

TCEQ DOCKET NO. 2019-1156-IWD

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| IN THE MATTER OF THE | § | TEXAS COMMISSION |
| APPLICATION OF PORT OF | § | |
| CORPUS CHRISTI AUTHORITY OF | § | ON |
| NUECES COUNTY FOR TPDES | § | |
| PERMIT NO. WQ0005253000 | § | ENVIRONMENTAL QUALITY |

PROTESTANTS’ MOTION FOR REHEARING

TO THE HONORABLE COMMISSIONERS:

Port Aransas Conservancy (PAC), James and Tammy King, Sam Steves, and Edward Steves (collectively, Protestants) file this their joint motion for rehearing to the Order issued by the Texas Commission on Environmental Quality (Commission or TCEQ) on December 20, 2022, granting the application by the Port of Corpus Christi Authority of Nueces County (Port). Pursuant to Tex. Gov’t Code § 2001.146(a), a motion for rehearing must be filed no later than the 25th day after the date the decision or order that is the subject of the motion is signed. Accordingly, this motion is timely filed.

I. SUMMARY

The Port seeks a permit to discharge up to 110 million gallons per day of effluent into one of the most sensitive waterbodies in Texas. This effluent will have double the salinity of ambient seawater. This would be the first such facility in Texas and the discharge would occur adjacent to one of only five major passes along the Texas coast, which are disproportionately ecologically valuable because they are the conduits between the Gulf of Mexico and coastal estuaries.

After a 5-day hearing on the Port’s Original Application in 2020 (the Initial Proceeding), the Administrative Law Judges (ALJs) recommended denial; the Commission remanded, disagreeing with the judges and the uncontroverted evidence and ordering that a “no significant lethality” legal standard be applied on remand, and additional evidence be taken on referred issues. On remand, the Port entirely ignored the scope of the Commission’s Remand Order and submitted a new application with a new discharge location. This was improper, as the Commission’s Remand Order defined and limited this proceeding on remand, as discussed in more detail further below.

Remarkably, the 108-page PFD issued by the ALJs did not explicitly state whether the Port carried its burden to prove there would be “no *significant* mortality” to organisms passing through the Zone of Initial Dilution (ZID). Instead, the ALJs concluded that a salinity limit in the permit would suffice in helping the applicant meet its burden of proof. Namely, the ALJs stated that the preponderance of the evidence *does not* demonstrate the Revised Draft Permit would ensure that salinity gradients in the estuary would “be maintained to support attainable estuarine dependent aquatic life uses” or that careful consideration was “given to all activities that may detrimentally affect salinity gradients.”¹ But, rather than recommending denial, the ALJs simply recommended a permit limit on salinity.

So, instead of analyzing the evidence and determining that the Port had affirmatively proven there would be no significant mortality to organisms passing through the ZID, the ALJs simply concluded that adding some permit limitations would remedy any potential problems. The Commission agreed with the ALJs and added additional requirements in the Revised Draft Permit approved by the Commission’s Order. However the additional requirements alone are insufficient to make the Revised Draft Permit protective of the marine environment and the living things that depend on that environment. The preponderance of the evidence does not demonstrate that the additional requirements will remedy the numerous deficiencies in the Port’s New Application or the Revised Draft Permit. The Revised Draft Permit should not be issued, even with the additional requirements, and the Commission’s Order approving the Revised Draft Permit is based upon many substantive and procedural errors that make it indefensible and improperly issued.

II. DISCUSSION

There are many procedural and substantive errors underlying the Commission’s Order in this docket. Those errors are discussed below.

A. **Error No. 1: The Commission Directed the ALJs to Apply, and Did Itself Apply, an Incorrect Legal Standard for Lethality.**

When it remanded this case for a second hearing, the Commission instructed the ALJs to apply the “no significant lethality” standard found in 30 Texas Administrative Code § 307.6(e)(1).

¹ PFD at 89 (quoting 30 Tex. Admin. Code § 307.4(g)(3)). Unless otherwise noted, all citations to “PFD” are to the final proposal for decision issued by the ALJs on June 20, 2022, after the Commission’s remand.

But, as the ALJs wrote in the original PFD, that section governs “total toxicity” or “standards related to toxicity testing of effluent.”² The correct standard is found in sections 307.6(c)(6) and 307.8(b)(2): “no lethality to aquatic organisms that move through a ZID.” In 2020, every witness to testify agreed that “no lethality” was the correct standard. That included the Port’s expert witness, Lial Tischler:

Q: Is it your understanding that the rules of TCEQ require no lethality even at the zone of initial dilution?

A: Yes, you mean within the zone of initial dilution?

Q: Yes.

A: The answer is yes.³

And the ED’s witnesses, such as Dr. Wallace:

Q: The regulations, TCEQ regulations, actually dictate that for this discharge, there has to be no death anywhere, even in the zone of initial dilution, isn't that right?

A: Actually, that’s for all permits, ma’am.

Q: So is that a “yes,” that there can be no death?

A: Yes, but it applies to all permits.

Q: Okay. And in order to complete your antidegradation review in the manner that you did, you had to conclude that this discharge will cause no death, right?

A: That's what I concluded, yes.

Q: Even in the zone of initial dilution?

A: Yes.⁴

....

² Feb. 5, 2021 PFD at 9.

³ Tr. Vol. 3 at 245.

⁴ Tr. Vol. 5 at 178:16-179:5.

Q: In this antidegradation review, was there any considera- -- besides human health concerns, was there any concern for any effects on oysters themselves, just as a marine creature?

A: They were considered as part of the exceptional aquatic life use, yes.

Q: Okay. So they're not supposed to die as a result of this discharge, either, are they?

A: No.⁵

The ALJs originally applied the correct legal standard and the ALJs' original recommendation for denial was based on the failure by the Port to meet that correct legal standard. The permit should have been denied. Instead, the Commission committed error by failing to deny the permit after the first hearing and applying an incorrect legal standard on remand, and then issuing the Order approving the permit.

B. Error No. 2: The Commission Failed to Evaluate This Permit Application as for a Major Facility.

In issuing its Order, the Commission relied on the ED's evaluation of the permit which treated the proposed permit as being for a minor discharge. This is clearly erroneous. The United States Environmental Protection Agency (EPA) determined and advised the ED that the permit must be treated as a major discharge under federal rules that apply to TCEQ permitting.

One of the first steps in the TCEQ's review process is to determine whether a permit is "Major" or "Minor." This should be relatively straightforward but, according to the EPA, the ED miscalculated the points assessed under the EPA Permit Rating Worksheet for determining what is a Major permit by at least 35 points,⁶ and incorrectly classified the discharge as Minor when it is actually Major.

Whether an application is Major or Minor directly impacts 1) the type of review that TCEQ must conduct as part of its application review process,⁷ and 2) whether the TCEQ Draft Permit

⁵ Tr. Vol. 5 at 170-171.

⁶ Just by way of example, the ED failed to assign 10 points for a facility located in an estuary in the National Estuary Protection Program. Ex. ED-SG-8 (TPDES Permit Major/Minor Rating Work Sheet). That is a verifiable fact that is not in dispute and allows for no discretion.

