

TCEQ DOCKET NO. 2024-1227-IWD

APPLICATION BY	§	BEFORE THE TEXAS COMMISSION
CORPUS CHRISTI POLYMERS	§	
LLC FOR RENEWAL OF TPDES	§	ON
PERMIT NO. WQ0005019000	§	
	§	ENVIRONMENTAL QUALITY

**CORPUS CHRISTI POLYMERS LLC’S RESPONSE
TO REQUESTS FOR CONTESTED CASE HEARING AND RECONSIDERATION**

TO THE COMMISSIONERS OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY:

Corpus Christi Polymers LLC (“CCP”) files this Response to the Requests for Contested Case Hearing and Reconsideration (“Response”) submitted in connection with the above-captioned permitting matter and would respectfully show the Texas Commission on Environmental Quality (the “Commission” or “TCEQ”) the following:

I. Introduction

On December 1, 2021, CCP filed a timely application to renew Texas Pollutant Discharge Elimination System (“TPDES”) Permit No. WQ0005019000 (the “Permit”), which authorizes the discharge of wastewater from its resins manufacturing facility located at 7001 Joe Fulton International Trade Corridor, in the City of Corpus Christi, Nueces County, Texas 78409 (the “Plant”). The Plant is authorized to discharge to Segment No. 2484 at the upper end of the Inner Harbor of the Corpus Christi Ship Channel, approximately seven miles from the Corpus Christi Bay. The area where the Plant and its discharge are located is home to significant industrial development, along with heavy vessel traffic.

CCP’s application seeks the renewal of the Permit without amendment. There is no proposed change to the quantity or quality of the wastewater or to the pattern or place of its discharge. The only changes to the Permit are enhancements proposed by the Executive Director

to expressly include narrative criteria for salinity and add more stringent effluent limitations and monitoring and reporting requirements. These enhancements are described in the Executive Director’s July 19, 2022 preliminary decision and the Executive Director’s June 5, 2024 final decision to issue the Draft Permit. The May 29, 2024 Response to Public Comment (“RTC”), included as part of the Executive Director’s final decision, also fully addressed all public comments and objections, including those of the Environmental Protection Agency (“EPA”).¹ The deadline for submitting contested case hearing requests and requests for reconsideration of the Executive Director’s decision was 30 days after June 5, 2024.²

The Commissioners Integrated Database indicates that 64³ persons or groups (collectively, the “Requestors”) submitted requests for hearing on the Permit. Of these requests, 53⁴ were form letters that did not clearly meet TCEQ requirements for requesting a hearing. In fact, none of the Requestors may validly demand a hearing be granted because there is no right to a contested case hearing under Section 26.028(d) of the Texas Water Code for this straight renewal. Even if there were such a right, the Requestors have not alleged a personal justiciable interest that would confer “affected person” status under Texas law, and it would not be in the public interest to otherwise hold a contested case hearing.

¹ The RTC confirms EPA’s determination that its objections have been fully resolved.

² 30 Texas Administrative Code (“TAC”) § 55.201(a).

³ The number of requestors is listed as 70 in the Commissioners Integrated Database, but four of those requests are duplicates and one request is broken into multiple parts, which were each counted as separate requests in the database’s tally.

⁴ These 55 Requestors include: Wallis Limuel, Joanne Vela, Sam Suniga, Andres Villarreal, Jonathan Mcada, Adolph Silva, Brenda Alonzo, Defranco Sarabia, Irma Moreno, Paul Shanks, Ferol Dougherty, Destinee Martina, Bill May, Sara Ibarra, April Tuttle, Luis Tovar, Santiago Escareno, Debrathe Ramirez, Manuel Hernandez, Kristen Aguilar, Gerald Walton, Rene Gonzalez, Eduardo Canales, Karen Thorwaldson, Abigail Sendejo, Sammy Sendejo, Lisa Hernandez, Robert Lowe, Celina Villareal, Terrence A, Paul Daniloff, Michelle Mitchell, Susan Soulas, Beatriz Alvarado, Jennifer Bray, Dorothy Peña, Guillermo Gallegos, Tanya McCandless, Moira McCandless, Cassie White, Ruby Buitron, Kristen M, Josh R, Sarah Skinner, Arriana McDonald, Isabella Espinosa, Miah Rodriguez, Sam Watson, Micah McCandless, Desiree Morin, and Joseph Rodriguez

For the Greater Good (“FTGG”) and Texas Campaign for the Environment (“TCE”) also submitted requests for reconsideration of the Executive Director’s decision to issue the Permit. Reconsideration is not warranted though, as the Executive Director’s decision to issue the Draft Permit is proper based on the record and applicable regulatory framework.

For the reasons set forth below, CCP respectfully urges the Commission to deny the requests for contested case hearing, deny the requests for reconsideration, adopt the Executive Director’s RTC, approve CCP’s renewal application, and renew the Permit as recommended by the Executive Director.

II. The Requests for Contested Case Hearing Should Be Denied

a. There is no opportunity to request a contested case hearing on CCP’s application to renew the Permit.

The Commissioners Integrated Database indicates requests for contested case hearing were filed by 64 persons or groups. Of these, 53 were form letters that fail to meet TCEQ requirements by not expressly requesting a hearing on the application or alleging any personal justiciable interest.⁵ The remaining 11⁶ requests also fail to meet statutory and regulatory requirements because there is no opportunity to request a hearing on the Permit,⁷ and even if there were, these requestors also fail to demonstrate a personal justiciable interest not common to the general public.⁸

⁵ 30 TAC § 55.201(d) (“A hearing request must substantially comply with the following: [...] (2) identify the person's personal justiciable interest affected by the application, including a brief, but specific, written statement explaining in plain language the requestor's location and distance relative to the proposed facility or activity that is the subject of the application and how and why the requestor believes he or she will be adversely affected by the proposed facility or activity in a manner not common to members of the general public; (3) request a contested case hearing; (4) for applications filed: [...] on or after September 1, 2015, list all relevant and material disputed issues of fact that were raised by the requestor during the public comment period and that are the basis of the hearing request.”).

