case is instead projected to return to ambient level within relatively short distances of the outfalls, not continue "for a substantial distance," nor do the receiving waters here meet the specified description. The closer fit, rather, is one of the IPs' examples of when degradation is deemed unlikely to occur, "[i]ncreased loading of [TP] . . . [or] [TN] . . . if it can be reasonably demonstrated that detrimental increases to the growth of algae or aquatic vegetation will not occur."[225]

Aside from these two arguments, Protestants do not appear to complain of any asserted failure by the ED and staff to perform the antidegradation review in accord with the IPs; instead, as OPIC suggests, Protestants' concern seems to be that the IPs are insufficiently protective of "water quality" (as Protestants would define or perceive that term).[226] However, the Standards, again, direct that the IPs provide the "process for the antidegradation review," and Protestants' dislike for the outcome does not render it or the underlying decisional process unreasonable.

In sum, Applicant has met its burden to prove, by a preponderance of the evidence, that the draft permit "complies with applicable antidegradation requirements" under both Tier 1 and Tier 2. And in the posture of this case, it follows from the preceding analysis that Applicant has also met its burden as to Referred Issues A, C, D, and F—that the draft permit is protective of "water quality" and the existing uses of the receiving waters in accord with the Standards, is protective of

[224] Protestants Closing Statement at 29; *see* Ex. ED-5 at 66.

[225] Ex. ED-5 at 65.

[226] OPIC Closing Arg. at 12.

groundwater, and includes adequate provisions to protect Protestants' health, aquatic and terrestrial wildlife, and Protestants' use and enjoyment of their property.

B. Location-Related Concerns (Referred Issues B, G, and H)

Protestants also voice concerns about the location of the Facility and asserted related risks.

1. Background

Subchapter B of 30 Texas Administrative Code, Chapter 309 prescribes minimum standards for the location of domestic wastewater-treatment facilities, which TCEQ is to apply in its evaluation of permit applications for such facilities.[227] These standards' purposes are "to condition issuance of permits . . . on selection of a site that minimizes possible contamination of water in the state; to define the characteristics that make an area unsuitable or inappropriate for a wastewater treatment facility; to minimize the possibility of exposing the public to nuisance conditions; and to prohibit issuance of a permit for a facility to be located in an area determined to be unsuitable or inappropriate, unless the design, construction, and operational features of the facility will mitigate the unsuitable site characteristics.[228] To these ends, the rules prohibit the Commission from issuing a wastewater-treatment-facility permit if the facility does not meet the requirements of 30 Texas Administrative Code § 309.13, which addresses "Unsuitable Site Characteristics."[229]

As material to contested issues, § 309.13(c) prescribes that, to ensure "adequate protection to potable water sources and supplies," a "wastewater treatment plant unit" (defined as "[a]ny apparatus necessary for the purpose of providing treatment of wastewater (i.e., aeration basins, splitter boxes, bar screens, sludge drying beds, clarifiers, overland flow sites, treatment ponds or

[227] 30 Tex. Admin. Code § 309.10(a).

[228] 30 Tex. Admin. Code § 309.10(b).

[229] 30 Tex. Admin. Code § 309.14(a); *see id*. § 309.13.

basins that contain wastewater, etc."[230]) "may not be located closer than 500 feet from a public water well . . . nor 250 feet from a private water well" and generally must be located a minimum horizontal distance of 150 feet from a private water well.[231] Further, under § 309.13(d) a "wastewater treatment facility surface impoundment" may not be located "in areas overlying the recharge zones of major or minor aquifers, as defined by the Texas Water Development Board," absent certain specified measures to prevent leaking into the aquifer.[232] And § 309.13(e) requires that "[o]ne of the following alternatives must be met as a compliance requirement to abate and control a nuisance of odor":

- "Lagoons with zones of anaerobic activity (e.g., facultative lagoons, un-aerated equalization basins, etc.) may not be located closer than 500 feet to the nearest property line. All other wastewater treatment plant units may not be located closer than 150 feet to the nearest property line."
- "The applicant must submit a nuisance odor prevention request for approval by the [ED]."
- "The permittee must submit sufficient evidence of legal restrictions prohibiting residential structures within the part of the buffer zone not owned by the applicant."[233]

2. Protestants' Evidence and Argument

Protestants assert that the draft permit fails to comply with 30 Texas Administrative Code § 309.13(e) because it shows that anoxic basins for the Facility will be located in compliance with a buffer of only 150 feet, not the 500 feet required for "[l]agoons with zones of anaerobic activity."[234] They point to testimony of Dr. Ross that anoxic basins will be included in each of the Facility's three phases; that "[b]iological processes within these basins would occur in the absence of free dissolved oxygen, creating the potential for generating odor-causing compounds"; and that

[230] 30 Tex. Admin. Code § 309.11(9).

[231] 30 Tex. Admin. Code § 309.13(c).

[232] 30 Tex. Admin. Code § 309.13(d).

[233] 30 Tex. Admin. Code § 309.13(e).

[234] Protestants Closing Arg. at 36.

while the draft permit includes a requirement (Other Requirement No. 3) mandating compliance with § 309.13(e), the Applicant and the map in the draft permit show that the proposed buffer will be only 150 feet.[235] Dr. Ross further opined that "[o]ffensive wastewater treatment plant odors can cause poor appetite, lower water consumption, impaired respiration, nausea and vomiting, and mental perturbation," and that "[e]xtremely offensive" ones "can impair human relations, discourage capital investment, and lower a community's socioeconomic status."[236]

Protestants also argue that the Facility would violate the siting requirements of § 309.13(c) that seek to protect private water wells.[237] In this regard, they point to testimony by Calvin Chapman, who asserted, based on his mapping of area water wells using the Texas Water Development Board Water Well Viewer online mapping tool, that there were a total of 22 private water wells within a one-mile radius of the Facility's location, yet Applicant identified only 8 such wells in the Application.[238] This omission, Protestants insist, also established that the Application was not substantially complete and contained inaccurate information.[239]

Protestants further urge that the Facility and draft permit would violate the § 309.13(d) requirements aimed at preventing leakage into aquifers.[240] They again rely on Mr. Chapman, who opined that the Facility must, but will not, be built atop at least three feet of low-permeability clays or similar fill materials, or else use a synthetic membrane liner coupled with an underground leak-detection system.[241]

3. Responsive Evidence and Argument

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[235] Protestants Closing Arg. at 36-37 (quoting Ex. PR-LR-1 at 27-28).

[236] Protestants Closing Arg. at 36-37 (quoting Ex. PR-LR-1 at 27).

[237] Protestants Closing Arg. at 38 (citing Ex. PR-CC-1 at 7-8, 10).

[238] Protestants Closing Arg. at 38.

[239] Protestants Closing Arg. at 39-40.

[240] Protestants Closing Arg. at 38-39 (quoting Ex. PR-CC-1 at 7).

[241] Protestants Closing Arg. at 39-40.

Regarding § 309.13(e) and nuisance odors, both Applicant and the ED dispute Protestants' premise that the Facility's anoxic basins are "[l]agoons with zones of anaerobic activity," so as to require a 500-foot rather than 150-foot buffer zone.[242] The ED points to TCEQ rules requiring that an anoxic basin in an activated sludge process plant with a membrane bioreactor, as the Facility will be, be designed so as to maintain a specified concentration of dissolved oxygen, *i.e.*, it is not anerobic, or without oxygen.[243] Further, both the ED and Applicant point to portions of the administrative record and additional evidence reflecting that the Facility's anoxic basins will be aerated.[244] And because the Facility complies with the 150-foot buffer zone, the ED adds, Applicant was not required also to comply with the alternative requirement of submitting a nuisance order prevention request.[245] OPIC agrees that Applicant will comply with § 309.13(e) through its compliance with the buffer-zone alternative.[246]

As to the § 309.13(c) protections for water wells, the ED points out that any additional wells identified by Protestants could violate the rule's distancing requirements only if located within 500 feet of the Facility, and only if a public water well (private water wells would be allowed if beyond 250 feet).[247] As for whether the asserted omission would render the Application inaccurate or not substantially complete, the ED observes that at relevant times the portion of the Application that called for the well information, section 13 of Domestic Administrative Report 1.0, required Applicant to identify only "public water supply wells" and "monitor wells" within a one-mile radius of the Facility.[248] The ED disputes that Protestants showed that any of the additional wells it identified were public water wells, public water supply wells, or monitor wells, and would conclude, therefore, that no violations have been shown.