⁷ Remand Tr. Vol. 9 at 2260:21-24 (Ms. Gibson testifying that "discharges of processed wastewater undergo a slightly heightened review with the water quality assessment and made sure there are additional permitting requirements.").

must be provided to EPA for its review and its right to object to terms or issuance. EPA’s stated concerns are not limited solely to the Major/Minor determination. EPA also raised concerns regarding total dissolved solids (TDS), sulfates, and chlorides, the Tier 2 Antidegradation Review process, and WET testing requirements—each of which are clearly relevant to one or more referred issues.⁸

The definitions of Major and Minor come from federal regulations, developed and overseen by EPA, and the evaluation is made by the ED using an EPA-promulgated worksheet. The EPA objection letter states that the ED’s permit review fell short of compliance with applicable federal regulations and the Draft Permit would “not be a validly issued NPDES permit” if issued without addressing all of EPA’s concerns. Commission staff have admitted to knowing that EPA is not satisfied with their response, but they simply do not care.⁹

EPA has also told TCEQ that going forward all desalination facilities should be classified as Major facilities.¹⁰ Yet the TCEQ has simply ignored that directive.¹¹ In choosing not to classify the desalination facility as “major,” TCEQ has failed to conduct a “heightened review with the water quality assessment” and failed to include “additional permitting requirements” that apply to major facilities.¹² This is error and renders the permit decision invalid and unsupported. In open meetings, the Commissioners have appeared to suggest that EPA acted in a dilatory manner by raising this concern late. To be clear, EPA raised the issue promptly after it was made aware of the ED’s mischaracterization—the failure was not of the EPA, but of the ED in failing to notify the EPA of the application and the “minor facility” characterization the ED was giving the application. There is nothing to suggest EPA acted in a dilatory fashion; to the contrary, it acted properly to notify the ED of its objections as quickly as it became aware of the issue.

C. Error No. 3: The Modeling Does Not Comply with Applicable Regulations nor Ensure the Revised Draft Permit is Protective of Water Quality, Utilizing Accurate Inputs.

The evidence does not support the issuance of the permit. The modeling and the data underlying it are inaccurate and, thus, as a matter of law they are unreliable. A permit decision is

⁸ Ex. PAC 89-R.

⁹ Remand Tr. Vol. 9 at 2233:16-23, 2254 - 2258.

¹⁰ Remand Tr. Vol. 9 at 2258:6-11.

¹¹ Remand Tr. Vol. 9 at 2259:8-23.

¹² See Remand Tr. Vol. 9 at 2260.

only as good as the evidence used to support it. Yet in this case, the Commission has simply ignored significant factual inaccuracies in the evidence the Commission relies on to support issuance of the permit. This is error.

Channel Depth: The Port’s Original Application identified the channel depth at the discharge location as 63 feet even though the actual depth was close to 90 feet.¹³ The “depth at discharge is a *required input* for the CORMIX model and is a variable that influences near-field mixing predictions.”¹⁴ Despite this clear error, an error that the Port identified months before the Contested Case Hearing began, the Port did not correct its application or use the correct depth in its modeling. Rather than denying the permit for such failure to correct the obvious and significant error, the Commission remanded the matter to allow the Port to correct that specific error. Yet, on remand, the Port made the exact same type of error again.

The Port’s bathymetry shows that the depth at the new location of the discharge is actually 65 feet.¹⁵ But the Port and the ED used 90 feet as the CORMIX input for water depth.¹⁶ No one contends that 90 feet is the actual depth at that location. Even the ALJs concede this fact.¹⁷ To be clear “CORMIX’s conservative module requires the modeler to select *a single value*” for depth of discharge.”¹⁸ This single value requirement does not allow the applicant to ignore the actual depth where the discharge will take place for the use of any depth that happens to occur within the entire waterbody at a location arbitrarily selected by the modeler. The Commission remanded for accurate information on the depth of the channel at the location of the discharge yet the Port has arbitrarily chosen a depth—one that is, as conceded by the ALJs, not the depth at the actual location of the discharge. Moreover, 90 feet is not even the deepest part of the channel in that area, as the Port’s own bathymetry map shows a depth of 95 feet in the same area. Yet the Port did not use the actual depth at the location of the discharge, nor the deepest depth in the area, but simply chose an

¹³ “While the CORMIX model is not a perfect representation of actual conditions, the results of the model are only as reliable as the accuracy of its inputs, with recognition of its limitations. In this case there is really no dispute that the inputs into the CORMIX model for channel bathymetry are not accurate. The evidence is conclusive that the depth of the channel at the outfall location is close to 90 feet, but the modeling used an input of 63 feet.” Feb. 5, 2021 Proposal for Decision, at 30.

¹⁴ PFD at 16 (emphasis added).

¹⁵ PFD at 36.

¹⁶ PFD at 17.

¹⁷ PFD at 17.

¹⁸ PFD at 36.

arbitrary number to include in the application. If the Commission remanded before for this same type of error, it must still recognize that this evidence cannot be relied upon to support permit issuance.

Ambient Velocity and The Eddy: The ALJs noted that in the Initial Proceeding “it was undisputed” that an eddy occurred near the outfall location.¹⁹ The Port’s witnesses – and its lawyers – repeatedly told the ED, the ALJs, and the Commissioners that there was an eddy, as an affirmative fact.²⁰ But they did not stop there – they relied on that eddy for the hypothesis (never tested by the Port’s many experts) on which they expected everyone to rely in granting a permit: “our expert testimony provided this in the record – that that eddy and that localized increase in depth enhances the mixing, and makes, makes existing modeling more conservative.”²¹ On remand, the Port now says it has disproven the existence of an eddy.²² But that is not what the ALJs determined. The ALJs concluded that it was unclear whether there was an eddy and what its impacts might be.²³ The ALJs noted that an eddy “could enhance mixing, but alternatively, [] it could trap organisms and lengthen exposure times.”²⁴ Despite the ALJs’ acknowledgment of uncertainty, there is no attempt in the record to reconcile this uncertainty with the finding that exposure time for any organism will be no more than minutes. This uncertainty is fatal to the permit.

Bathymetry, Critical Conditions, and Margin of Error: The ALJs noted that the ED’s critical conditions are not the worst-case scenario for salinity, and then concede that this “calls into question whether the critical conditions derived from the modeling are protective of aquatic life with respect to salinity.”²⁵ In other words, for this first-of-its-kind facility, where salinity is the constituent of concern, we know the ED ignored the modeling results specifically for salinity in setting the Permit Limit. That does not create merely a “question.” If the modeling cannot provide the worst-case scenario for salinity, or if the ED cannot or will not correctly interpret the modeling,

¹⁹ PFD at 38.

²⁰ Certified Transcription May 19, 2021 Commission open meeting at 46:8-14.

²¹ *Id.*

²² PFD at 26.

²³ PFD at 38-39.

²⁴ *Id.*

²⁵ PFD at 40.

the result is the same: the modeling, either by design or because of improper utilization, **is not protective of water quality**. But it gets worse, because this problem is compounded by two other findings by the ALJs. The PFD states that the site-specific bathymetry – the outcroppings (the “cove”) and the 90’ hole – “introduce *some uncertainty* into the CORMIX modeling results.”²⁶ Said more plainly, when CORMIX predicts 14.6% effluent at the edge of the ZID, we have no idea how close that is to the real world mixing that will occur. Does “some uncertainty” mean that maybe, under some conditions, it will really be 20%? Or 40%? Or 60%?

Finally, CORMIX has a 50% margin of error, meaning that when the modeling predicts 14.6% effluent at the edge of the ZID, in reality that may end up being as high as 21.9%.²⁷ Perhaps rarely. Perhaps all day, every day. Unfortunately, there is no way to know whether the discharge actually meets the effluent percentage limits at the mixing zone boundaries. As the ALJs have already pointed out, those effluent percentage limits are solely based on the CORMIX model outputs, not on actual measurements of effluent at the mixing zone boundaries. Despite knowing that the effluent percentage limits can never actually be measured, the ED argues that the permit “does not authorize the exceedance of the modeled effluent percentages when they are used to set permit limits.”²⁸ In other words, when the Port’s desalination facility discharges up to 110 million gallons a day of hyper-saline brine into the Corpus Christi Ship Channel, despite the inability to actually measure effluent percentages at the mixing zone boundaries, all these modeling uncertainties, and the 50% CORMIX margin of error, the Port and the ED would have you believe that there will not be 21.9% effluent at the edge of the ZID, simply because the Revised Draft Permit says so. The Revised Draft Permit is unsupported by the evidentiary record.