⁶ These 11 referenced requestors are: Brandon Marks (on behalf of himself); Brandon Marks (on behalf of TCE); Chloe Torres; Isabel Araiza Ortiz; Errol Summerlin (on behalf of Coastal Alliance to Protect our Environment); Elida Castillo; Lamont Taylor; Margaret Ann Duran; Love Sanchez; George Gardiner; and Marisa Perales (on behalf of FTGG/TCE). The 53 Requestors who submitted form requests are included in the Certificate of Service.

⁷ 30 TAC § 55.201(i)(5).

⁸ 30 TAC § 55.201(d).

The opportunity to request a contested case hearing on an application to renew a water quality permit is strictly limited under Texas Water Code Section 26.028(d). Under this section and TCEQ's rules implementing this statutory limitation, there is no right to a contested case hearing on an application to renew or amend a Chapter 26 permit where the following conditions are met:

(A) the applicant is not applying to:

(i) increase significantly the quantity of waste authorized to be discharged; or

(ii) change materially the pattern or place of discharge;

(B) the activity to be authorized by the renewal or amended permit will maintain or improve the quality of waste authorized to be discharged;

(C) any required opportunity for public meeting has been given;

(D) consultation and response to all timely received and significant public comment has been given; and

(E) the applicant's compliance history for the previous five years raises no issues regarding the applicant's ability to comply with a material term of the permit.⁹

As explained in the bullets below, CCP's application satisfies each of the above-listed conditions of 30 TAC § 55.201(i)(5):

- § 55.201(i)(5)(A)(i): CCP is not seeking any increase in the quantity of wastewater authorized to be discharged under the Permit. Rather, CCP is seeking renewal of an already-authorized discharge.
- § 55.201(i)(5)(A)(ii): CCP is not seeking to change the location of its outfalls or discharge or the pattern of its discharge. No new outfalls would be permitted through this renewal action.

⁹ 30 TAC § 55.201(i)(5); *see also* Texas Water Code § 26.028(d).

- § 55.201(i)(5)(B): The only changes from CCP’s existing permit are enhancements made by the Executive Director designed to improve the quality of the wastewater authorized to be discharged, namely, the express inclusion of narrative criteria for salinity, addition of monitoring and reporting requirements for Total Dissolved Solids (“TDS”), sulfates, chlorides, and salinity, and lowering of limits for three parameters.¹⁰
- § 55.201(i)(5)(C): A public meeting on the application and Draft Permit was held in Corpus Christi on February 23, 2023.
- § 55.201(i)(5)(D): The Executive Director responded to all timely, significant comments in its May 29, 2024 RTC.
- § 55.201(i)(5)(E): CCP’s compliance history raises no issues about its ability to comply with the Permit. CCP’s compliance rating is classified as “high” in TCEQ’s Central Registry, meaning that CCP has an above-satisfactory compliance record.

CCP’s renewal application meets the conditions in 30 TAC § 55.201(i)(5), and thus constitutes an application under Texas Water Code Chapter 26 for which there is no right to a contested case hearing. Accordingly, the hearing requests should be denied.

b. Comprehensive permitting and public participation processes have served the public interest, and there is no basis to justify holding a contested case hearing.

Conceding their lack of a right to a hearing, two of the Requestors, FTGG and TCE, argue that the Commission should nonetheless refer CCP’s renewal application to SOAH for a contested case hearing because “a hearing would be in the public interest” pursuant to 30 TAC § 55.211(d)(1) based on what they allege is a “considerable public interest regarding the permit renewal,” their concerns regarding the impacts of the discharge, and two purported members of FTGG and TCE

¹⁰ Fact Sheet and Executive Director’s Preliminary Decision, at Section IX, p. 4 (April 18, 2022).

who they assert may qualify as “affected persons.”¹¹ The Commission should decline this extraordinary invitation to circumvent the statutory limitation on hearings for a renewal.

The Executive Director has provided the public with abundant opportunity to be heard on the renewal and has thoroughly responded to all public comments. The public comment period lasted over a year, beginning with the publication of the Notice of Receipt and Intent to Obtain a Water Quality Permit on February 22, 2022, and ending at the close of the public meeting held on February 23, 2023.¹² Members of the public were given an opportunity to provide oral comments and ask questions regarding the renewal application at the February 23, 2023 public meeting. The Executive Director then fully responded to all significant public comments submitted during the public comment period, including those on which hearing requests were based. CCP’s application is a simple renewal application, in which the only proposed revisions are those that would be *more protective* of the environment and human health. The public interest has been more than sufficiently served through an extensive public comment period and a public meeting, and FTGG and TCE have failed to justify the need for a contested case hearing on top of these other opportunities for public involvement.

c. None of the Requestors qualifies as an “affected person.”

Even if the Commission were to entertain the extraordinary request that it refer CCP’s renewal application for a hearing, none of the Requestors would have standing as an affected person to be named as a party. Under Section 5.556(c) of the Texas Water Code and 30 TAC § 80.109, only an “affected person” may be named as a party. “Affected person” is narrowly defined as a person “who has a personal justiciable interest related to a legal right, duty, privilege,

¹¹ FTGG and TCE, “Hearing Request and Request for Reconsideration regarding the Application of Corpus Christi Polymers LLC for Renewal of TPDES Permit No. WQ0005019000 (EPA ID No. TX0134635)”, p. 2-3 (July 5, 2024).