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[242] Applicant Reply Br. at 4; ED Resp. at 3-4.

[243] ED Resp. at 3-4 (citing 30 Tex. Admin. Code § 217.157(d)(3).

[244] ED Resp. at 3 (citing Ex. AR-5 at APP-1 at APP 71-73; Ex. ED-9 at 1); Applicant Reply Br. at 4 (citing Ex. AR-5 at APP 72-78; Ex. CL App-1 (Callegari Dir.) at APP 24-25; HOM Tr. at 17-18 (Callegari Cross), 211 (Cooper Cross)).

[245] ED Resp. at 3; *see* 30 Tex. Admin. Code § 309.13(e).

[246] OPIC Closing Arg. at 5-6.

[247] ED Resp. at 9; *see* 30 Tex. Admin. Code § 309.13(c).

[248] ED Resp. at 9-10 (citing Ex. ED-14 at 38).

Applicant similarly disputes that the water-well data mentioned by Mr. Chapman is consistent with the well information it was required to provide TCEQ in the Application.[249] Applicant adds that it provided TCEQ the required information as to each well, but acknowledges that it initially omitted one well from the map it submitted in the Application. However, it emphasizes that it promptly corrected the omission after staff inquired.[250] Mr. Cooper also testified that Applicant provided TCEQ the correct documents to verify compliance with the siting requirements.[251]

Finally, with respect to § 309.13(d) and aquifer protection, the ED points out that these requirements apply to a "wastewater treatment facility surface impoundment," a feature that the Facility will not have.[252]

OPIC agrees that the Facility complies with the siting requirements, including those relating to distances from water wells.[253] It submits no argument as to whether the Application is substantially complete and contains accurate information.[254]

4. ALJ's Analysis

The ALJ agrees with the ED and Applicant that Protestants' location-related complaints are predicated on requirements that, on this record, are inapplicable to the Facility. The preponderant evidence presented, if not the administrative record alone, establishes that the Facility's anoxic basins will be aerated, are thus not "[l]agoons with zones of anaerobic activity," and in turn do not trigger the 500-foot buffer-zone requirement. Consequently, the Facility's

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[249] Applicant Reply Br. at 7.

[250] Applicant Reply Br. at 7; *see* Ex. AR-5 at APP 464-67.

[251] Ex. ED-1 at 16-17; HOM Tr. at 209 (Cooper Cross).

[252] ED Resp. at 9; *see* 30 Tex. Admin. Code § 309.13(d); Ex. AR-5 at APP 71-79.

[253] OPIC Closing Arg. at 13-14.

[254] OPIC Closing Arg. at 13-14.

compliance with the 150-foot buffer zone suffices under § 309.13(e) without need also to undertake the alternative of submitting a nuisance odor prevention request.[255] Similarly inapposite are § 309.13(d)'s requirements for a "wastewater treatment facility surface impoundment," as the Facility will not have such features.

As for § 309.13(c)'s requirements relating to water wells, Mr. Chapman did not elaborate as to whether any of the 14 additional wells he had identified were public water wells, public water supply wells, or monitor wells, beyond describing the wells generally—and seemingly to the contrary—as "residential/domestic in nature."[256] Nor did he demonstrate that any private water wells would fall within the minimum distances specified under § 309.13(c). Without more, the ALJ concludes that Protestants did not meet their rebuttal burden as to any asserted violation of § 309.13(c) or their contention that the Application was inaccurate or not substantially complete by virtue of omitting mention of the additional wells.[257]

It follows, in the posture of this case, that Applicant has met its burden to prove, by a preponderance of the evidence, that the draft permit "adequately addresses nuisance odor in accordance with 30 Texas Administrative Code § 309.13(e)"; that the "Facility complies with the siting requirements of 30 Texas Administrative Code Chapter 309, Subchapter B, including the required buffer zones for private water wells and potable water-storage tanks"; and that the Application is "substantially complete and contains accurate information."

C. Need for Facility (Referred Issue I)

As noted in the Introduction, and is reflected in the administrative record in evidence, Applicant intends the Facility to serve as a larger-capacity replacement for the wastewater-

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[255] *See* 30 Tex. Admin. Code § 309.13(e) (listing the buffer-zone requirement and nuisance odor prevention request as two of three "alternatives" under that subsection, "[o]ne of the following" that "must be met as a compliance requirement to abate and control a nuisance of odor").

[256] Ex. PR-CC-1 at 8.

[257] And the ALJ would so conclude under either view of S.B. 709's burden-shifting framework described in Part I.E, Protestants did not present legally sufficient evidence of, let alone prove by a preponderance *vis a vis* the administrative record, any violations of § 309.13(c) or that the additional wells were public water supply wells or monitor wells required to be addressed in the Application.

treatment facility it has been leasing from Potranco Holdings (*i.e.*, Mr. Harpole), which it intends to abandon.[258] The administrative record includes an affidavit from John-Mark Matkin, Kendall West's president, attesting to additional background and context.[259] According to Mr. Matkin, Applicant acquired the water and wastewater utilities it now operates, including its lease of the current facility and the TLAP permit, in 2012, and that Potranco Holdings also acquired its ownership of that facility in a foreclosure sale around the same time. He further averred that "[a]lthough [Applicant] has engaged in good faith negotiations with Mr. Harpole and Potranco over the past 10 years or more regarding mutually agreeable lease terms or to provide for [Applicant's] mutually agreeable purchase of the [facility], those negotiations have been unsuccessful." In the meantime, Mr. Matkin emphasized, the area within Applicant's service territory—approximately 7,160 acres, of which only about 900 acres had been developed, with about 1,061 retail residential water and 290 sewer utility connections—has seen significant demand for new development, such that Applicant anticipates the need to expand its capacity to treat and discharge domestic wastewater from the current 0.150 MGD to the requested 0.49 MGD in order to meet its service obligations under its CCN.[260] Applicant also presented forecasts indicating that demand will continue to rise to more than 0.60 MGD by 2030.[261] "A key factor" in Applicant's decision to build a new facility and seek a new TPDES permit, Mr. Matkin added, "was the historical inability to arrive at mutually agreeable terms regarding [Applicant's] continued lease or purchase" of the existing plant.[262] Assuming the Application is approved, the permit's Other Requirement No. 9 would require Applicant to submit a "Clean Closure Plan" and initiate the process for cancelling the TLAP permit within 30 days after the Facility becomes operational and the collection system necessary for transfer of flows is completed.[263]

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[258] AR-5 at APP 81.

[259] AR-5 at APP 722-25.

[260] AR-5 at APP 722-23; *see also id.* at APP 561-64.

[261] AR-5 at APP 561-64.

[262] AR-5 at APP 723-24; *see also id*. at APP 438-39.

[263] AR-5 at APP 798; *see id.* at APP 405-06.

Protestants dispute whether Applicant demonstrated a need for the Facility, as required by Texas Water Code § 26.0282.[264]

1. Legal Background

Texas Water Code § 26.0282, titled "Consideration of Need and Regional Treatment Options," states:

> In considering the issuance . . . of a permit to discharge waste, the commission may deny or alter the terms and conditions of the proposed permit . . . based on consideration of need, including the expected volume and quality of the influent and the availability of existing or proposed areawide or regional waste collection, treatment, and disposal systems not designated as such by commission order pursuant to provisions of this subchapter. This section is expressly directed to the control and treatment of conventional pollutants normally found in domestic wastewater.

TCEQ has published—although not explicitly as formal rules—a "Regionalization Policy for Wastewater Treatment" to explain how it implements § 26.0282 and what it regards as the underlying "regionalization policy for wastewater treatment" declared in Texas Water Code § 26.081.[265] According to this policy, TCEQ looks to whether a proposed new wastewater-treatment facility would be located within three miles of a preexisting wastewater-treatment facility or collection system, though it emphasizes that this "is not an automatic basis to deny an application or to compel an applicant to connect to an existing facility." Rather, according to the policy, TCEQ "may approve" an application "in any of the following situations":

- "There is no wastewater treatment facility or collection system within three miles of the proposed facility."