D. Error No. 4: The Executive Director’s Anti-Degradation Review Was Not Accurate or Reliable.

The Tier 1 antidegradation review requires that “[e]xisting uses and water quality sufficient to protect those existing uses must be maintained.”²⁹ The Tier 2 antidegradation review requires that (1) water quality not be lowered by more than a de minimis amount;³⁰ (2) salinity gradients in

²⁶ PFD at 39.

²⁷ PFD at 34.

²⁸ PFD at 40.

²⁹ PFD 41; 30 Tex. Admin. Code § 307.5(b)(1).

³⁰ PFD 41; 30 Tex. Admin. Code § 307.5(b)(2).

estuaries be maintained to support attainable estuarine dependent aquatic life uses; and (3) careful consideration be given to all activities that may detrimentally affect salinity gradients.³¹

This case was remanded so the ALJs could take additional evidence on whether the ED's antidegradation review *was* accurate. No such evidence was presented. Instead, the ED tossed its original antidegradation review, replaced the anti-degradation reviewer, and conducted a new and different review of a new application.³² One step in this new review process "was to assign critical conditions for the outfall location" – ironically, these are the same critical conditions that the PFD states are not the worst-case scenario for salinity.³³

The ED's new antidegradation review was performed by Mr. Schaefer, an aquatic scientist at TCEQ, and the Team Leader of the Standards Implementation Team.³⁴ Despite his experience and position, Mr. Schaefer could not even define "salinity gradient" or "*de minimis*"—two key terms essential to the antidegradation review under the applicable law. He could provide no explanation whatsoever, including his own plain-English definition of the standard that he is tasked with enforcing. When asked in the comfort of his own office, "What is the definition of *de minimis*?" he replied, "*De minimis* is not defined by the Texas Water Code, the Texas Administrative Code or the Implementation Procedures (IPs)."³⁵ This non-answer implied what he more explicitly stated live at hearing when he was asked, "Do you have a definition of *de minimis* that you used in your review?" He answered, "No. I don't."³⁶ He was simply unable to define the very standard that, in his expert opinion, the Port had clearly met.

As to the definition of "salinity gradient," his testimony is slightly less stark. Although he had earlier been deposed regarding his definition of this term, he offered no prefiled direct testimony regarding it. In hearing, he said, "I don't know the precise definition, no, sir."³⁷ He also acknowledged not knowing if the time over which the change in salinity occurs was a component of the definition.³⁸ If one does not know whether a gradient is measured over time or is measured

³¹ PFD at 41; 30 Tex. Admin. Code § 307.4(g)(3).

³² PFD at 53.

³³ PFD at 40, 42.

³⁴ PFD at 42.

³⁵ Ex. ED-PS-1-Remand, at 24:28-30.

³⁶ Remand Tr. Vol. 9, at 2384:9-11.

³⁷ Remand Tr. Vol. 9, at 2349:21.

³⁸ Remand Tr. Vol. 9, at 2350:5-6.

over distance, it is a stretch to find that that person has even a general understanding of the “gradient” concept embodied in the Water Quality Standards. Mr. Schaefer’s counsel did not explore his understanding of either term in re-direct examination.

The ALJs, nonetheless, credit Mr. Schaefer with “a general understanding of the concepts.”³⁹ That is like saying that someone with a general understanding of electricity could rewire your house. Or someone with a general understanding of dentistry could give you a root canal. The ALJs’ disregard of Mr. Schaefer’s lack of knowledge or understanding of the essential elements of an antidegradation review is shocking.

Moreover, “he indicated that by following the IPs’ guidance, he can ensure no more than de minimis degradation.”⁴⁰ Then he described the steps he took to follow the IPs. In other words, he has a recipe – and he followed it. Mr. Schaefer is worth quoting at some length because his testimony demonstrates the ad hoc nature of his approach and that, contrary to the PFD,⁴¹ he *did not* consider the only existing actual testing data to show the impacts of salinity on aquatic life— Dr. Nielsen’s data. Perhaps he used Dr. Wallace’s gazing ball and could see what would come out in the future merits hearing:

- A. Okay. So like I said, it started out looking at the Texas Water Development Board paper and that *gave me an idea*, okay, so what’s a tolerance for organisms that are going to be found in this area, red drum, which everyone has been talking about, stood out, and looking at the – *the optimal range that was given in that of 20 to 35 ppt*, I’ve calculated the effluent percentage at *the edge of the mixing zone*. It was within that – that level, and then, of course, looking at the SUNTANS modeling, the WET data results, and then the additional information that this hearing has brought out has kind of fallen in line like the Nielsen – *of course, I didn’t use that in my initial review* but the Nielsen data on the red drum, that sort of falls into place with the water development board results and kind of gives me more assurance that *at the edge of that aquatic life mixing zone, we’re going to be within that range of tolerance for those, the red drum*. Looking for areas within the ZID, within the mixing zone, that’s where the whole effluent toxicity data comes into play.

³⁹ PFD at 46.

⁴⁰ PFD at 47. The IPs do not contain the terms “de minimis” or “salinity gradient.” The IPs have never before been used to evaluate a permit for discharge from a marine desalination facility.

⁴¹ PFD at 47 (listing consideration of Dr. Nielsen’s data as part of Mr. Schaefer’s “process” without citation to the record).

Q. Understood. So at the edge of the aquatic life mixing zone, I believe that you used an 8.9 percent effluent – an effluent –

A. Percentage?

Q. Percentage. Thank you, sir. Is that accurate?

A. That is correct.

Q. And where did you get that number from?

A. From the critical conditions memo.⁴²

So his “process” was actually as follows: Mr. Schaefer looked at the TWDB paper and found that it says the “optimal range” of salinity for red drum is 20-35 ppt. Except that is incorrect. The TWDB paper does not use the word “optimal” with respect to red drum at all. It states that red drum survived from hatching to two weeks and grew equally well in 15-30 ppt water.⁴³ And Figure 24 provides the range of salinity that will result in “no salinity related mortality during the pelagic larval stage.” For red drum the upper limit is not 35; it is 33 ppt.⁴⁴ So, one of his initial considerations was simply wrong.

Mr. Schaefer says that he then calculated the effluent at the edge of the mixing zone at 8.9% effluent. He did no such calculation – that 8.9% is the CORMIX result produced by Ms. Cunningham and the Port. He testified that if those results were not accurate, he would want to “revisit” his antidegradation review.⁴⁵ Well, as the PFD states, those results are in fact unreliable. Of course, Mr. Schaefer could not have known that – or accounted for the inability to model for the site-specific bathymetry, the failure to use the worst case scenario in developing the critical conditions, and the CORMIX margin of error – when he performed his review. And he does not claim he did. He simply accepted the CORMIX results as gospel.

Next Mr. Schaefer “looked” at the SUNTANS modeling – which was prepared for the first hearing and not redone with the new application information. This is the model that capped each cell’s salinity increase at 1% above ambient cell salinity, that schematized the ship channel very differently from the actual geometry of the channel, and for which “it is not possible to develop

⁴² Remand Tr. Vol. 9 at 2384:20 - 2385:24 (emphasis added).

⁴³ EX PAC-85R at 55 (Bates Port Authority 041392).

⁴⁴ EX PAC-85R at Fig. 24 (Bates Port Authority 041408).