¹² See 30 TAC § 55.152(b).

power, or economic interest affected by the application.”¹³ “An interest common to members of the general public does not qualify as a personal justiciable interest.”¹⁴ To allege a personal justiciable interest, a request for a contested case hearing must include a “specific, written statement explaining in plain language the requestor’s location and distance relative to the proposed facility [...] and why the requestor believes he or she will be adversely affected by the proposed facility or activity in a manner not common to members of the general public.”¹⁵

No Requestor is able to demonstrate affected person status with respect to CCP’s renewal application due to the nature of the application itself and the proposed discharge location. Because the renewed Permit would not result in an increase in the discharge volume or concentration of any pollutants, no one can show that they are adversely affected by the renewal application. According to TCEQ’s rules, affected person status is derived from impacts due to “the application.”¹⁶ Here, the application is a straight renewal with no changes to the impacts of the authorized activity other than *beneficial* changes made by TCEQ. And negative impacts to fish and marine species claimed by certain requesters are speculative given the record before the Commission, notably the determination by the Executive Director that the Draft Permit “is protective of the environment, water quality, and human health” and that, based on Tier I and Tier II antidegradation reviews performed for the previous permit action (for which this permit action is merely a renewal), “all existing uses will be maintained and protected if the facility is operated in accordance with the terms of the draft permit.”¹⁷

¹³ 30 TAC § 55.203(a); *see also* TEX. WATER CODE § 5.115(a).

¹⁴ 30 TAC § 55.203(a); *see also* TEX. WATER CODE § 5.115(a).

¹⁵ 30 TAC § 55.201(d)(2).

¹⁶ 30 TAC § 55.203(a).

¹⁷ Executive Director’s Response to Public Comment, p. 3, 19 (May 29, 2024).

The Permit authorizes CCP to discharge into the Corpus Christi Inner Harbor, whose designated uses are limited to non-contact recreation (i.e. “[a]ctivities that do not involve a significant risk of water ingestion, such as those with limited body contact incidental to shoreline activity, including birding, hiking, and biking”¹⁸) and intermediate aquatic life use (i.e. “some species expected”¹⁹).²⁰ No Requestor resides or owns property along the Inner Harbor, and FTGG and TCE have not explained how its purported members’ recreational and economic interests derived from fishing far downstream of the discharge are any different from that of other members of the public who may fish in this area. The Commission has previously found that recreational interests that occur more than four miles downstream from the permitted outfall are “common to members of the general public” and not sufficient to confer affected person status.²¹ The members’ fishing activities take place approximately six miles or more downstream from CCP’s outfall, reinforcing that the members’ interests are indistinguishable from the general public. Moreover, the members lack a property interest sufficient to confer standing under Texas law.²² For each of these reasons, the purported members’ recreational interests, and economic interest derived from the recreational interests, are insufficient to make the members affected persons.

The remaining Requestors likewise have not demonstrated a personal justiciable interest related to CCP’s renewal application. They describe concerns or comments on the application, but

¹⁸ 30 TAC § 307.3(42).

¹⁹ RG-194, “Procedures to Implement the Texas Surface Water Quality Standards,” p. 15, table 1 (June 2010).

²⁰ 30 TAC § 307.10, Appendix A; *see also* 33 CFR § 165.809(b) (barring recreational, passenger, and commercial fishing vessels within the Inner Harbor).

²¹ An Order Concerning the Application by Southwestern Electric Power Company for Renewal and Amendment to TPDES Permit No. WQ0002496000, TCEQ Docket No. 2011-2199-IWD (Dec. 10, 2012).

²² Texas case law makes clear that a generalized recreational interest is not sufficient to confer standing without an interest in real property affected by the challenged action: “[t]here is no Texas authority for the proposition that . . . injury to [a requestor’s] members’ environmental, scientific, and recreational interests generally and without any interest in or connection to the real property involved—is the type of interference with a legally protected interest or injury that confers standing as a matter of state law.” *Save Our Springs All. v. City of Dripping Springs*, 304 S.W.3d 871, 882 (Tex. App.—Austin 2010). Here, neither of the members have identified property that would be affected by the proposed action.

do not indicate that they have an interest that is different from that of the general public or provide information regarding the distance between their location and the Plant. Accordingly, these Requestors have failed to show that they qualify as “affected persons” for purposes of requesting a contested case hearing on CCP’s application.

III. The Requests for Reconsideration Should Be Denied

FTGG and TCE also request reconsideration of the Executive Director’s decision to renew the Permit.²³ FTGG submitted comments and a request for reconsideration on September 15, 2022, during the public comment period on the renewal application. After the Executive Director published its RTC, FTGG, now joined by TCE, submitted a second request for reconsideration on July 5, 2024, reurging, in many cases, the same concerns, and even the same language, set forth in the first request for reconsideration.²⁴

Every issue raised by FTGG and TCE was adequately and fully addressed in the Executive Director’s May 29, 2024 RTC, by the terms of the Draft Permit, by CCP’s permit application, or by the applicable regulatory framework. Accordingly, the Executive Director’s decision was and remains appropriate, and the alleged issues raised by FTGG and TCE fail to justify reconsideration of this decision. CCP, therefore, respectfully urges the Commission to deny FTGG and TCE’s requests for reconsideration.

²³ The Commissioners Integrated Database also classifies two other requests, from Joanie Steinhaus and Tammy Rodgers King, as requests for reconsideration. However, these comments state only that the construction timeline provides TCEQ with “ample opportunity for TCEQ to re-consider the Permit,” and thus do not satisfy the requirement in 30 TAC § 55.201(e) that “[t]he request for reconsideration must expressly state that the person is requesting reconsideration of the executive director's decision.” Regardless of whether they are sufficient to qualify as requests for reconsideration, the issues raised by Ms. Steinhaus and Ms. King have been fully addressed by the Executive Director’s RTC and this Response.

²⁴ CCP objects to the Commission’s consideration of the untimely supplement to the July 5, 2024 request for reconsideration submitted on July 8, 2024. Under 30 TAC § 55.201(a), the deadline for submitting requests for reconsideration was July 5, 2024. Therefore, the July 8, 2024 supplement was untimely and should be disregarded.

a. The Draft Permit complies with federal cooling water intake structure requirements.