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[264] Protestants Closing Arg. at 40-41.

[265] TCEQ Regionalization Policy for Wastewater Treatment, available at https://www.tceq.texas.gov/permitting/wastewater/tceq-regionalization-for-wastewater (last accessed May 16, 2022).

In Texas Water Code § 26.081, the Texas Legislature "finds and declares that it is necessary to the health, safety, and welfare of the people of this state to implement the state policy to encourage and promote the development and use of regional and area-wide waste collection, treatment, and disposal systems to serve the waste disposal needs of the citizens of the state and to prevent pollution and maintain and enhance the quality of water in this state." To that end, succeeding provisions authorize the Commission, within certain areas, to hold hearings on and propose, subject to voter approval, the designation of an area to be served by a regional or area-wide system or systems and of an entity to operate them.

- "The applicant requested service from wastewater treatment facilities within the 3 miles, and the request was denied."

- "The applicant can successfully demonstrate that an exception to regionalization should be granted based on costs, affordable rates, and/or other relevant factors."

- "The applicant has obtained a Certificate of Convenience and Necessity (CCN) for the service area of the proposed new facility."

The policy further notes that "TCEQ has not denied any wastewater permit actions based solely on regionalization."

As noted, Applicant holds the CCN to provide service in the area that would be served by the Facility. However, there is no dispute that there are presently two wastewater treatment facilities operating within three miles of the Facility site. One such facility is that of the Lerin Hills Municipal Utility District (MUD). The administrative record includes a letter written on behalf of Lerin Hills advising Applicant that the MUD's facility "is not designed or permitted to accept wastewater" from sources other than the subdivision it serves, thereby excluding "the community of Tapatio Springs."[266] Protestants have not raised any complaint in regard to Lerin Hills.

The other facility is the one that Applicant presently leases from Potranco Holdings and intends to replace with the Facility.

2. Protestants' Evidence and Argument

Protestants urge the Commission to deny the Application under Texas Water Code § 26.0282, in the view that the Facility is "unnecessary and duplicative" of the current facility being leased from Potranco Holdings.[267] As for serving the additional demand Applicant forecasts, Protestants do not contest that such growth will occur but insist that the existing plant "could easily be upgraded and expanded."[268] In support of that assertion, Protestants point to testimony by

[266] Ex. AR-5 at APP 136, 440-41.

[267] Protestants Closing Arg. at 40.

[268] Protestants Closing Arg. at 40 (citing Ex. PR-CC 3 at 1-2).

Mr. Chapman. He opined that this facility, "originally constructed to support the Tapatio Springs development in the 1980s, would benefit greatly from upgrading and expansion," and added that Mr. Harpole "has no objection to such an approach, according to his public comments" in the case.[269] In that regard, Mr. Harpole testified that the current facility sits on 33 acres that he owns and that "[t]here is plenty of room on site to expand."[270]

Protestants also rely on opinions from Mr. Chapman to the effect that it would have been more cost-effective, and less expensive for Applicant's ratepayers, if Applicant had cooperated with the City of Boerne or other entities to develop a system of transporting wastewater flows to the Facility that relied more on gravity that the system it has designed.[271]

3. Responsive Evidence and Argument

Applicant disputes that Texas Water Code § 26.0282 would *require* that it continue leasing the existing plant or to utilize the City of Boerne's system, urging that the statute merely affords *discretion* to the Commission to deny or tailor permits in accordance with a *policy* to "encourage and promote" regionalization.[272] And this policy, Applicant argues, would be furthered by the Facility and the stand-alone system that would serve the rapidly growing demand within its CCN. In addition to emphasizing the aforementioned materials in the administrative record, Applicant presented testimony from Robert P. Callegari, P.E., who opined that expansion of the existing plant "would not be cost-effective due to real estate costs," noting the need for additional land not only for operations but also for disposal of effluent under the TLAP permit, on top of "challenges with getting changes to the Lease Agreement related to the plant property."[273] Mr. Callegari further

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[269] Ex. PR-CC 3 at 1-2.

[270] Ex. PR-WH-1 at 6.

[271] Protestants Closing Arg. at 40-41; *see* Ex. PR-CC-3 at 2-3.

[272] Applicant Closing Arg. at 15-16.

[273] Ex. CL APP-1 (Callegari Dir.) at CL APP 19-20; *see also* Ex. CL APP-12 (Hodge Dir.) at CL APP 100-01 (CLWSC's president attesting that, since the acquisition, he had been unable to obtain a lease extension "on reasonable terms or at a reasonable price" from Potranco Holdings, to negotiate the purchase of the property at a "reasonable price," nor secure a long-term lease (in lieu of the five-year terms Potranco has historically offered) on "reasonable terms").

testified that, based on his analysis, about 5,139 acres of Applicant's service area is open to development and that resultant demand would support an approximately 2 MGD plant.[274] Were Applicant unable to expand capacity to meet this increased demand, he further suggested, the alternative would be multiple small-capacity wastewater treatment plants, which in his experience had a higher tendency for upsets and spills and "are just not normally maintained at a higher degree."[275]

In Applicant's view, Protestants ignore the regionalization policy, pointing to concessions made by Mr. Chapman during cross-examination regarding the bases for his opinions.[276] Applicant notes that Mr. Chapman admitted that he had not performed an analysis comparing the costs of upgrading the existing plant to a 0.4 MGD capacity versus replacing it.[277] Similarly, when asked whether it made sense for Applicant to invest the necessary sums of money required to upgrade a plant it did not control, Mr. Chapman responded that Applicant and Mr. Harpole "obviously have to work with each other" and that "I don't have any other information."[278] Further, while urging that some of the subdivisions for which Applicant would provide service were "much closer" to the City of Boerne than to the Facility, he agreed that City's wastewater-treatment plants were more than three miles distant from the Facility site. [279] Applicant also points out that it, not the City of Boerne, holds the CCN authorizing it to provide service in the area.

The ED agrees that Applicant submitted information demonstrating the need for the proposed Facility in its projected size. As for preexisting facilities, there is only one in the ED's view—Lerin Hills, which declined to provide service. The ED reasons that Applicant will replace the existing leased plant, not operate in addition to it, further pointing to permit Other Requirement No. 9, requiring the older plant's cessation of operation and closure.[280] As for Protestants'

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[274] Ex. CL APP-1 at CL APP 18-19.

[275] Ex. CL APP-1 at CL APP 20.

[276] Applicant Closing Arg. at 17.

[277] HOM Tr. at 27-28 (Chapman Cross).

[278] HOM Tr. at 28.

[279] HOM Tr. at 29.

[280] ED Closing Arg. at 20-21; ED Resp. at 10.

arguments about utilizing the City of Boerne's system, the ED asserts that § 26.0282 "does not contain a cost-effectiveness requirement."[281]

OPIC agrees that Applicant adequately demonstrated a need for the Facility, in accordance with Texas Water Code § 26.0282.[282]

4. ALJ's Analysis

As an initial observation, Texas Water Code § 26.0282 is, as Applicant suggests, a grant of discretionary authority to the Commission—"*may* deny or alter the terms and conditions of the proposed permit . . ."—rather than a mandate that it do so.[283] Per its published policy, the Commission has never exercised this discretion to "den[y] any wastewater permit actions based solely on regionalization." The ALJ would conclude that this is not the case in which the Commission should make its first intervention of this sort.

The Commission's exercise of its discretion under § 26.0282 entails "consideration of need, including [1] the expected volume and quality of the influent and [2] the availability of existing or proposed areawide or regional waste collection, treatment, and disposal systems." There is no apparent dispute that demand in Applicant's service area will soon exceed the 0.15 MGD capacity of the existing facility, and may indeed dwarf it within the decade. Consequently, Protestant's complaints reduce principally to insisting that "the availability of existing or proposed areawide or regional waste collection, treatment, and disposal systems" as used in § 26.0282 means that Applicant must satisfy its increased service obligations only through continued reliance on the existing facility—one that is owned by and must be leased from one of the Protestants, is approximately 40 years old, and would require substantial upgrades and expansions—rather than simply replacing it with Applicant's proposed brand-new, much-larger-

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[281] ED Resp. at 10.