⁴⁵ Remand Tr. Vol. 9 at 2386:3-6.

quantitative metrics for assessing the SUNTANS model’s performance,”⁴⁶ i.e., to validate its results quantitatively. Dr. Furnans formed the qualitative opinion that the SUNTANS model “may over predict actual bay salinity,”⁴⁷ but this is the same authority who was willing to opine on salt-flux ratios on the basis of another model that has been proven unreliable. The input used for calculating the salt-mass flux through the diffuser was not “potentially” wrong; it was verifiably wrong by a factor of 10. This is a fact. Clearly, Dr. Furnans’ failure to use the correct data in his analyses – and the failure of the Port or of Dr. Furnans’ colleagues to have used a sound QA/QC check of the data – calls into question Mr. Schaefer’s judgment in trusting the “integrity” of Dr. Furnans’ salt-flux analysis.

Mr. Schaefer also took as relevant and weighty Dr. Furnans’ aforementioned salt-flux analysis. To date, no one has explained how this analysis, even had it been executed correctly, leads to findings regarding salinity gradients or changes in salinity gradients. The PFD diverts attention from the salt-flux-analysis on which Mr. Schaefer relied by shifting the burden from the Port and the agency to Protestants, stating: “no one questioned Dr. Furnans or any other witness about it. Nor did PAC offer other exhibits explaining this error or offering a different analysis.”⁴⁸ But this discussion wholly misses the point. The Port’s error is clearly in the evidentiary record and means that the salt flux data was completely unreliable for any purpose.

Further, the ALJs opined, with no record support, that such an increase “does not seem” to result in degradation and “would not necessarily raise the salinity level of the receiving water to an alarming level.”⁴⁹ Neither of these is the correct legal standard the Port is required to meet. Lay persons guessing about degradation and the mere possibility that salinity levels would not be raised above “alarming levels” is not sufficient to demonstrate that no degradation has occurred.

The PFD asserts that it was within Mr. Schaefer’s “discretion to *heavily discount* the outlier CORMIX runs” offered by PAC.⁵⁰ But that is not what Mr. Schaefer testified to. When asked

⁴⁶ Ex. APP-JF-13 and Ex. APP-JF-1, p.15:7-8. Additionally, there is only one reference point against which to judge the SUNTANS model’s ability to reflect salinity changes over time, and that reference point is not in the Bay but, rather, is in Aransas Pass, almost in the Gulf of Mexico. See, Ex. APP-JF-13, Figure 1 and related text.

⁴⁷ Ex. APP-JF-1, p. 15:10-11.

⁴⁸ PFD at 51.

⁴⁹ PFD at 51.

⁵⁰ PFD at 48.

whether he considered the salinity concentrations projected by PAC's witnesses, Socolofsky and Osting, he stated unequivocally that he did not consider them and discounted them "to zero."⁵¹

The PFD asserts for a second time that Mr. Schaefer "considered Dr. Nielsen's study" in his weight of the evidence review.⁵² In fact he testified at the merits hearing that he *did no such thing*: "and then the additional information that this hearing has brought out has kind of fallen in line like the Nielsen – of course, I didn't use that in my initial review."⁵³ It appears the PFD is approving of a practice where ED witnesses attend the hearing and then backfill their deficient processes and reviews with new information they cherry pick from the merits hearing.

Finally, the PFD states that the unwritten process used by Mr. Schaefer was not "too vague" because he began to explain it but "was cut off . . . the questioning went in a different direction."⁵⁴ The PFD concludes that Mr. Schaefer "did not get the opportunity to finish that discussion."⁵⁵ This is remarkable. The ALJs control the proceeding, not the parties. Again, the ALJs have shifted the responsibility to PAC for things that the law and the process do not place upon PAC. Once Mr. Schaefer's review was shown lacking, it was the ED's job to defend the antidegradation review and weight of the evidence "process." After Mr. Schaefer was "cut off" during cross examination, the ED's counsel took him on re-direct and elected to not create any record at all of what constitutes an adequate weight of the evidence review.⁵⁶

The anti-degradation review was no real review at all, and the decision to rubberstamp it as adequate reflects a desire to simply push this permit along rather than ensure that it satisfied all applicable standards and will be protective of aquatic life. Without reliable evidence and a defensible anti-degradation analysis, the Revised Draft Permit has not been shown to satisfy the applicable standards.

⁵¹ Remand Tr. Vol. 9 at 2361:2-5 & 2361:20-23.

⁵² PFD at 48 (there is no citation to the record to support this assertion).

⁵³ Remand Tr. Vol. 9 at 2385:5-8.

⁵⁴ PFD at 49.

⁵⁵ PFD at 49.

⁵⁶ Remand Tr. Vol. 9 at 2387-91 (Re-Direct examination of Mr. Schaefer by ED).

E. Error No. 5: The Commission Improperly Ignored that the Proposed Discharge will Adversely Impact the Marine Environment, Aquatic Life, and Wildlife, Including Birds and Endangered or Threatened Species, Spawning Eggs, or Larval Migration.

The ALJs recognized that the Corpus Christi Ship Channel (CCSC) plays an important role in sustaining populations of estuarine-dependent marine species and the Port’s proposed discharge site is in a sensitive area.⁵⁷ High salinity or saline imbalances can be fatal to aquatic life, particularly the early life stages that will pass through the ZID.⁵⁸ It is not possible to simply compare the data on acceptable salinity ranges for aquatic organisms with the predicted salinity concentrations produced by the modeling – because the modeling results are “uncertain.”⁵⁹ Are they wrong by a little or a lot? Admittedly, no one knows.

Ignoring the uncertainty shown in the evidence, the ALJs conclude, without evidentiary support, that exposure will be no more than “seconds and minutes.”⁶⁰ But even if this is wrong, the ALJs appear to believe that the WET testing required by the Draft Permit is an insurance policy that will protect against potential harm from the discharge. But, this is wrong.

The 24-hour acute testing requires “greater than 50% survival of the appropriate test organisms in 100% effluent for a 24-hour period.”⁶¹ To be clear, everyone understands that this requirement means the Facility could operate for months, degrading water quality and causing significant lethality, before the testing would reveal that.

While the Port may have been reasonable for using standard species in its WET testing, we know that red drum are more sensitive than those species, particularly in the early life stages.⁶² The only person to test red drum larvae, and the only person to test for the impacts of a salinity concentration of 100 percent effluent (as required by the Draft Permit), is Dr. Nielsen. Her LT50 testing showed that, when exposed to 100% effluent, larvae spawned at 28 ppt began dying after only 4 minutes, and half were dead after 48 minutes.⁶³ Similarly, when exposed to 100% effluent,

⁵⁷ PFD at 84.

⁵⁸ PFD at 84.

⁵⁹ PFD at 39.

⁶⁰ PFD at 88.

⁶¹ Admin Record Tab K at Page 31 (Bates 00031).

⁶² PFD at 85.

⁶³ PFD at 59-60.

larvae spawned at 35 ppt began dying after 10 minutes, and half were dead after 55.4 minutes.⁶⁴ The ALJs found that testing reliable.⁶⁵ So, while we do not have comparable results for the Port's test species (because it only tested salinities up to 55 ppt – substantially lower than the 68.7 ppt of 100 percent effluent), it is clear the Facility would “fail” the required 24-hour acute test if red drum were used. We know that. Today. The Port has not in any way carried its burden on this issue.

Experts for both the Port and PAC relied on the TPWD study and the PFD discussed it in considerable detail.⁶⁶ So let us examine the TPWD paper vis-à-vis the Draft Permit's requirements for acute testing. In the TPWD study, red drum larvae of different ages, ranging from 1-day to 9-days, were subjected to 18-hour salinity tolerance tests with concentrations ranging from 0 ppt to 50 ppt.⁶⁷ For every age, mortality was much greater than 50% at 48 ppt. Thus, the TPWD study showed that salinity far less than required for the Draft Permit's acute testing, killed far more than half the subjects, well before the 24 hour mark. The “best” result at 50 ppt was for 5-day old red drum, with a 4.76% survival rate.⁶⁸ We do not need to look into a gazing ball. We have the data that tells us what the WET test results would be, if it were performed competently, using red drum. We know that. Today. The Port has not in any way carried its burden on this issue.