FTGG and TCE first claim that the Executive Director has failed to ensure compliance with federal and state cooling water intake structure requirements at 40 CFR Part 125, Subpart I (the “CWIS Rule”). However, FTGG and TCE’s argument rests on a fundamental misunderstanding of the application of the CWIS Rule to new facilities like the Plant, and thus does not provide a basis for reconsidering the Executive Director’s decision to issue the Draft Permit.

The Draft Permit complies with the CWIS Rule requirements by reflecting the TCEQ’s use of Best Professional Judgement (“BPJ”) to minimize adverse environmental impacts.²⁵ The more prescriptive provisions of the CWIS Rule noted by FTGG and TCE apply to a new facility only when, among other factors, the facility “[h]as at least one cooling water intake structure that uses at least 25 percent of the water it withdraws for cooling purposes.”²⁶ “A new facility meets the 25 percent cooling water threshold if, based on the new facility’s design, any monthly average over a year for the percentage of cooling water withdrawn is expected to equal or exceed 25 percent of the total water withdrawn.”²⁷ If a facility does not meet this threshold, then the rule requires TCEQ to use its BPJ in regulating cooling water intake as was done here.²⁸ TCEQ’s TPDES permit application captures this applicability criteria by asking applicants to confirm whether the facility will use at least 25 percent of the water withdrawn by the cooling water intake structure “exclusively for cooling purposes.” This is consistent with the federal rule, which provides a

²⁵ See Executive Director’s Response to Public Comment, Responses 7 and 8, p. 7-8 (May 29, 2024); 40 CFR § 125.80(c).

²⁶ 40 CFR § 125.81(a)(2).

²⁷ 40 CFR § 125.81(c). The averaging calculation is “over a period of 1 year (any 12-month period),” 66 Fed. Reg. 65288 (Dec. 18, 2001).

²⁸ 40 CFR § 125.80(c).

distinction between cooling water and process water for purposes of the threshold calculation: “Cooling water that is used in a manufacturing process either before or after it is used for cooling is considered process water for the purposes of calculating the percentage of a new facility’s intake flow that is used for cooling purposes in § 125.81(c) [the 25% threshold].”²⁹

The CCP Plant remains subject to BPJ, rather than the more prescriptive provisions of the CWIS Rule, because, as designed, less than 25 percent of the water withdrawn from the Inner Harbor by its cooling water intake structure is used exclusively for cooling purposes measured on an average monthly basis; instead, more than 75% of water withdrawn is used or reused in a manufacturing process.³⁰ CCP confirmed this determination both in its permit application and in subsequent information provided to the Executive Director.

FTGG and TCE misread the CWIS Rule in arguing that the TPDES permit application is flawed by using the word “exclusively.” FTGG and TCE fail to recognize the explicit instruction provided in 40 CFR § 125.83 on what constitutes cooling water for this exact calculation. CCP provided all requisite information in its application for Clean Water Act (“CWA”) Section 316(b) and CWIS Rule purposes, including relevant responses to TCEQ inquiries.³¹ Accordingly, as in

²⁹ 40 CFR § 125.83. While the phrasing differs between Subpart I (new facility) and Subpart J (existing facility) rules, EPA is consistent that only the water used *exclusively* for cooling purposes is to be counted when determining the 25 percent threshold for CWA 316(b) rules rather than BPJ. *See e.g.*, 71 Fed. Reg. 35008 (June 16, 2006) (“As is the case with the *Phase I [new facility]* and *Phase II [existing large power plant]* rules, only the water used *exclusively for cooling purposes* is to be counted when determining whether the 25 percent threshold in §125.131(a)(2) [new offshore oil and gas facility] is met.” (emphasis added)); 66 Fed. Reg. 65256, 65259 (“In the final rule EPA has amended the definition of cooling water intake structure to ensure that the rule does not discourage the reuse of cooling water as process water. EPA has amended the proposed definition of cooling water intake structure to specify that cooling water that is used in a manufacturing process, either before or after it is used for cooling, is considered process water for purposes of calculating the percentage of a new facility’s intake flow that is used for cooling and whether that percentage exceeds 25 percent.”).

³⁰ 40 CFR § 125.81(a)(2), (c); Fact Sheet and Executive Director’s Preliminary Decision, at Section X(D)(11), p. 17 (April 18, 2022).

³¹ CCP provided additional information to TCEQ to confirm its monthly average cooling water use relative to the regulatory threshold. CCP letter to TCEQ, January 25, 2023. FTGG and TCEQ noted that the application originally stated that 43% of the wastewater discharged at external Outfall 001 is cooling tower blowdown. However, this typographical error was corrected (to 4.38%) during technical review and that correction was included in the copy of the application provided at the public library. Letter from Power Engineering to TCEQ, dated December 15, 2021, at p. 136 and 139 of public viewing copy of application.

the prior permitting actions, the Executive Director accurately concluded that the CWIS Rule does not apply and exercised its BPJ in the Draft Permit.³²

The CCP Plant incorporated cooling towers in its design—a form of closed-cycle recirculating system.³³ TCEQ accurately explains in its Fact Sheet that CWA 316(b) rulemakings document that cooling towers are considered the most effective impingement mortality and entrainment technology available because the use of cooling towers dramatically reduces surface water withdrawals.³⁴ TCEQ's BPJ is consistent with 40 CFR § 125.84(b)(1), which indicates that where (unlike here) a new facility is subject to the more prescriptive provisions of the CWIS Rule, the benchmark for any cooling water system is if it can reduce intake flow to a level commensurate with that of a closed-cycle recirculating cooling system like that of CCP. In addition, CCP will have substantial internal water reuse. Accordingly, while the 0.5 f/s velocity criterion under the CWIS Rule is not an applicable requirement for the Plant, it is nevertheless the case that the maximum through-screen design intake velocity is calculated to be below 0.4 f/s.³⁵

Overall, TCEQ properly determined that the Draft Permit is not subject to the more prescriptive provisions of the CWIS Rule and instead properly reflects application of TCEQ's BPJ. Accordingly, FTGG and TCE have failed to establish a basis for reconsideration of the Draft Permit with respect to its compliance with the federal CWA 316(b) cooling water intake structure requirements.