[282] OPIC Closing Arg. at 14-15.

[283] *See* Tex. Gov't Code § 311.016 (Code Construction Act) (emphasis added) ("may" generally "creates discretionary authority or grants permission or a power," and contrasting "shall" and "must"); *see also id*. § 311.002 (Code Construction Act applies to codes enacted by 60th and subsequent Texas Legislatures as part of this State's continuing statutory revision program); Tex. Water Code § 1.001(a) (Water Code enacted as part of that program).

capacity Facility. Protestants' logic would imply that § 26.0282 effectively bars or restricts wastewater utilities from replacing their facilities when warranted, as well as incenting rent-seeking in situations where (as here) the utility lacks full ownership or control of the asset sought to be replaced.

The ALJ shares the ED's skepticism that Applicant's proposed replacement and abandonment of the existing facility would implicate § 26.0282. The evident statutory concern, as the ED suggests, is instead with whether a proposed new wastewater-treatment facility is needed relative to other existing or proposed facilities that would also be serving the same area contemporaneously. In the very least, that reading is reasonable and not inconsistent with § 26.0282's plain text. In short, Protestants have not demonstrated that the draft permit violates the specific legal requirement on which they rely,[284] and therefore have not met their rebuttal burden.

Alternatively, assuming that § 26.0282 should have application here, the ALJ agrees with Applicant that the regionalization policy considerations identified by TCEQ weigh in favor of granting the Application and that the underlying reading of the statute is reasonable and not inconsistent with its plain text. Certainly, having Applicant serve its current certificated area through the new Facility would better advance the policy of regionalization than if other smaller providers ended up filling gaps.

The ALJ also concludes that Mr. Chapman's proposal for some sort of cooperation with the City of Boerne—within Applicant's service area—does not materially alter the foregoing analysis. In sum, Applicant has met its burden to prove, by a preponderance of the evidence, a need for the Facility as required under Texas Water Code § 26.0282.

[284] Or have presented legally sufficient evidence of a violation.

D. "Necessary Operational Requirements" (Referred Issue J)

Protestants have contested Referred Issue J only with respect to whether the draft permit contains "necessary operational requirements."[285]

1. Legal Background

30 Texas Administrative Code § 30.350 requires that each holder of a wastewater-disposal permit employ or contract for one or more licensed wastewater treatment facility operators who hold "the appropriate level of license."[286] The rule further prescribes an "appropriate level of license" that differs according to the treatment system being used and the facility's permitted daily average flow.[287] In the category applicable to the Facility—an activated sludge treatment system operated in modes other than extended aeration and having a permitted daily average flow greater than 0.050 MGD up to 1.0 MGD—the operator must hold at least a "Class C" license.[288] These requirements are incorporated into the draft permit's Other Requirements No. 1.[289]

To obtain a Class C license, a person must obtain a high school diploma or its equivalent, have two years of work experience, and receive 60 hours of training.[290] By contrast, a Class B operator must have either (1) a bachelor's degree coupled with two-and-a-half years of work experience, or (2) a high school diploma or equivalent coupled with 5 years of work experience, plus in either case 100 hours of training. The highest level, Class A operator, requires 160 hours of training and either (1) a master's degree plus 4 years of work experience, (2) a bachelor's degree plus 5 years of work experience, or (3) a high school diploma or equivalent plus 8 years of work

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[285] Protestants Closing Statement at 41.

[286] 30 Tex. Admin. Code § 30.350(d).

[287] 30 Tex. Admin. Code § 30.350(e) & Figure 30 TAC § 30.350(e).

[288] 30 Tex. Admin. Code § 30.350(e) & Figure 30 TAC § 30.350(e).

[289] AR-5 at APP 797 ("The permittee shall employ or contract with one or more licensed wastewater treatment facility operators or wastewater systems operation companies holding a valid license or registration according to the requirements of 30 TAC Chapter 30, Occupational Licenses and Registrations, and in particular 30 TAC Chapter 30, Subchapter J, Wastewater Operators and Operations Companies. This Category C facility must be operated by a chief operator or an operator holding a Category C license or higher. . . .").

[290] 30 Tex. Admin. Code § 30.340(a) & Figure 30 TAC § 30.340(a).

experience. Conversely, a Class D license requires only a high school diploma or equivalent, 20 hours of training, and no minimum amount of work experience.[291]

2. Protestants' Evidence and Argument

While not disputing that Other Requirements No. 1 tracks the requirements of 30 Texas Administrative Code § 30.350, Protestants take issue with whether a Class C licensee will be up to the task of operating the Facility.[292] They rely on testimony from Dr. Ross, who emphasized that the Facility will use a membrane bioreactor [MBR], opined that MBR "is not a widespread treatment technology," and deduced that "it is unlikely that two years of work experience would encompass the particular operational experience of MBR technology." "For the MBR facility to be reliably operated," she added, "an operator requirement of either training or experience in this particular type of system would be essential to assure operation to meet the effluent limits and achieve reliable effluent quality."[293]

3. Responsive Evidence and Argument

Both Applicant and the ED respond that Protestants are attempting to impose a requirement of specific training or experience in MBR technology that appears nowhere in TCEQ's rules.[294] Applicant also emphasizes testimony from Mr. Callegari, who opined that MBRs "are very automated" and that in his experience, MBR manufacturers "provide very good technical support and can provide remote monitoring and alarming if requested" by the facility owners. Consequently, Mr. Callegari concluded, "[a] Class C operator is capable of operating this facility with the manufacturer's support."[295]

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[291] 30 Tex. Admin. Code § 30.350(e) & Figure 30 TAC § 30.350(e).

[292] Protestants Closing Statement at 41.

[293] Ex. PR-LR-1 at 29.

[294] Applicant Closing Arg. at 19; ED Resp. at 10.

[295] Ex. CL APP-1 at CL APP 20-21.

OPIC agrees that the draft permit contains necessary operational requirements.[296]

4. ALJ's Analysis

At bottom, Protestants are attempting to impose a measure of "necessary operational requirements" differing from the requirements prescribed by the TCEQ rules that form the context of that issue. 30 Texas Administrative Code § 30.350 requires that the Facility's operator have a Class C license, and the draft permit incorporates that same requirement into Other Requirement No. 1. Consequently, Dr. Ross's testimony could not demonstrate that the draft permit violates any specifically applicable state or federal requirement,[297] and Protestants have not met their rebuttal burden as to Referred Issue J. Alternatively, to the extent Protestants should reach the merits with their complaint, the ALJ would find that the requirement of a Class C license suffices as "necessary operational requirements" for the reasons explained by Mr. Callegari. In either case, Applicant has met its burden to prove, by a preponderance of the evidence, that the draft permit includes sufficient monitoring and reporting requirements, including necessary operational requirements.

E. Compliance with EPA Review Requirements (Referred Issue K)

Referred Issue K inquires "[w]hether the draft permit was provided to the U.S. EPA for review as required." There is no dispute, at least in terms of historical facts, that TCEQ provided the draft permit to the EPA on July 13, 2020, that EPA reviewed it, and that EPA communicated back via email of August 25, 2020 that "TCEQ, in its role as the NPDES permitting authority for the State of Texas, may proceed with the issuance of the draft permit." These communications between TCEQ and EPA were included in the administrative record that was both filed with SOAH and admitted into evidence at the preliminary hearing.[298]

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[296] OPIC Closing Arg. at 15-17.

[297] Or would be legally sufficient evidence of a violation, as it is immaterial to that issue.

[298] Ex. AR-5 at 178-329.