The PFD acknowledges these facts in a rather understated way: “the evidence shows that some mortality could occur due to abrupt changes.”⁶⁹ Mr. Schaefer relied on the TPWD study for his “optimal salinity level.” Dr. Fontenot relied heavily on the TPWD study for his Effects Assessment Exhibits – he relied on that study exclusively for the salinity tolerance range of red drum larvae in Exhibit EFA 1-1. Yet there is no analysis at all nor any attempt to explain how mortality of more than 95% for all ages of red drum larvae⁷⁰ exposed to 50 ppt in the 18-hour test would not be “significant lethality.”

Ultimately the ALJs concluded that the preponderance of the evidence does not demonstrate the Draft Permit would ensure compliance with the TSWQS.⁷¹ To remedy this failure,

⁶⁴ PFD at 60.

⁶⁵ PFD at 86.

⁶⁶ This is also called the “Thomas” study. Ex. PAC-85R; PFD at 63, 67, 72, 86.

⁶⁷ EX PAC-85R at 62, Table 12 (Bates Port Authority 041399).

⁶⁸ EX PAC-85R at 62, Table 12 (Bates Port Authority 041399).

⁶⁹ PFD at 89.

⁷⁰ That is 100% for larvae age 1-day, 3-days, and 9-days.

⁷¹ PFD at 89.

the ALJs propose a limit on salinity.⁷² The ALJs note that “[t]he question is what limit is appropriate.”⁷³ To arrive at their recommendation, the ALJs simply surveyed the parties’ various proposals.

The Port cited to other state and international standards. But simply lifting any standard from some other jurisdiction ignores the fact that those standards are not tailored to *this* marine environment and the aquatic life found *here*. It ignores the site specific conditions. While the record contains some evidence regarding marine desalination facilities outside Texas, *none* of them discharge in a similar location – in proximity to a pass that links a bay to an estuary.

The 2.0 salinity limit recommended by the ALJs as a cap on the increase in salinity at 100 meters from the discharge was first noted in the 2018 joint report of the General Land Office and Texas Parks and Wildlife Department on seawater desalination in Texas.⁷⁴ TPWD provided that same recommendation in its specific comments on the Port’s application in this case.⁷⁵ It has been adopted at seawater desalination discharge permits in other locations. It has been endorsed by one of the Port’s experts and even called too lenient by another of the Port’s experts. Protestants supported the limit if a permit were issued but continued to oppose any permit due to the deficiencies in application, modeling and a number of uncertainties, including the location of the proposed discharge.⁷⁶

The PFD agreed that there were numerous deficiencies and uncertainties – for example, regarding the eddy and the modeling, among others – and proclaims that they are all remedied with a salinity limit. But this one additional term, in isolation, does nothing to make the Draft Permit more protective within 100 meters, within the ZID where marine organisms will contact 100% effluent. Moreover, the Port admits, and PFD acknowledges, that the proposed facility does not meet this standard for 50% recovery and the 95th percentile salinity.⁷⁷

Because the Port has failed to meet its burden to prove the Revised Draft Permit would satisfy the TSWQS – because there will be adverse impacts on the marine environment and aquatic

⁷² PFD at 89.

⁷³ PFD at 90.

⁷⁴ Ex. PAC 7 at 5, 18.

⁷⁵ Ex. PAC 37 at 2.

⁷⁶ Moreover, the PFD notes on pages 102-3 a list of eleven changes to the permit that Protestants assert are necessary to mitigate the harm from the errors in modeling and environmental evaluations by the Port and ED.

⁷⁷ PFD at 90.

organisms – the permit should be denied. The Commission has erred by approving the Revised Draft Permit in the absence of clear evidence supporting it.

F. Error No. 6: The Commission Improperly Ignored that the Proposed Discharge Will Adversely Impact Recreational Activities, Commercial Fishing, or Fisheries in Corpus Christi Bay and the Ship Channel.

For all of the same reasons that there will be adverse impacts on the marine environment and aquatic organisms, there will be adverse impacts on recreational activities, commercial fishing, and fisheries. A permit limit of 2.0 ppt at 100 meters from the discharge will do nothing to diminish the significant mortality that will occur within 100 meters of the discharge.

Scott Holt testified (as did others) that during spawning, there are 100 red drum larvae per 100 cubic meters of water.⁷⁸ The TPWD study leads to a reasonable inference that there could be virtually 100% mortality to red drum larvae exposed to 50 ppt or greater. Thus the preponderance of the evidence shows there will be significant mortality within the ZID, and due to the importance of the CCSC in the life cycle of the red drum and other estuarine dependent species, that mortality will have a material and lasting impact on the recreational and commercial fishing stock within a few years.

G. Error No. 7: The Commission Improperly Accepted an Incomplete, Inaccurate, and Erroneous Application with False Representations Contained therein.

This matter was remanded for the ALJs to take additional evidence on (1) whether the Application, and representations contained therein, are complete and accurate, and (2) the depth of the channel, site-specific ambient velocity, and the depth of the diffuser. On this referred Issue, here is what the Original PFD said:

Protestants and OPIC contend that the Application inaccurately identifies the channel depth at the outfall location as 63 feet, when the actual depth is closer to 90 feet. The channel depth is an input to the CORMIX model, so this issue is discussed above in connection with Issue G. For the reasons discussed there, the ALJs conclude that the channel depth provided in the Application is not accurate.⁷⁹

At the time that was written, everyone understood and agreed that “the channel depth at the outfall location” actually meant the channel depth at the location where the Port told the world

⁷⁸ Ex. PAC-46R at 13:20-23.

⁷⁹ Feb. 5, 2021 PFD at 78.

it intended to install the outfall. But on remand that simple, basic concept has been turned on its head.

The depth of the channel and depth of the diffuser should not be matters of opinion; they are verifiable facts that were supposed to be corrected definitively on remand. The original PFD correctly observed that 63 feet is not 90 feet. Easy.

ED witness Katie Cunningham described the problem on remand clearly and succinctly in her testimony. The June 24, 2021 memo from Dr. Tischler states that the depth at the discharge location is approximately 90 feet. But the depth of the diffuser barrel, as depicted in the bathymetry map included with that memo, is 65 feet.⁸⁰

But instead of saying, again – 65 feet is not 90 feet – the PFD provides that “both the ED and the Port Authority agree that the outfall will discharge 64 or 65 feet below the surface and would be within 68 to 70 feet of water on four-to-six feet risers.”⁸¹ That still contradicts the Figure 1 bathymetry map submitted with the New Application.⁸² That map shows the Proposed Discharge Location at a spot between two depths: 65.0 and 63.4 feet. Depths of 68 and 70 feet are not reflected anywhere near that proposed location. But now we have a new standard. Correct and verifiable facts need not actually be contained in the Application and supported with data. The Applicant and ED only need to agree – “that the world is flat, that the moon is made of green cheese, or that the Earth is the center of the solar system.”⁸³

The PFD tells us that now the ALJs agree that the diffuser barrel will be put in an area within 68 to 70 feet depth⁸⁴ – and also that “this area will be in front of the 90-foot depression.”⁸⁵ The bathymetry map does not actually show a 90 foot depth anywhere. According to the Port’s bathymetry map, “this area will be in front of” depths of 81.7 feet, 95.1 feet, 88.2 feet, 68.0 feet, and 60.7 feet. Why aren’t any of those the “correct” depth? Apparently because the Port and ED “agree” they are not. The effluent will discharge in that southerly direction during the supposedly

⁸⁰ PFD at 96; Ex ED-KC-1 Remand at 0008.