³² Fact Sheet and Executive Director's Preliminary Decision, at Section X(D)(11), p. 17 (April 18, 2022).

³³ Fact Sheet and Executive Director's Preliminary Decision, at Section X(D)(11), p. 17 (April 18, 2022).

³⁴ Fact Sheet and Executive Director's Preliminary Decision, at Section X(D)(11), p. 17 (April 18, 2022).

³⁵ CCP letter to TCEQ, February 20, 2023.

b. The Draft Permit is protective of aquatic life, in compliance with the Texas Surface Water Quality Standards.

FTGG and TCE next allege that (1) despite the sound modeling already performed by the Executive Director (which is supported further by CCP's own additional modeling), more modeling beyond that required by federal or TCEQ rules is needed to ensure no adverse impacts to aquatic species from salinity gradients, (2) the Draft Permit fails to prevent CCP's discharge from resulting in a dense plume of elevated salinity along the bottom of the Inner Harbor, which FTGG and TCE's witnesses hypothesize may occur at another facility based on very different discharge conditions, (3) the new salinity monitoring requirements added to the Draft Permit and approved by EPA, which would make the renewed Permit even more protective for salinity, are still not good enough, and (4) the past amendments of the Permit have somehow resulted in the water quality impacts being underestimated. However, FTGG and TCE's concerns and assertions are not justified and mischaracterize TCEQ's review of CCP's permit application and the protectiveness of the Draft Permit.

Contrary to FTGG and TCE's first argument, the Executive Director's technical evaluation of the applicable narrative water quality standard for the renewal application was entirely proper, including its use of modeling with respect to mixing and the effluent concentration at the aquatic life mixing zone ("ALMZ"). The use of mathematical models to evaluate water quality conditions at the edge of the ALMZ is long established. The Executive Director evaluated potential salinities at the edge of the aquatic life mixing zone in the Inner Harbor using the jet plume model and a range of salinities, consistent with TCEQ's Procedures to Implement the Texas Surface Water Quality Standards (RG-194) ("Implementation Procedures") and past practice.³⁶ Calculating an average condition of 35.6 ppt and an "extreme case" of 43.9 ppt at the edge of the ALMZ, TCEQ

³⁶ Fact Sheet and Executive Director's Preliminary Decision, at Section X(D)(2)(a), p. 10 (April 18, 2022).

evaluated the narrative surface water quality standard requiring salinity gradients in estuaries to be maintained to support attainable estuarine dependent aquatic life uses.³⁷ Aquatic life use subcategories “recognize the natural variability of aquatic community requirements and local environmental conditions.”³⁸ The attainable estuarine dependent aquatic life use is “Intermediate.”³⁹ TCEQ concluded that the discharge “will not have deleterious effects on aquatic life in the Inner Harbor.”⁴⁰

In addition, TCEQ properly conducted QUAL-TX modeling to evaluate concentrations of oxygen-demanding constituents.⁴¹ “Based on model results, the existing effluent limits of 250 lbs/day BOD5 at Outfall 101 and 20 mg/L BOD5 at Outfall 201, are predicted to be adequate to maintain dissolved oxygen level above the criterion stipulated by the Standards Implementation Team for Corpus Christi Inner Harbor (3.0 mg/L).”⁴² TCEQ’s use of QUAL-TX to model dissolved oxygen is consistent with the Implementation Procedures and past practices, including in much more complex water channels. See **Attachment A, Technical Memorandum of Dr. James Miertschin, p. 3 (September 27, 2024) (“Att. A – JMA Technical Memo”)**.

FTGG and TCE claim that, because the City of Corpus Christi and the Port of Corpus Christi Authority Harbor Island submitted CORMIX modeling to TCEQ with their respective TPDES permit applications to discharge greater volumes of wastewater at different locations closer to or in the Bay, respectively, CCP should be required to do the same. Incredibly, they argue this even though these other applications are for (1) an over 30% greater discharge volume much nearer to the Corpus Christi Bay (primary contact recreation, exceptional aquatic use, and oyster

³⁷ 30 TAC §307.4(g)(3).

³⁸ 30 TAC §307.7.

³⁹ 30 TAC § 307.4(g)(3).

⁴⁰ Letter from TCEQ to EPA, “Response to Specific Objections Concerning Draft Permit,” Attachment A (Oct. 17, 2023); *see* 30 TAC § 307.4(g)(3).

⁴¹ Fact Sheet and Executive Director’s Preliminary Decision, at Section X(D)(9)(a), p. 16 (April 18, 2022).

⁴² Fact Sheet and Executive Director’s Preliminary Decision, at Section X(D)(9)(a), p. 16 (April 18, 2022).

water), and (2) an almost 150% greater volume discharge into the Bay (primary contact recreation, exceptional aquatic use, and oyster water). *See also Att. A – JMA Technical Memo, p. 4-5.* According to FTGG and TCE, this modeling is needed to show the mixing and dispersal of CCP’s discharge. However, submittal of CORMIX is not required by federal or TCEQ regulations. Additionally, FTGG and TCE’s own experts criticize CORMIX as only reliably predicting “near field” mixing close to the discharge point, with additional modeling needed to demonstrate the far field behavior of the discharge.⁴³ In fact, CORMIX is not a reliable tool for evaluating CCP’s discharge. When CCP evaluated this tool, the physical conditions of the discharge and receiving stream as inputs to the model resulted in multiple warnings that the model results would be flawed and unreliable. **Att. A – JMA Technical Memo, p. 3-4.** Instead, the near field mixing was appropriately evaluated by TCEQ’s jet plume model.