Protestants urge, however, that the draft permit was not provided to the EPA "in the manner required by law" due to a difference in the timing of the notice TCEQ provided to EPA and the notice that TCEQ issued to the public, also reflected in the administrative record.[299] Although staff had begun the process for issuing the public notice in July 2020, around the same time that notice was transmitted to the EPA, the public notice ultimately was not issued until August 21, 2020 (a few days before the EPA communicated its response on August 25), evidently due to delays associated with adding the Notice of Public Meeting to the combined NORI and NAPD.[300] The difference, in Protestants' view, constitutes a fatal legal flaw, pointing to a term of the TCEQ-EPA MOA stating that "TCEQ will transmit the draft permit to EPA at the same time as it issues public notice," whereupon EPA has 45 days to respond.[301] "By giving notice to EPA much sooner, in violation to the requirements," Protestants argue, "TCEQ deprived the public of the opportunity to provide EPA information about the proposed permit that may have informed EPA's review."[302]

Both Applicant and OPIC argue that Protestants have not met their rebuttal burden with respect to notice to EPA.[303] Applicant disputes that any inconsistency with the TCEQ-EPA MOA would "demonstrate" a violation of a "specifically applicable state or federal requirement," as required by Texas Government Code § 2003.047(i-2), arguing that the MOU merely "sets out the roles and responsibilities between the two agencies for assumption of the NPDES program by TCEQ" and "does not put any legal or technical requirements on the permittee." To similar effect, OPIC, although instead joining issue on the ultimate merits, observes that "the forty-five days allotted for EPA's review only applies to that review [and that] there is no public comment period with EPA for TCEQ-issued permits."[304]

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[299] Protestants Closing Statement at 42-43.

[300] Ex. AR-5 at APP 352, 355-56, 407, 413-35, 447-51; *see also id.* at APP 600.

[301] TCEQ-EPA MOA at III.C.3, *available at* https://www.epa.gov/sites/default/files/2021-01/documents/attachment_d_-_2020_tpdes_moa_1_002.pdf (last accessed May 2, 2022).

[302] Protestants Closing Statement at 42.

[303] Applicant Closing Arg. at 19-20; ED Closing Arg. at 23-24.

[304] OPIC Closing Arg. at 17 (also citing testimony from TCEQ's Mr. Cooper).

But more fundamentally, Applicant further contends, as does the ED, that Protestants have failed to meet the § 2003.047(i-2) threshold requirement of "*presenting evidence*" relating to a referred issue and that demonstrates the requisite violation. They emphasize that Protestants rely entirely on documents within the administrative record (just summarized) and have not "presented evidence" in the sense of any proof extrinsic to it. Protestants vigorously dispute that they are precluded from relying upon documents within the administrative record itself to meet their rebuttal burden.[305]

Assuming without deciding that Protestants may raise their complaint at this juncture,[306] the ALJ agrees with Applicant that any arguable noncompliance with TCEQ-EPA MOA would not demonstrate a violation of any state or federal requirement "specifically applicable" with respect to Protestants, as the MOA governs the relationship between the two contracting governmental parties and, at least with respect to the issue here, does not purport to create rights in external parties. It follows—from Applicant's unrebutted prima facie demonstration—that Applicant met its burden to prove by a preponderance of the evidence that the draft permit was provided to EPA for review as required.

F. Compliance with Notice Requirements (Referred Issue L)

The final Referred Issue concerns whether Applicant "substantially complied with all applicable notice requirements." As they have briefed this issue, Protestants appear only to bring forward their contention, raised through their motion to dismiss, that CLWSC's acquisition of Kendall West in December 2021 has changed the identity of the relevant "owner" and/or "operator" heretofore identified in the Application and, they reason, thereby rendered deficient

[305] Protestants Reply at 3-5.

[306] Protestants' complaint would arguably implicate whether Exs. AR-1 through AR-5 actually met the definition of "administrative record" under 30 Texas Administrative Code § 80.118(c), more specifically whether the items listed in § 80.118(a)(1)-(6) would facially "demonstrate the draft permit meets all applicable requirements and, if issued, would protect human health and safety, the environment, and physical property." 30 Tex. Admin. Code § 80.118(c)(1); *see also* 30 Tex. Admin. Code §§ 80.17, .117, .127(h) (all incorporating § 80.118(c)(1)'s definition of "administrative record"). But those exhibits, again, were admitted without objection as the administrative record.

past notices to the public and EPA referencing Kendall West.[307] The ALJ has addressed this contention as a threshold matter in Part I.C and concluded that, on the contrary, Kendall West has remained the relevant "owner" and "operator" for purposes of the Application and this proceeding. Accordingly, Protestants have not presented evidence demonstrating that Applicant—Kendall West—failed to substantially comply with any applicable notice requirements.

III. CONCLUSION

Based on the foregoing analysis, the ALJ recommends that the Commission grant the Application and issue the permit that the ED has proposed. For the same reasons, the ALJ further recommends that the Commission adopt all Findings of Fact and Conclusions of Law contained in the Proposed Order and decline to adopt any findings and conclusions proposed by the parties that are not included.[308]

Neither Applicant nor Protestants moved for an assessment of reporting and transcription costs, nor briefed that issue.[309] The ALJ will leave any such costs to the party or parties that has incurred them.

SIGNED May 25, 2022.

ROBERT H. PEMBERTON
ADMINISTRATIVE LAW JUDGE
STATE OFFICE OF ADMINISTRATIVE HEARINGS

[307] Protestants Closing Arg. at 42-43; Protestants Reply at 5.

[308] 30 Tex. Admin. Code § 80.252(d).

[309] 30 Tex. Admin. Code § 80.23(d).

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

AN ORDER
GRANTING THE APPLICATION BY
KENDALL WEST UTILITY, LLC
FOR TPDES PERMIT NO. WQ0015787001
IN KENDALL COUNTY, TEXAS;
SOAH DOCKET NO. 582-22-0489;
TCEQ DOCKET NO. 2021-0755-MWD

On _____, the Texas Commission on Environmental Quality (TCEQ or Commission) considered the application of Kendall West Utility, LLC (Applicant), for a new Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0015787001 in Kendall County, Texas. A Proposal for Decision (PFD) was presented by Robert Pemberton, Administrative Law Judge (ALJ) with the State Office of Administrative Hearings (SOAH), who conducted an evidentiary hearing concerning the application on February 24 and 25, 2022, in Austin, Texas via Zoom videoconferencing.

After considering the PFD, the Commission makes the following findings of fact and conclusions of law.

I. FINDINGS OF FACT

Application

1. Applicant filed its application (Application) for a new TPDES permit with the TCEQ on April 17, 2019.

2. The Application requested authorization to discharge treated domestic wastewater from a proposed plant site, the Tapatio Wastewater Treatment Facility (Facility), SIC Code 4952, to be located approximately 500 feet north of Eagle Drive, 1,375 feet east-southeast of the intersection of Eagle Drive and Tapatio Drive East, in Kendall County, Texas 78006. The treated effluent will be discharged via Outfall 001 to an unnamed tributary, thence to Masters Lake, thence to Frederick Creek, thence to Lake Oz, thence to Frederick Creek,

thence to Upper Cibolo Creek in Segment 1908 of the San Antonio River Basin; and via Outfall 002 to an unnamed tributary, thence to Smith Investment Co. Lake No. 1, thence to Smith Investment Co. Lake No. 3, thence to Masters Lake, thence to Frederick Creek, thence to Lake Oz, thence to Frederick Creek, thence to Upper Cibolo Creek in Segment 1908 of the San Antonio River Basin.

3. The Application requests authorization to discharge treated domestic wastewater from the proposed Facility at a daily average flow not to exceed 0.167 million gallons per day (MGD) in the Interim Phase I, 0.333 MGD in Interim Phase II, and 0.49 MGD in the Final Phase.

4. The Facility will be an activated sludge process plant with membrane bioreactors (MBRs). Treatment units in the Interim I phase will include one bar screen, one equalization tank, one pre-aeration basin, one chemical feed system, one anoxic basin, one MBR basin, one process basin, one chlorine contact chamber, one sludge holding tank and one sludge filter press. Treatment units in the Interim II phase will include one bar screen, one equalization tank, two pre-aeration basins, one chemical feed system, two anoxic basins, two MBR basins, two process basins, one chlorine contact chamber, one sludge holding tank and one sludge filter press. Treatment units in the Final phase will include one bar screen, one equalization tank, three pre-aeration basins, one chemical feed system, three anoxic basins, three MBR basins, three process basins, two chlorine contact chambers, one sludge holding tank and one sludge filter press.

5. The Executive Director (ED) declared the Application administratively complete on May 22, 2019.

6. The ED completed the technical review of the Application on October 24, 2019, prepared a draft permit (Draft Permit), and made it available for public review and comment.