⁸¹ PFD at 97.

⁸² PFD at 97; AR-R 4 Admin Record – Remand Tab I at Figure 1 Diffuser Location (Bates 00254).

⁸³ *E.I. du Pont de Nemours & Co. v. Robinson*, 923 S.W.2d 549, 558 (Tex. 1995).

⁸⁴ PFD at 97.

⁸⁵ PFD at 97.

infrequent and brief slack tides.⁸⁶ The effluent will flow east and west during much more frequent incoming and outgoing tides, and depths in those directions range from 45.5 feet to 78.3 feet. Why aren't any of those the "correct" depth? Apparently because the Port and ED simply "agree" they are not.

How were Protestants and their experts to know the "correct" depth when they conducted their modeling? Apparently, they weren't. They had to sit tight for the big reveal, when the Port submitted rebuttal testimony. This really begs the question – why "require" the Application to be correct, or have a hearing at all if the Applicant and ED can simply "agree" to a set of facts that contradict the facts contained in the Application and supporting materials? And that also contradicts the facts presented in written discovery and depositions. One thing is very clear: the location of the discharge has been identified as 90 feet in the Application, yet now everyone agrees it is actually in a location where the depth is somewhere between 65 and 70 feet. This is a fact. The New Application is wrong. Yet, apparently facts do not matter and one of the reasons the Commission remanded to the ALJs has now been disregarded as irrelevant. The Application is not accurate and the Commission erred in issuing an Order based on it.

H. Error No. 8: The Remand Proceeding Exceeded the Clear Scope of the Commission's Remand Order.

Under the rules, the Commission "may order the judge to reopen the record for further proceedings on *specific* issues in dispute."⁸⁷ If the Commission does this, its order "shall include instructions as to *the subject matter* of further proceedings and the judge's duties in preparing supplemental materials or revised orders based upon those proceedings."⁸⁸ Therefore, the scope of the remand is defined, and limited, by the Commission in its order reopening the record.

In its Remand Order, the Commission identified two purposes for the Remand: (1) for the ALJs to apply a different legal standard for evaluating non-numeric criteria; and (2) for the ALJs to "take additional evidence on" the following issues:

- Whether the *proposed* discharge will adversely impact the marine environment, aquatic life, and wildlife, including birds and endangered or threatened species, spawning eggs, or larval migration;

⁸⁶ PFD at 70.

⁸⁷ 30 Tex. Admin. Code § 80.265 (emphasis added).

⁸⁸ 30 Tex. Admin. Code § 80.265 (emphasis added).

- Whether the *proposed* discharge will adversely impact recreational activities, commercial fishing, or fisheries in Corpus Christi Bay and the ship channel;
- Whether *the* Application, and representations contained therein, are complete and accurate;
- Whether *the* modeling complies with applicable regulations to ensure *the* Draft Permit is protective of water quality, including utilizing accurate inputs;
- Whether the Executive Director’s antidegradation review *was* accurate; and
- Whether *the* Draft Permit includes all appropriate and necessary requirements.⁸⁹
- The depth of the channel, *site-specific* ambient velocity, and the depth of the diffuser.⁹⁰

As a matter of simple grammar, it is clear that the Remand Order references *the* Application, and *the* Draft Permit, as they existed at the time the Order was issued. For example, the ALJs were tasked with taking additional evidence to determine whether the Application was complete and accurate – not to take evidence on what types of changes to the Application could support “some” Draft Permit that did not yet even exist. By using the past tense, the Commission made it clear the ALJs were to receive evidence that the ED’s *original* antidegradation review had satisfied the law. But no one offered additional evidence to support the original Application, modeling, antidegradation review, or Draft Permit, or to answer the ALJs’ questions and concerns expressed in the original PFD. Instead the Port ignored the Remand Order and changed the discharge location, effectively submitting a new application.

The Port presented voluminous new evidence in support of a *new* Application for a *new* discharge location (thus *new* site-specific conditions), including all *new* modeling. The ED performed a *new* antidegradation review (by a *new* witness) and issued a *new* Draft Permit. The ALJs convened a 2022 merits hearing that was twice as long at the 2020 merits hearing (10 days compared to 5) – to accommodate more than double the number of witnesses that the Port presented (8 compared to 3). This is clearly not what Chairman Niermann had in mind for the Remand, when he stated during an open meeting:

⁸⁹ Interim Order, at 1-2, Paragraph I (May 26, 2021) (emphasis added).

⁹⁰ Interim Order, at 2, Paragraph II (May 26, 2021) (emphasis added).

I do though think that the process is working in that the protestants have raised legitimate questions about the protectiveness of *the proposed authorization*, and now those questions can be addressed.

* * *

And I appreciate *the burden this matter has already placed on all of the parties*, but in my view, the weight of the equities and the better policy is to remand the matter so that we can determine whether *the proposed authorization* is indeed protective, based on more precise data inputs. And so that's, that's what I would propose.⁹¹

The Chairman clearly expected, and the Commission ordered, that the Port could submit additional evidence to provide greater clarity regarding the subjects addressed in the Initial Proceeding and PFD. Nothing said at the Commission's open meeting, or in the Remand Order, would have lead anyone to reasonably expect that the Remand would involve 25 new depositions, and a merits hearing twice as long as the original. Talk about a burden.

Perhaps at that open meeting the Port actually did intend to provide supplemental data to support its existing Application, when its counsel said "The ALJs disagreed and they wanted more specific data. That's the type of data that we think we can provide that will show that *being deeper* and having more current enhances the mixing and provides more protection for Marine life and the environment."⁹² But the Port certainly thumbed its nose at Chairman Niermann's concept of the process "working" when it moved the outfall to a location where the water is approximately 30 feet *shallower* than in its Original Application. In 2020 the ED told the world that such a revision would send the Port back to square one, when its witness testified under oath:

I believe that would require a whole new application. I would need to double-check. But because our reviews are site specific, if they move the outfall, that would, basically, be going back to the beginning.⁹³

In contradiction of that sworn testimony and statements made at the Commission's open meeting, the "*proposed* authorization" the Chairman spoke of was wholly shredded. Internally, the Port actually did go back to square one, but it got the procedural benefit of skipping the pesky requirements that come with a new application, like new public notice and comments from other

⁹¹ Certified Transcription May 19, 2021 Commission open meeting at 49:19-23, 51:4-10, attached as Exhibit A.

⁹² Certified Transcription May 19, 2021 Commission open meeting at 46:15-19 (emphasis added).

⁹³ Tr. Vol. 5 at 70:7-12 (ED witness Shannon Gibson at the 2020 merits hearing).

regulatory agencies. The ED allowed this improper procedure, and just conducted all new modeling, performed a new antidegradation review, and issued the new Draft Permit.

PAC timely raised the issue with the ALJs and requested that a question be certified to the Commission to clarify the scope of the remand, but the ALJs denied that request – **effectively determining that the Commissioners do not determine the scope of any remand, but rather the parties get to.** If this Draft Permit is issued, with or without the changes recommended by the ALJs, it will be clear that the scope of any remand is determined unilaterally by the Applicant. Allowing the Port to ignore the Commission’s Remand Order guts the Commission’s authority.

The Sunset Commission recently described the TCEQ Commissioners as “reluctant regulators. . . . delegating much of the initial decision making to staff and, to a certain extent, encouraging industry members to self-govern and self-police.”⁹⁴ The Port, for one, is delighted to self-govern and self-police. This case presented an opportunity for the Commissioners to demonstrate that they actually take ownership of their own orders and are willing to meaningfully enforce them, yet they improperly allowed the Port to go beyond the scope of the remand order. The Commission’s issuance of the Revised Draft Permit on the new application is a violation of the Commission’s rules, because the scope of the remand did not allow the Port to submit an entirely new application.