Further, while not required by applicable regulations, nor necessary for the TCEQ’s review and conclusion that the Draft Permit is protective of surface water quality standards, CCP conducted CE-QUAL-W2 modeling (i.e., 2-dimensional near and far field modeling) and presented the results to TCEQ. The modeling supports, and does not present any basis to revisit, TCEQ’s own modeling efforts. CCP’s CE-QUAL-W2 model included detailed, site-specific inputs, including tidal data, water quality data, meteorological data, and the Inner Harbor bathymetry. The CE-QUAL-W2 modeling indicates rapid vertical transport of the plume toward the bottom of the channel, followed by longitudinal transport toward the mouth, and strong mixing from top to bottom. The projected long-term average salinity increase is less than 1 ppt near the outfall and roughly a tenth of a ppt at the mouth of the Inner Harbor. Further, while not included

⁴³ FTGG and TCE’s Hearing Request and Request for Reconsideration regarding the Application of Corpus Christi Polymers LLC for Renewal of TPDES Permit No. WQ0005019000 (EPA ID No. TX0134635), Attachment B, p. 2, Attachment C, p. 1 (July 5, 2024).

in the base case CE-QUAL-W2 model, the net effect of ship traffic in this industrial channel is expected to be increased mixing in the water column. **Att. A – JMA Technical Memo, p. 1-2.**

FTGG and TCE’s second allegation imports generalizations and speculation to claim that a dense plume of salinity will persist and travel along the bottom of the channel in a manner that is not protective of aquatic species. However, as explained above and by Dr. James Miertschin in **Attachment A**, the site-specific modeling performed for CCP’s discharge indicates that the discharged salinity will dissipate by mixing with the upper layers as the effluent migrates toward the mouth in the Inner Harbor. **Att. A – JMA Technical Memo, p. 3.** FTGG and TCE, along with their witness statements, base their arguments on a generalized assertion that mixing in the Inner Harbor is very weak. Their witnesses lean on CORMIX modeling for a different applicant’s (i.e. the City of Corpus Christi’s) discharge. However, these generalized assertions and limited utility modeling at other project locations are inconsistent with the site-specific modeling by the Executive Director and CCP. To be clear, CCP has an extraordinary interest in understanding and having confidence about the mixing and the long-term water quality in the Inner Harbor where it not only has its discharge but also its water supply intake. The CCP-specific analyses are the better representation of the proposed discharge and provide a robust record that the discharge will support attainable estuarine dependent aquatic life uses. FTGG and TCE’s generalized concerns do not undermine the Executive Director’s conclusion that the Draft Permit, built on CCP’s application record, is protective of water quality standards.

Furthermore, the permit action at issue is a renewal without amendment and the only changes are TCEQ-initiated and reinforce the protectiveness of the Draft Permit with respect to salinity.⁴⁴ The Executive Director expressly included narrative criteria for salinity and added

⁴⁴ Fact Sheet and Executive Director’s Preliminary Decision, at Section IX, p. 4 (April 18, 2022).

monitoring and reporting requirements for Total Dissolved Solids (“TDS”), sulfates, chlorides, and salinity. EPA reviewed and concurred with these changes to the Draft Permit. Pursuant to the new salinity monitoring and reporting requirements, CCP will be required to report to TCEQ on a semi-annual basis both effluent salinity data and effluent flow.⁴⁵ This data will allow TCEQ to ensure the Plant’s discharge is in compliance with 30 TAC § 307.4(g)(3). TCEQ also collects extensive data with TCEQ’s Surface Water Quality Monitoring Information System, which includes over a dozen monitoring stations. However, FTGG and TCE argue without support that CCP’s permit conditions – here the salinity monitoring requirements – must mirror those that have been added only to one other TPDES permit for a desalination plant, which is discharging larger volumes of wastewater in an area with higher recreational and aquatic life uses. The permit record and modeling indicate that the monitoring and reporting requirements TCEQ already added to the Draft Permit will be sufficient to ensure compliance with water quality standards, and FTGG and TCE have alleged no basis in fact for taking the unusual step of adding even more stringent monitoring requirements.

Finally, FTGG and TCE argue that the assumptions in the application are in error and underestimate the water quality impacts due to the past amendments of the Permit to increase the discharge volume, ignoring the fact that those previous amendment actions underwent proper TCEQ and public review. They further assert, without support or evidence, that the “increased” quantity of water authorized for discharge in prior amendments increases the potential for discharged wastewater to be re-entrained within the intake water, which will result in salinity and other contaminants being concentrated in the intake water. To be clear, this renewal action would not authorize an increased quantity of discharge nor adopt any changes other than TCEQ’s

⁴⁵ Draft Permit, Other Requirements No. 15, p. 18.

adoption of more stringent water quality-based limits for three specific parameters and the addition of monitoring and reporting for TDS, sulfates, chlorides, and salinity, and explicit narrative criteria language for salinity.⁴⁶

TCEQ properly noticed and issued the original permit and the two major amendments that increased the volume of discharge—each of those applications having been subject to public and EPA review. But most importantly, the Executive Director in fact analyzed the proposed discharge in *this* renewal application in full accordance with its rules and Implementation Procedures, worked through its processes for addressing EPA and public comments and objections, and established a Draft Permit that meets all statutory and regulatory requirements, including satisfaction of the narrative water quality criteria and EPA review.

The Draft Permit was prepared in accordance with federal and state regulations to be protective of attainable aquatic life uses and meet all statutory and regulatory requirements. FTGG and TCE have not overcome the integrity of the record and the Executive Director's determinations. Accordingly, the Commission should deny the request for reconsideration, affirm the Executive Director's decision, and issue the Draft Permit.

c. FTGG and TCE's additional arguments for reconsideration were fully addressed by the Executive Director's Response to Public Comment.