The Draft Permit

Effluent limits in the Draft Permit, based on a thirty-day average, are summarized below:

Phase	Five-Day Carbonaceous Oxygen Demand ($CBOD_5$)	Total Suspended Solids	Ammonia Nitrogen	Total Phosphorus	*E. coli*	Dissolved Oxygen
Interim I	10 milligrams per liter (mg/L)	15 mg/L	2 mg/L	0.5 mg/L	126 colony-forming units (CFU) or most probable number (MPN) per 100 milliliters (mL)	4 mg/L (min)
Interim II	7 mg/L	15 mg/L	2 mg/L	0.5 mg/L	126 CFU or MPN per 100 mL	4 mg/L (min)
Final	5 mg/L	5 mg/L	1.9 mg/L	0.5 mg/L	126 CFU or MPN per 100 mL	6 mg/L (min)

7. For all phases, the pH must be in the range of 6 to 9 standard units, and the effluent shall contain a chlorine residual of at least 1.0 mg/L and not exceed a chlorine residual of 4.0 mg/L after a detention time of at least 20 minutes, based on peak flow.

Notice and Jurisdiction

8. The combined Notice of Public Meeting and Notice of Receipt of Application and Intent to Obtain Water Quality Permit and Notice of Application and Preliminary Decision was published on August 21, 2020, in the *Boerne Star*.

9. A public meeting was held on September 21, 2020, and the public comment period closed on that same date.

10. Willis Jay Harpole, Michael Dillinger, Clint McNew, and Heather McNew timely filed formal Public Comments and Requests for Contested Case Hearing.

11. The ED filed its Response to Public Comment on April 30, 2021.

12. During its open meeting on September 8, 2021, the Commission considered hearing requests and requests for reconsideration. The Commission determined that Mr. Harpole, Mr. Dillinger, Mr. McNew, and Ms. McNew was each an affected person and granted their requests for hearing. At that same meeting, the Commission denied requests for reconsideration.

13. Also during its September 8, 2021 open meeting, the Commission considered the issues to be referred to SOAH. The Commission issued an Interim Order dated September 13, 2021, directing that the following twelve issues be referred to SOAH (Referred Issues):

Issue A: Whether the Draft Permit is protective of groundwater.

Issue B: Whether the Draft Permit adequately addresses nuisance odor in accordance with 30 Texas Administrative Code § 309.13(e).

Issue C. Whether the Draft Permit includes adequate provisions to protect the health of the requesters and aquatic and terrestrial wildlife.

Issue D. Whether the Draft Permit is protective of water quality and the existing uses of the receiving waters in accordance with applicable Texas Surface Water Quality Standards.

Issue E. Whether the Draft Permit complies with applicable antidegradation requirements.

Issue F. Whether the Draft Permit includes adequate provisions to protect the requestors' use and enjoyment of their property.

Issue G. Whether the Facility complies with the siting requirements of 30 Texas Administrative Code Chapter 309, Subchapter B, including the required buffer zones for private water wells and potable water-storage tanks.

Issue H. Whether the permit application is substantially complete and contains accurate information.

Issue I. Whether the Applicant adequately demonstrated a need for the proposed facility, as required by Texas Water Code § 26.0282, Consideration of Need and Regional Treatment Options.

Issue J. Whether the Draft Permit includes sufficient monitoring and reporting requirements, including necessary operational requirements.

Issue K. Whether the Draft Permit was provided to the U.S. Environmental Protection Agency (EPA) for review as required.

Issue L. Whether the Applicant substantially complied with all applicable notice requirements.

14. The Interim Order also set the maximum duration of the hearing at 180 days from the date of the preliminary hearing until the date the PFD is issued by SOAH. Because the 180-day deadline would have fallen during the Memorial Day weekend, the parties agreed to extend the PFD deadline to the following Tuesday, May 31, 2022.

15. On October 29, 2021, notice of the preliminary hearing was published in the *Boerne Star*. The notice included the time, date, and place of the hearing, as well as the matters asserted, in accordance with the applicable statutes and rules.

Proceedings at SOAH

16. The preliminary hearing was held on November 29, 2021, via videoconference, before SOAH ALJ Robert Pemberton. Mr. Harpole, Mr. Dillinger, Mr. McNew, Ms. McNew, and also Tom Tucker (collectively, Protestants) appeared through their representative, as did the Applicant, the ED, and the Office of Public Interest Counsel (OPIC). Each were admitted as parties.

17. During the preliminary hearing, the Applicant offered Exhibits AR-1 through AR-5 to establish the administrative record (Administrative Record), and also Exhibits APP-A through APP-L as evidence of notice and jurisdiction. All of these exhibits were admitted without objection, and jurisdiction was noted by the ALJ.

18. On November 30, 2021, ALJ Pemberton issued SOAH Order No. 2 memorializing the preliminary hearing, adopting a procedural schedule, and setting the hearing on the merits.

19. On February 22, 2022, ALJ Pemberton convened a prehearing conference via videoconference to hear argument on motions and objections filed by the parties. All parties appeared through their respective representatives. On February 23, 2022, the ALJ issued SOAH Order No. 6 with rulings on the motions.

20. The hearing on the merits was held via videoconference on February 24, 2022, and concluded on February 25, 2022, with ALJ Pemberton presiding. All parties appeared through their respective representatives. The record closed on April 14, 2022, the date on which the last post-hearing arguments from the parties were filed.

Issue A: Whether the Draft Permit is protective of groundwater.

21. The Draft Permit is protective of surface water quality, as found below, so it is also protective of groundwater quality.

Issue B: Whether the Draft Permit adequately addresses nuisance odor in accordance with 30 TAC § 309.13(e).

22. The Facility's wastewater-treatment plant units will be located at least 150 feet from the nearest property line.

23. The Facility will not have lagoons with zones of anaerobic activity that would trigger a 500-foot buffer-zone requirement.

24. Protestants did not present evidence demonstrating that the Facility will violate 30 Texas Administrative Code § 309.13(e).

25. The Draft Permit adequately addresses nuisance odor in accordance with 30 Texas Administrative Code § 309.13(e).

Issue C: Whether the Draft Permit includes adequate provisions to protect the health of the requesters and aquatic and terrestrial wildlife.

26. Protestants did not present evidence demonstrating that the Draft Permit will adversely affect human health, including the health of requestors.

27. Protestants did not present evidence demonstrating that the Draft Permit will adversely impact aquatic or terrestrial wildlife.

28. The Draft Permit includes adequate provisions to protect the health of requesters and aquatic and terrestrial wildlife.

Issue D: Whether the Draft Permit is protective of water quality and the existing uses of the receiving waters in accordance with applicable Texas Surface Water Quality Standards.

29. The substance of Protestants' evidence and arguments implicate three of the water-quality criteria contained in the Texas Surface Water Quality Standards (Standards): (1) the requirement that specified minimum concentrations of dissolved oxygen (DO) must be maintained in the receiving waters so as to support aquatic-life uses; (2) that "[n]utrients from permitted discharges or other controllable sources must not cause excessive growth of aquatic vegetation that impairs an existing, designated, presumed, or attainable use"; and (3) that "[s]urface waters must be maintained in an aesthetically attractive condition."

30. The unnamed tributary below Outfall 002 is an intermittent stream having a corresponding dissolved oxygen (DO) criterion of 2.0 mg/L.

31. The unnamed tributary below Outfall 001 is an intermittent stream having a corresponding DO criterion of 3.0 mg/L.

32. Frederick Creek and the ponds along it, including Smith Investment Co. Lakes Nos. 1 and 3 and Masters Lake, are perennial streams and water bodies having a corresponding DO criterion of 5.0 mg/L.

33. The effluent limits in the Draft Permit will maintain the required DO levels in the respective receiving waters, and in turn the waters' respective aquatic life uses.

34. Protestants did not present evidence demonstrating that that the effluent limits in the Draft Permit will allow nutrients that will cause "excessive growth of aquatic vegetation" that will impair an existing, designated, presumed, or attainable use, nor that the limits will fail to maintain receiving waters "in an aesthetically attractive condition."

35. The effluent limits in the Draft Permit will not cause "excessive growth of aquatic vegetation" that will impair an existing, designated, presumed, or attainable use, nor will they fail to maintain receiving waters "in an aesthetically attractive condition."

36. The Draft Permit is protective of water quality and the existing uses of the receiving waters in accordance with the applicable Standards.