An agency is bound to follow its own rules.⁹⁵ If an agency wishes to change its rules, it must follow the rulemaking procedures of the APA to modify the rule.⁹⁶ It cannot simply disregard the rule in circumstances where the rule plainly applies and guides the Commission’s analysis. As the Texas Supreme Court has noted, “If the Commission does not follow the clear, unambiguous language of its own regulation, we reverse its action as arbitrary and capricious.”⁹⁷

⁹⁴ Sunset Advisory Commission Staff Report, TCEQ, 2022-23 88th Legislature, at 1.

⁹⁵ *Flores v. Employees Ret. Sys. of Tex.*, 74 S.W.3d 532, 542 (Tex. App.—Austin 2002, pet. denied); *Southern Clay Prods., Inc. v. Bullock*, 753 S.W.2d 781, 783 (Tex. App.—Austin 1988, no writ) (citing *Gulf Land Co. v. Atlantic Ref. Co.*, 134 Tex. 59, 131 S.W.2d 73, 79 (Tex. 1939)).

⁹⁶ *Myers v. State*, 169 S.W.3d 731, 734 (Tex. App.—Austin 2005, no pet.) (“Allowing an agency to create broad amendments to its rules through adjudication, rather than through its rule making authority, effectively undercuts the Administrative Procedures Act.”) (“If an agency does not follow the unambiguous language of its own rules, we must consider its actions arbitrary and capricious.”).

⁹⁷ *Rodriguez v. Service Lloyds Ins. Co.*, 997 S.W.2d 248, 254–255 (Tex. 1999); *see also Bexar Metro. Water Dist. v. Tex. Comm’n on Env’tl. Quality*, 185 S.W.3d 546, 551 (Tex. App.—Austin 2006, pet. denied) (“A reviewing court will reverse an agency when it fails to follow the clear, unambiguous language of its own regulations, that is, when its actions are arbitrary and capricious.”).

Here, the Commission was required to identify the scope of the remand in its order remanding the case. It did so and that scope limited and defined the proceedings that could occur at the State Office of Administrative Hearings. By allowing the proceedings to far exceed the scope of the remand order, the Commission violated its own rules and committed clear error.

I. Error No. 9: The Commission Included a Monitoring Plan in the Revised Draft Permit that is Not Supported by Any Evidence in the Record.

In their PFD on remand, the ALJs recommended that the “permit require a monitoring plan” for the 2.0 ppt limit on salinity increases.⁹⁸ The ALJs also stated, “the Port Authority agrees to work with TCEQ staff to develop” such a plan.⁹⁹ The evidentiary record, however, contained no testimony or evidence to establish what should be included in any monitoring plan. In fact, both experts for Protestants and the Port testified that they could evaluate such a plan, if one had been proposed. Despite the clear recommendations of GLO and TPWD that there be the limit and monitoring, the Port did not include one in its application and the Executive Director did not include one in either of its Draft Permits. No one, not the parties or TPWD has had any opportunity to evaluate the monitoring plan that the ALJs’ recommended be a required part of the permit.

Thus, in the face of the ALJs’ recommendation, the Commission could have remanded this matter back to the ALJs to take additional evidence regarding the necessary requirements for any effective monitoring plan. Instead, it appears that the Commission unilaterally developed a monitoring plan outside of the contested case hearing process and included such monitoring plan as key elements of the Revised Draft Permit. This was error, as there is no evidence to support these elements of the Revised Draft Permit. Texas Government Code § 2003.047(m) provides that the Commission’s order in a contested case “shall be based solely on the record made before the administrative law judge.” Thus, in adopting a monitoring plan apart from any evidentiary basis, the Commission violated this statute.¹⁰⁰

Moreover, the plan does not take into consideration the complexity of the site or the facts in the record, and will not even do what the ALJs recommend, i.e. monitor to determine if there are any increases in salinity over ambient as much as 2 ppt at 100 meters from the discharge. For

⁹⁸ PFD at 12, Finding of Fact 122.

⁹⁹ PFD at 38-39.

¹⁰⁰ Because it is not clear at all how the Commission developed the monitoring plan and these additional elements of the Revised Draft Permit, it also raises the question of whether a violation of Tex. Gov’t Code § 2001.061 has occurred.

example, the plume will never get to the location proposed for measuring the ebb tide plume. There is a bathymetric feature, a shoulder or side of a cove, that juts out from Harbor Island within 100 meters and blocks the dense plume from moving to the ebb tide monitoring location. The dense saline plume will fall as it moves with the ebb tide and it cannot then climb over the shoulder. Instead, the shoulder will divert the plume toward the middle of the channel.¹⁰¹

There is no evidence in the record on how much the plume will be diverted toward the center of the channel during the major periods of ebb tide as the momentum of the plume moves it further toward the middle of the channel while the tide drops. The plume will swing from outgoing to flowing toward the middle of the channel and then swing toward Corpus Christi and back again during one cycle of the tides. There is no evidence in the record on a proper location for monitoring the plume. That work has never been done, but needs to be done for there to be an effective monitoring plan. The experts and all parties have a right to review and comment on any supporting basis for these new elements of the Revised Draft Permit, yet they have been given no opportunity to do so.

A very similar situation will occur with the flood tide. The bathymetric features that create the problems for monitoring the plume are visible in the Port's maps used in the permit on pages 22-25. The locations of the monitoring locations on the maps are not in the evidentiary record.

There are other clear problems with the monitoring plan. The averaging of the monitoring results over time and over channel depth will not identify the maximum increases in salinity to measure with the 2.0 ppt limit or to validate the modeling. The discharges at 100 meters are still narrow plumes of concentrated brines, with salinity levels that create the risk to the sensitive aquatic species.

As noted above, Tex. Gov't Code § 2003.047(m) requires the Commission's order in a contested case to "be based solely on the record made before the administrative law judge." Thus, by going outside the record to include new provisions in the Revised Draft Permit related to a monitoring plan, the Commission violated this statutory provision. This is clear error.¹⁰²

¹⁰¹ Ex. PAC 51R-SS6.

¹⁰² To be clear, the Revised Draft Permit needs to have a monitoring plan to address the ALJs' concerns. It would be error for the Commission to issue the permit without the monitoring plan, in light of the ALJs' determinations. But, the proper action was for the Commission to reopen the record to take evidence to determine the monitoring plan, not to unilaterally develop it outside of the evidentiary record in violation of the APA.

III. ERRONEOUS FINDINGS AND CONCLUSIONS

In addition to the errors identified above, the Commission's Order also contains the following erroneous findings and conclusions discussed below.

Finding of Fact No. 45: The additional requirements included in the Revised Draft permit are not supported by evidence in the record. This finding is in error.

Finding of Fact No. 56: The depth of the channel at the outfall location is approximately 65 feet and the use of a 90-foot depth for CORMIX modeling was not reasonable and was error.

Finding of Fact No. 59: The ED's use of 229 feet for DISTB in the CORMIX modeling was materially inaccurate. As noted by Finding of Fact No. 58, the use of 229 feet overpredicted mixing. Therefore, this finding is in error.

Finding of Fact No. 60: The CORMIX user Manual recommends that the Brine module in CORMIX be run for all brine discharges. Therefore, this finding is in error.

Finding of Fact No. 62: The potential for an eddy to form occasionally near the proposed discharge site means that its movement could trap organisms and lengthen exposure times. This finding is in error.

Finding of Fact No. 63: The presence of two outcroppings extending from the shoreline, and the 90-foot depression, introduce some uncertainty into the modeling results, rendering them unreliable. This finding is in error.

Finding of Fact No. 64: The ED's highest predicted effluent percentages should have been used for worst case modeling scenarios. This finding is in error.