The remainder of the issues raised by FTGG and TCE in their July 5, 2024 request for reconsideration were also raised in FTGG's September 15, 2022 request reconsideration. Each of these issues was fully addressed in the Executive Director's May 29, 2024 RTC, and do not provide a basis for reconsideration:

⁴⁶ Fact Sheet and Executive Director's Preliminary Decision, at Section IX, p. 4 (April 18, 2022) (describing changes to Draft Permit, including decreases in effluent limits for hexachlorobenzene, benzo(*a*)anthracene, and benzo(*a*)pyrene).

- Whether the Plant’s discharge will worsen historical environmental burdens upon communities near Refinery Row is addressed in RTC Response 15.
- Whether the proposed discharge will cause or contribute to Segment No. 2484’s pre-existing impairment for copper is addressed in RTC Responses 10 and 57.
- Whether other contaminants will be present at harmful levels is addressed in RTC Response 10.
- Whether biomonitoring is sufficient is addressed in RTC Responses 11 and 27.

IV. Conclusion and Prayer

For the foregoing reasons, CCP respectfully requests that the Commission deny the requests for contested case hearing, deny the requests for reconsideration, adopt the Executive Director’s Response to Public Comment, approve CCP’s renewal application, and issue TPDES Permit No. WQ0005019000 as recommended by the Executive Director.

Dated: September 27, 2024

Respectfully Submitted,



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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing Corpus Christi Polymers LLC's Response to Requests for Contested Case Hearing and Reconsideration has been e-filed and served on the following counsel/persons by regular U.S. mail on this 27th day of September 2024.

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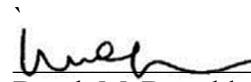
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TCEQ DOCKET NO. 2024-1227-IWD

APPLICATION BY	§	BEFORE THE TEXAS COMMISSION
CORPUS CHRISTI POLYMERS	§	
LLC FOR RENEWAL TPDES	§	ON
PERMIT NO. WQ0005019000	§	
	§	ENVIRONMENTAL QUALITY

**CORPUS CHRISTI POLYMERS LLC'S RESPONSE
TO REQUESTS FOR CONTESTED CASE HEARING AND RECONSIDERATION**

Attachment A

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TECHNICAL MEMORANDUM

TO: Corpus Christi Polymers File

FROM: James Miertschin, PE, PhD

DATE: 27 September 2024

SUBJECT: SALINITY AND MODELING REGARDING DESALINATION
DISCHARGE PLUME FOR TPDES PERMIT NO. WQ0005019000



27 Sep 2024

INTRODUCTION

Corpus Christi Polymers (CCP) is authorized to discharge from its chemical manufacturing facility on the Corpus Christi Inner Harbor. The facility includes a desalination process to generate treated water for the manufacturing process and other industrial facilities, and the reverse osmosis reject is a component that is discharged via the facility outfall. Water quality models were applied to evaluate effects of the proposed effluent discharge. The facility has an existing TPDES permit (WQ0005019000) issued by the Texas Commission on Environmental Quality (TCEQ). The original permit was issued in 2014, and there have been permit amendments since that time. James Miertschin & Associates (JMA) has provided consulting and modeling support to CCP and its predecessors with respect to the wastewater discharge. A permit renewal is now pending before the TCEQ.

1. CCP's comprehensive, site-specific modeling indicates strong mixing in the Inner Harbor

For the CCP facility, JMA conducted comprehensive modeling with the CE-QUAL-W2 water quality model, which demonstrates the near and far field activity of CCP's discharge. Modeling results, summarized below, were provided to the Executive Director during the Executive Director's review of the application in a Technical Memorandum dated April 6, 2023. These modeling results reinforce the results of the Executive Director's own modeling.

The 2-dimensional CE-QUAL-W2 water quality model was successfully calibrated and applied for simulation of salinity within the Corpus Christi Inner Harbor ship channel segment. As a 2-dimensional model, simulation results are provided for the longitudinal direction (distance) and the vertical direction (depth), using 0.5 m layered segments. The longitudinal segmentation of 100 m is illustrated in Figure 1, with an aerial photo basemap, showing key segments where historical water quality monitoring stations were located.



Figure 1: Longitudinal Segmentation of Inner Harbor, Showing Monitoring Locations

Two discharge flow scenarios were modeled, including a discharge flow of 33.72 MGD, which is close to, and a reasonable surrogate for, the 38.5 MGD outfall flow permitted in CCP's TPDES permit. Under that flow scenario, a Base Case Mixing scenario utilized all of the coefficients and variables that led to the optimum salinity calibration for the model. The Base Case results are appropriate to assess impacts in the channel.¹

As Table 1 of the April 2023 Technical Memorandum indicates in greater detail, the CCP discharge is projected to result in a long-term average salinity increase of typically less than 1.0 ppt near the outfall, with smaller increases evident downstream. At the mouth of the Inner Harbor, the projected long-term average salinity increase is roughly a tenth of a part-per-thousand. It should be recognized that the Inner Harbor, TCEQ Seg. 2484, is designated as Intermediate aquatic life use habitat with a noncontact recreation use. The Inner Harbor is a security zone with restricted access.

The projected salinity effects are far below the observed range of salinity fluctuation of over 20 ppt in the Inner Harbor under ambient conditions.

The CE-QUAL-W2 model represents the mixing of the discharged effluent within the Inner Harbor. The mixing is evident in the output results, which include concentrations for each of the vertical layers and longitudinal segments. Based on detailed, site-specific inputs (including tidal data, water quality data, meteorological data, and the Inner Harbor bathymetry), the model indicates rapid vertical transport of the effluent toward the bottom of the channel, followed by longitudinal transport toward the mouth, and strong mixing from top to bottom. In addition to the Base Case Mixing scenario, ship traffic will tend to mix the contents of the channel laterally and vertically in the water column.

¹ An Enhanced Mixing Case was also developed to better represent the effects of ship and barge traffic in the channel and evaluate increased transport of constituents toward shallower layers in the model.