Issue E: Whether the Draft Permit complies with applicable antidegradation requirements.

37. The existing water-quality uses of the receiving waters will not be impaired by the Draft Permit as long as Applicant complies with it, satisfying the Tier 1 antidegradation requirement.

38. The Draft Permit will not cause a lowering of water quality by more than a de minimis extent in Frederick Creek, Masters Lake, or Smith Investment Co. Lakes Nos. 1 and 3 as long as Applicant complies with the Draft Permit, satisfying the antidegradation Tier 2 requirement.

39. The Draft Permit complies with applicable antidegradation requirements.

Issue F: Whether the Draft Permit includes adequate protections to protect the requestors' use and enjoyment of their property.

40. Protestants did not present evidence demonstrating that the Draft Permit will adversely impact Protestants' use and enjoyment of their property.

41. The Draft Permit includes adequate protections to protect the requestors' use and enjoyment of their property.

Issue G: Whether the facility complies with the siting requirements of 30 Texas Administrative Code Chapter 309, Subchapter B, including the required buffer zones for private water wells and potable water-storage tanks.

42. As relating to Referred Issue G, Protestants presented evidence that there were 14 water wells in the general area of the Facility that were not referenced in the Application. However, they did not present evidence that any of these was either a public water well located within 500 feet of a wastewater treatment plant unit nor a private water well located within 250 feet.

43. The Facility will not have a wastewater treatment facility surface impoundment that would trigger the requirement of leak-prevention protections under 30 Texas Administrative Code § 309.13(d).

44. Protestants did not present evidence demonstrating that the Facility will violate any siting requirements of 30 Texas Administrative Code Chapter 309, Subchapter B.

45. The Facility complies with the siting requirements of 30 Texas Administrative Code Chapter 309, Subchapter B, including the required buffer zones for private water wells and potable water-storage tanks.

Issue H: Whether the permit application is substantially complete and contains accurate information.

46. As relating to Referred Issue H, Protestants contend that their evidence of 14 additional water wells not referenced in the Application demonstrates that the Application is not substantially complete and contains inaccurate information. However, Applicant was not required to identify the additional wells when making the Application.

47. Protestants did not present evidence demonstrating that the Application, by virtue of violating any specifically applicable state or federal requirement, is not substantially complete or contains inaccurate information.

48. The Application is substantially complete and contains accurate information.

Issue I: Whether the Applicant adequately demonstrated a need for the proposed facility, as required by Texas Water Code § 26.0282, Consideration of Need and Regional Treatment Options.

49. Applicant presented forecasts to TCEQ reflecting that demand in its service territory will increase to 0.452 MGD by 2027, and to approximately 0.632 MGD by 2030.

50. The wastewater-treatment facility that Applicant has heretofore used to provide service (the Current Facility) has a capacity of only 0.150 MGD.

51. The Current Facility was constructed in the 1980s and would require significant upgrades and expansion to be a viable means of meeting the forecasted increased demand.

52. The Current Facility is owned by Potranco Holdings, Ltd., an entity owned and controlled by one of the Protestants, Mr. Harpole. Applicant has leased the Current Facility from Potranco and Mr. Harpole.

53. In its Application, Applicant explained that it intended to replace its reliance on the Current Facility with the newly constructed Facility for which it is seeking TPDES Permit WQ0015787001. Other Requirement No. 9 of the Draft Permit would require Applicant to submit a "Clean Closure Plan" and initiate the process for cancelling the Current Facility's permit (a TLAP permit) within 30 days after the Facility becomes operational and the collection system necessary for transfer of flows is completed.

54. Applicant also provided documentation showing that the operator of the only other wastewater-treatment facility within three miles of the Facility site, the Lerin Hills Municipal Utility District, declined to provide service, explaining that its facility was not designed nor permitted to accept wastewater from outside the subdivision it serves.

55. Protestants did not present evidence demonstrating that the Facility would violate Texas Water Code § 26.0282.

56. The preponderant evidence demonstrates that the Facility would advance the policy of regionalization as contemplated in Texas Water Code § 26.0282.

57. Applicant adequately demonstrated a need for the proposed Facility, as required by Texas Water Code § 26.0282.

Issue J: Whether the Draft Permit includes sufficient monitoring and reporting requirements, including necessary operational requirements.

58. As relating to Referred Issue J, Protestants contested only whether the Draft Permit includes "necessary operational requirements" of requiring adequate education and training for Facility's operator.

59. Protestants did not present evidence that the Draft Permit violates any specifically applicable state or federal requirement relating to the education and training required of the Facility's operator.

60. On the contrary, Other Requirement No. 1 in the Draft Permit affirmatively demonstrates compliance with the applicable requirements prescribed in 30 Texas Administrative Code Subchapter J.

61. The Draft Permit includes sufficient monitoring and reporting requirements, including necessary operational requirements.

Issue K: Whether the Draft Permit was provided to the U.S. EPA for review as required.

62. TCEQ provided the Draft Permit to the U.S. EPA on July 13, 2020.

63. EPA reviewed the Draft Permit and, on August 25, 2020, gave TCEQ permission to issue it.

64. Protestants did not present evidence demonstrating that the manner or timing of giving notice to the EPA *vis a vis* public notice of the Draft Permit violated any specifically applicable state or federal legal requirement.

65. The Draft Permit was provided to the U.S. EPA as required.

Issue L: Whether the Applicant substantially complied with all applicable notice requirements.

66. Protestants challenge notice based on the contention that Kendall West is no longer the Applicant because that entity and/or its assets were acquired by another entity between the preliminary hearing and the hearing on the merits.

67. Kendall West remains the Applicant for purposes of this proceeding.

68. Protestants did not present evidence demonstrating that Applicant failed to substantially comply with all applicable notice requirements.

69. The Applicant substantially complied with all applicable notice requirements.

Transcription Costs

70. No party requested an allocation of transcription costs.

71. Applicant and Protestants should each bear any transcription costs they have incurred.

II. CONCLUSIONS OF LAW

1. TCEQ has jurisdiction over this matter. Tex. Water Code, chs. 5, 26.

2. SOAH has jurisdiction to conduct a hearing and to prepare a PFD in contested cases referred by the Commission under Texas Government Code § 2003.047.

3. Notice was provided in accordance with Texas Water Code §§ 5.114 and 26.028; Texas Government Code §§ 2001.051 and .052; and 30 Texas Administrative Code §§ 39.405 and .551.

4. The Application is subject to the requirements in Senate Bill 709, effective September 1, 2015. Tex. Gov't Code § 2003.047(i-1) through (i-3).

5. Applicant's filing of the Administrative Record established a prima facie demonstration that: (1) the Draft Permit meets all state and federal legal and technical requirements; and (2) a permit, if issued consistent with the Draft Permit, would protect human health and safety, the environment, and physical property. Tex. Gov't Code § 2003.047(i-1); 30 Tex. Admin. Code §§ 80.17(c)(1), .117(c)(1), .127(h).

6. Applicant has the burden of proof on the issues referred by the Commission. 30 Tex. Admin. Code § 80.17(a). However, the admission of the Administrative Record into evidence met Applicant's burden of proof, subject to rebuttal. 30 Tex. Admin. Code § 80.117(b).

7. To rebut the prima facie demonstration established by the Administrative Record, a party must present evidence that (1) relates to one of the Referred Issues; and (2) demonstrates, as compared to the Administrative Record, that one or more provisions in the Draft Permit violates a specifically applicable state or federal requirement. *See* Tex. Gov't Code § 2003.047(i-2); 30 Tex. Admin. Code §§ 80.17(c)(2), .117(c)(3).

8. Even if the prima facie demonstration established by the Administrative Record is rebutted, the Applicant or ED may present additional evidence to be considered in determining whether Applicant met its burden of proof. *See* Tex. Gov't Code § 2003.047(i-3); 30 Tex. Admin. Code §§ 80.17(c)(3), .117(c)(3).

9. The standard of proof is by a preponderance of the evidence. *Granek v. Texas St. Bd. of Med. Examn'rs*, 172 S.W.3d 761, 777 (Tex. App.—Austin 2005, no pet.); *Southwestern Pub. Servs. Co. v. Pub. Util. Comm'n of Tex.*, 962 S.W.2d 207, 213-14 (Tex. App.—Austin 1998, pet. denied).