Finding of Fact No. 65: CORMIX's 50% margin of error renders the modeling results unreliable. This finding is in error.

Finding of Fact No. 67: The ED's CORMIX modeling inputs are materially inaccurate. This finding is in error.

Finding of Fact No. 68: The ED's CORMIX modeling is not sufficient to ensure the Revised Draft Permit is protective of water quality. This finding is in error.

Finding of Fact No. 69: The Port Authority relied on the SUNTANS modeling it conducted for the Original Application, without revision or updating. Therefore, this finding is in error as it implies the SUNTANS modeling was conducted for the revised application.

Finding of Fact No. 70: The SUNTANS modeling included a calculation for salt mass flux and an input for that calculation included an error that is incorrect by approximately a factor of ten. Therefore, this finding is in error.

Finding of Fact No. 77: Mr. Schaefer used a Texas Water Development Board paper to determine the optimal salinity level of red drum for his review; however he misunderstood or misstated the findings in that paper. He also testified that he did not examine salinity toxicity testing by PAC witness Dr. Kristin Nielsen. This finding is in error.

Finding of Fact No. 78: The ED's antidegradation review does not demonstrate that the proposed discharge will maintain existing uses and not lower water quality by more than a de minimis amount. This finding is in error.

Finding of Fact No. 83: Organisms entering the Aransas Pass inlet have three alternate pathways to travel to the estuaries: Corpus Christi Ship Channel, Lydia Ann Channel, and Aransas Channel. Approximately 20% to 70% of larvae are estimated to use the Corpus Christi Ship Channel for this journey. Therefore, as stated, this finding is in error.

Finding of Fact No. 96: Exposure times will be longest during slack tide conditions, but the actual exposure times are impossible to determine. The evidence in the record does not support this finding as stated. Therefore, this finding is in error.

Finding of Fact No. 97: The evidence in the record is insufficient to establish this finding. Therefore, this finding is in error.

Finding of Fact No. 103: The careful consideration required for evaluating the impacts of a discharge of salinity was not performed. This finding is in error.

Finding of Fact No. 104: With the addition of a salinity limit in the Revised Draft Permit, the adverse impact on the marine environment, aquatic life, and wildlife, including spawning eggs and larval migration will be reduced, but not eliminated. Therefore, this finding is in error.

Finding of Fact No. 106: Because the proposed discharge will adversely impact aquatic life, there will be cascading effects on aquatic-dependent species, including birds. This finding is in error.

Finding of Fact Nos. 107: The proposed discharge will adversely impact birds and endangered or threatened species. Therefore, this finding is in error.

Finding of Fact Nos. 111: Because the proposed discharge will adversely impact aquatic life, there will be cascading effects on recreational and commercial fishing, or fisheries. This finding is in error.

Finding of Fact Nos. 112: The proposed discharge will adversely impact recreational activities, commercial fishing, and fisheries in Corpus Christi Bay and the ship channel. This finding is in error.

Finding of Fact No. 116: The Revised Application did not have a sponsoring witness at the Remand Hearing. The absence of a sponsoring witness renders the Revised Application unreliable and lacking in evidentiary value. This finding is in error.

Finding of Fact No. 117: The Revised Application and supporting documentation did not correctly identify the locations of the proposed outfall or depth of the channel at the outfall location. Therefore, this finding is in error.

Finding of Fact No. 118: The evidence is insufficient to establish this finding. Therefore, this finding is in error.

Finding of Fact No. 120: Whether the Facility is properly characterized as a minor or major facility does affect whether the ED's antidegradation review was accurate and whether the Revised Draft Permit includes all appropriate and necessary requirements. This finding is in error.

Finding of Fact No. 121: The Application failed to provide information about the effluent as required by 30 TAC § 305.45(a)(8)(B)(ii) which requires that the application include information on the chemicals or characteristics of the chemicals that can be expected to be in the discharge “described in enough detail to allow evaluation of the water and environmental quality considerations involved; ...” Therefore, this finding is in error.

Finding of Fact No. 123: The Revised Draft Permit should include all of the information identified in this finding. Therefore, this finding is in error.

Finding of Fact No. 124: Because WET testing will not adequately address the harm from salinity to the most sensitive aquatic life species, changes need to be made to the WET testing requirements. This finding is in error.

Finding of Fact No. 125: Because the Applicant submitted a New Application, new notice was required but was not provided. This finding is in error.

Finding of Fact No. 135: The Port should bear all costs of transcribing this proceeding, including all costs from the original hearing, and should not be entitled to reimbursement from any other parties. This finding is in error.

Conclusion of Law No. 3: New notice was required by TCEQ rules because the Port’s revised application represented a major amendment to the initial application. Therefore this conclusion is in error.

Conclusion of Law No. 4: Notice of the Original Application and the Initial Proceeding were properly provided to the public and to all parties. Tex. Water Code §§ 5.115, 26.022, 26.028; Tex. Gov’t Code §§ 2001.051-052; 20 Tex. Admin. Code ch. 39. Notice of the New Application and hearing thereon were not properly provided. Therefore, this conclusion is in error.

Conclusion of Law No. 10: Not all parts of the application that were admitted into the record were properly sponsored or authenticated so as to allow them to be admitted into the evidentiary record for all purposes over the objections of Protestants. Therefore this is conclusion is in error.

Conclusion of Law No. 11: There must be no lethality to aquatic organisms that move through a ZID. 30 Tex. Admin. Code §§ 307.6(c)(6), 307.8(b)(2). This conclusion applies the wrong standard and, therefore, is in error.

Conclusion of Law No. 17: The ED's antidegradation review does not ensure compliance with the Tier 1 and Tier 2 antidegradation standards. 30 Tex. Admin. Code § 307.5(b). This conclusion is in error.

Conclusion of Law No. 18: The ED's modeling analysis of the proposed discharge is not sufficient to ensure the Revised Draft Permit is protective of water quality. This conclusion is in error.

Conclusion of Law No. 21: With the additional permit requirements described in Finding of Fact No. 122, the Revised Draft Permit is more protective but still does not include all appropriate and necessary requirements to protect the marine environment, aquatic life, wildlife, recreational activities, commercial fishing, and fisheries. Therefore, this conclusion is in error.

Conclusion of Law No. 22: With the additional permit requirements described in Finding of Fact No. 122, the Revised Draft Permit is more protective of water quality and the uses of the receiving waters but still does not satisfy the applicable TSWQS. 30 Tex. Admin. Code ch. 307. Therefore, this conclusion is in error.

Conclusion of Law No. 25: The Port Authority substantially complied with all applicable notice requirements for the Original Application but not for the new Application submitted on remand. 30 Tex. Admin. Code ch. 39. Therefore, this conclusion is in error.

Conclusion of Law No. 28: The Port should bear all costs of transcribing this proceeding, including all costs from the original hearing, and should not be entitled to reimbursement from any other parties. Therefore, this conclusion is in error.

IV. CONCLUSION

WHEREFORE, PREMISES CONSIDERED, Protestants respectfully request that the Commission reverse its order and deny the Port's permit application, because such fails to demonstrate that the proposed facility will be protective of public health and the environment.

Respectfully submitted,



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CERTIFICATE OF SERVICE

I certify that a copy of this document was served on all required persons and parties listed in the Chief Clerk's mailing list on this date, January 13, 2023, in accordance with the applicable service procedures.



Craig R. Bennett

TCEQ DOCKET NO. 2019-1156-IWD

**IN THE MATTER OF THE
APPLICATION OF PORT OF
CORPUS CHRISTI AUTHORITY OF
NUECES COUNTY FOR TPDES
PERMIT NO. WQ0005253000**

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§

**TEXAS COMMISSION
ON
ENVIRONMENTAL QUALITY**

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