2. Because there is sufficient mixing, no layer of impaired dissolved oxygen is expected. Site-specific data supports TCEQ's use of QUAL-TX per the Implementation Procedures

QUAL-TX was appropriate for setting a BOD limit for the CCP discharge. The site-specific modeling supports the conclusion that there is mixing in the Inner Harbor sufficient to avoid a dense bottom plume or any basis for divergence from well-established TCEQ practices.

The effluent will have higher salinity than the ambient seawater, because ambient salt will be rejected in the desalination treatment and subsequently discharged. While modeling indicates that the discharged effluent will move toward the bottom of the ship channel near the discharge due to its higher density, the discharged salinity will dissipate by mixing with the upper layers as the effluent migrates toward the mouth in the Inner Harbor. By the time that it reaches the mouth, approximately 11.1 km from the outfall, the anticipated change in salinity is less than one-tenth of a part-per-thousand, analyzed as a vertical average concentration, compared to historical concentrations.

TCEQ's application of the QUAL-TX model to the Inner Harbor is consistent with agency practice and guidance. The Procedures to Implement the Texas Surface Water Quality Standards (RG-194) ("Implementation Procedures") explain that an uncalibrated QUAL-TX model may be applied to tidal water bodies. This is exactly what the agency did with respect to the Inner Harbor, and it is consistent with agency practice on other similar waterbodies such as the Houston Ship Channel. While there are simplifications with application of the one-dimensional water quality model, it has been proven by the agency to adequately simulate steady state effects on dissolved oxygen under critical conditions.

With respect to the potential for dissolved oxygen reduction, it is anticipated that the CCP effluent will have only a very limited concentration of oxygen-demanding constituents. The effluent will be comprised largely of constituents from ambient seawater, rejected during the desalination treatment process. As a general observation, the ambient seawater displays only a very small oxygen demand, as demonstrated by low measurements of BOD₅ (biochemical oxygen demand, five day). TCEQ captures data through its Surface Water Quality Monitoring (SWQM) Program with 13 monitoring stations taking data at multiple depths in the Inner Harbor, and the historical average BOD₅ is approximately 3.0 mg/L. Therefore, given the low oxygen demand and the hydrodynamic mixing within the ship channel, no layer of impaired dissolved oxygen is expected.

3. CORMIX modeling would not provide an accurate representation of CCP's discharge.

CORMIX is commonly used to assess effluent movement from an outfall diffuser. However, CORMIX is not appropriate for every conceivable outfall location. The CCP discharge outfall does not have a diffuser; instead, it is engineered as an open outfall that releases effluent near the surface layer. In the vicinity of CCP, the channel is approximately 11.07 m deep.

JMA evaluated for CCP whether CORMIX modeling would provide meaningful results. CORMIX simulations were compromised by the schematization of the physical system, most importantly the fact that the facility will utilize a surface discharge. The physical conditions of the discharge and receiving stream as inputs to the model resulted in multiple warnings that the model results would be flawed and unreliable. The model could not be used to predict effluent dilution at any regulatory mixing zone, since simulations were terminated at the conclusion of the near-field.

For CCP, TCEQ staff applied their Jet Plume Model, as explained in the Implementation Procedures within the chapter on mixing zones. This Jet Plume Model provided the anticipated percentages of effluent at the edge of the Aquatic Life Mixing Zone (ALMZ). TCEQ's application of the Jet Plume Model was completely appropriate and consistent with the TCEQ's Implementation Procedures.

4. TCEQ's modeled effluent concentration at the ALMZ increases the stringency of the CCP TPDES Permit

The water quality modeling work conducted by TCEQ staff was proper and consistent with their standard procedures. TCEQ staff applied their Jet Plume Model, as explained in the Implementation Procedures within the chapter on mixing zones. This Jet Plume Model provided the anticipated percentages of effluent at the edge of the ALMZ. TCEQ's results from application of the Jet Plume model resulted in the assignment of a 13% effluent fraction at the edge of the ALMZ; that is, the proportion of effluent at the edge of the ALMZ is set higher than TCEQ's default value. Accordingly, the TEXTOX model was applied to determine stringent limits for the allowable constituent effluent concentrations related to aquatic toxicity based on the site-specific modeling.

5. Modeling conducted for other desalination plant discharges in or near Corpus Christi Bay is not representative of CCP's discharge

The proposed Harbor Island plant near Port Aransas and the proposed City of Corpus Christi plant near the mouth of the Inner Harbor are different than the CCP plant, and it is inappropriate to apply generalities to all.

The Harbor Island plant will be located near the main ship channel, basically across the channel from Port Aransas, and the discharge is positioned within Corpus Christi Bay. The designation for Corpus Christi Bay is exceptional quality aquatic habitat and oyster waters, and as such, it has a 5 mg/L dissolved oxygen criterion. The TPDES Permit authorizes 95.6 MGD daily average flow of effluent.

The proposed City of Corpus Christi plant will be located near the mouth of the Inner Harbor, close to the main body of Corpus Christi Bay. The TCEQ has classified the Inner Harbor as intermediate quality aquatic habitat, with a 3 mg/L dissolved oxygen criterion. The TPDES Permit for the City of Corpus Christi plant is proposed to authorize 51 MGD daily average flow of effluent. Thus, the agency recognizes that the Inner Harbor has a much more limited fishery than the main bay segment.

None of the modeling efforts for the Harbor Island facility or the City of Corpus desalination facility is representative of the unique conditions of the CCP discharge.

CCP is authorized to discharge 38.5 MGD at the upper end of the Inner Harbor, approximately seven miles from the Bay. CCP therefore discharges to an intermediate aquatic life habitat many miles away from any higher use designation. The CE-QUAL-W2 site-specific modeling best represents the CCP discharge, and its outputs are consistent with conditions that support TCEQ's use of its long-standing practices, such as use of the Jet Plume model and QUAL-TX in evaluating the CCP renewal application.