10. The Draft Permit is protective of groundwater.

11. Prior to construction of the Facility, Applicant must satisfy one of three alternative compliance requirements to abate and control a nuisance of odor. 30 Texas Administrative Code § 309.13(e)

12. The alternative means of complying with 30 Texas Administrative Code § 309.13(e) include satisfying a buffer-zone requirement. Lagoons with zones of anaerobic activity may not be located closer than 500 feet to the nearest property line, and all other wastewater treatment plant units may not be located more than 150 feet to the nearest property line. 30 Texas Administrative Code § 309.13(e)(1).

13. The Draft Permit adequately addresses nuisance odor in accordance with 30 Texas Administrative Code § 309.13(e).

14. The Draft Permit includes adequate protections to protect the health of requestors and aquatic and terrestrial wildlife.

15. TCEQ has adopted water-quality standards applicable to wastewater discharges (the Standards) in accordance with the Clean Water Act and the Texas Water Code. 33 U.S.C. § 1313; Tex. Water Code § 26.023; 30 Tex. Admin. Code ch. 307.

16. Texas Water Code § 26.023 directs TCEQ by rule to set water quality standards (Standards) for the water in this state and provides that it has the sole and exclusive authority to do so. Tex. Water Code § 26.023; *see also id.* § 26.011 (Commission "shall administer the provisions of this chapter and shall establish the level of quality to be maintained in, and shall control the quality of, the water in this state, as provided by this chapter").

17. The Standards define "water quality" in terms of certain criteria or attributes, some expressed numerically, others as narrative descriptions. 30 Tex. Admin. Code §§ 307.4, .7, .10.

18. The numerical water-quality criteria prescribed in the Standards include minimum DO concentrations that must be maintained in receiving waters in order to support existing, designated, presumed, and attainable aquatic life uses. 30 Tex. Admin. Code § 307.4(h).

19. Perennial streams and water bodies are presumed to have a high aquatic life use and a corresponding DO criterion of 5.0 mg/L. Intermittent streams are presumed to have minimal aquatic life use and a corresponding DO criterion of 2.0 mg/L. Intermittent streams with perennial pools are presumed to have a limited aquatic life use and corresponding DO criterion of 3.0 mg/L. 30 Tex. Admin. Code §§ 307.4(h), .7(a), (b)(3) & Figure 30 TAC § 307.7(b)(3)(A)(i).

20. The effluent limits in the Draft Permit will maintain the required DO levels in the receiving waters, and in turn the waters' respective aquatic life uses.

21. The narrative water-quality criteria in the Standards include "[n]utrients from permitted discharges or other controllable sources must not cause excessive growth of aquatic vegetation that impairs an existing, designated, presumed, or attainable use" and "[s]urface waters must be maintained in an aesthetically attractive condition." 30 Tex. Admin. Code § 307.4(b)(1), (e).

22. The effluent limits in the Draft Permit will prevent nutrients from causing "excessive growth of aquatic vegetation" that will impair an existing, designated, presumed, or attainable use. 30 Tex. Admin. Code § 307.4(e).

23. The effluent limits in the Draft Permit will maintain surface waters in an "aesthetically attractive condition." 30 Tex. Admin. Code § 307.4(b)(1).

24. The Standards do not contain any water-quality criteria addressed specifically to concentrations of phosphorus or nitrogen in the receiving waters, nor any criteria that are framed in terms of an oligotrophic/mesotrophic/eutrophic continuum or categories. 30 Tex. Admin. Code §§ 307.4, .7.

25. The Draft Permit is protective of water quality and the existing uses of the receiving waters in accordance with the applicable Standards.

26. Tier 1 of the Commission's antidegradation policy requires that existing uses and water quality sufficient to protect those existing uses must be maintained. 30 Tex. Admin. Code § 307.5(b)(1).

27. The Draft Permit, if complied with, will maintain existing uses and water quality sufficient to protect those existing uses. 30 Tex. Admin. Code § 307.5(b)(1).

28. Tier 2 of the Commission's antidegradation policy requires that the Draft Permit not cause, in waters that exceed fishable/swimmable quality, a lowering of water quality that is by more than a de minimis extent, unless there is a showing that such lowering is necessary for important economic or social development. 30 Tex. Admin. Code § 307.5(b)(2).

29. The Draft Permit, if complied with, will not cause a lowering of water quality by more than a de minimis extent in Frederick Creek, Masters Lake, or Smith Investment Co. Lake Nos. 1 and 3. 30 Tex. Admin. Code § 307.5(b)(2).

30. The Draft Permit complies with applicable antidegradation requirements.

31. To ensure adequate protections to potable water sources and supplies, a wastewater treatment plant unit may not be located closer than 500 feet from a public water well, nor 250 feet from a private water well. 30 Tex. Admin. Code § 309.13(c). Further, a wastewater treatment facility surface impoundment may not be located in areas overlying the recharge zones of certain aquifers absent specified measures to prevent leaking into the aquifer. 30 Tex. Admin. Code § 309.13(d).

32. The Facility complies with the siting requirements of 30 Texas Administrative Code Chapter 309, Subchapter B, including the required buffer zones for private water wells and potable water storage tanks.

33. The Application is substantially complete and contains accurate information.

34. In considering the issuance of a permit to discharge waste, the Commission may deny or alter the proposed permit's terms and conditions based on consideration of need, including the expected volume and quality of the influent and the availability of existing or proposed areawide or regional waste collection, treatment, and disposal systems not designated as such by Commission order. Tex. Water Code § 26.0282.

35. Texas Water Code § 26.0282 does not require the Commission to deny a permit under any particular circumstances or prescribe any specific means of advancing the goal of regionalization. Rather, it affords the Commission discretion it may exercise in a given permit case to encourage and promote regionalization based on the evidence presented concerning the need for the permit and other systems, existing and proposed, in the geographical area.

36. TCEQ has not adopted any formal rules requiring regionalization pursuant to Texas Water Code § 26.0282.

37. Applicant adequately demonstrated a need for the Facility, as required by Texas Water Code § 26.0282, Consideration of Need and Regional Treatment Options.

38. The Commission should not deny or alter the terms and conditions of the Draft Permit based on consideration of need and the policy to promote regional or area-wide systems. Tex. Water Code § 26.0282.

39. A domestic wastewater-treatment facility with an activated sludge treatment system other than extended aeration, and having a permitted average daily flow greater than 0.050 MGD and up to 1.0 MGD, must be operated by a wastewater-treatment-facility operator holding at least a Category C license. 30 Tex. Admin. Code § 30.350(e) & Figure 30 TAC § 30.350(e).

40. The Draft Permit includes sufficient monitoring and reporting requirements, including necessary operational requirements.

41. There is no indication that the provisions of the Memorandum of Agreement between TCEQ and EPA regarding provision of draft permits to EPA creates enforceable rights in external, private parties.

42. The Draft Permit was provided to the U.S. EPA for review as required.

43. Applicant substantially complied with all applicable notice requirements.

44. Upon the timely filed motion of a party or upon its own motion, the Commission may assess reporting and transcription costs to one or more of the parties participating in the proceeding, excluding the ED and OPIC, considering the factors listed in 30 Texas Administrative Code § 80.23(d)(1).

45. The Commission should not assess reporting and transcription costs in this case.

NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY, IN ACCORDANCE WITH THESE FINDINGS OF FACT AND CONCLUSIONS OF LAW, THAT:

1. Applicant's Application for Texas Pollutant Discharge Elimination System Permit No. WQ0015787001 is granted as set forth in the Draft Permit.

2. The Commission adopts the ED's Response to Public Comment in accordance with 30 Texas Administrative Code § 50.117.

3. All other motions, requests for entry of specific Findings of Fact or Conclusions of Law, and any other requests for general or specific relief, if not expressly granted herein, are hereby denied.

4. The effective date of this Order is the date the Order is final, as provided by Texas Government Code § 2001.144 and 30 Texas Administrative Code § 80.273.

5. TCEQ's Chief Clerk shall forward a copy of this Order to all parties.

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

ISSUED:

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

_____

Jon Niermann, Chairman, For the Commission