

**SOAH DOCKET NO. 582-20-1895  
TCEQ DOCKET NO. 2019-1156-IWD**

<b>IN THE MATTER OF THE</b>	<b>§</b>	<b>BEFORE THE STATE OFFICE</b>
<b>APPLICATION OF PORT OF</b>	<b>§</b>	
<b>CORPUS CHRISTI AUTHORITY OF</b>	<b>§</b>	<b>OF</b>
<b>NUECES COUNTY FOR TPDES</b>	<b>§</b>	
<b>PERMIT NO. WQ0005253000</b>	<b>§</b>	<b>ADMINISTRATIVE HEARINGS</b>

**REVISED JOINT REPLY TO THE EXCEPTIONS OF THE EXECUTIVE DIRECTOR  
BY PORT ARANSAS CONSERVANCY, JAMES AND TAMMY KING AND  
SAM AND EDWARD STEVES**

**July 21, 2022**

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**REVISED PROTESTANTS' REPLY TO EXCEPTIONS**

TO THE HONORABLE COMMISSIONERS:

Port Aransas Conservancy (PAC), James and Tammy King, Sam Steves, and Edward Steves (Protestants) file this their joint reply to the exceptions filed by the Executive Director (ED) of the Texas Commission on Environmental Quality. In an effort to make cross-referencing as easy as possible, Protestants utilize the same format the ED used in exceptions.

**A. Discussion and Analysis.**

**Items 1-2:**

No reply.

**Item 3:**

The ED seeks to edit the PFD to restate what Mr. Schaefer said at hearing regarding the antidegradation analysis. However, the PFD correctly summarizes, on page 47, Mr. Schaefer's testimony. Specifically, the transcript, at pages 2384-85, notes that Mr. Schaefer testified, "looking at the -- the optimal range that was given in that [paper] of 20 to 35 ppt, I've calculated the effluent percentage at the edge of the mixing zone." The ED would like to rewrite his testimony. The way the ED would reword the PFD conflicts with what Mr. Schaefer said at the pages cited by the ALJs. If there is an inconsistency between his testimony on those pages, and what he actually did or testified to elsewhere, this further highlights the unreliable nature of his analysis and his testimony. The ED's exception should be rejected.

It should also be noted that the ED's own modeling shows that the salinity levels resulting from the discharge go well above this "optimal range" of 20 to 35 ppt cited by Mr. Schaefer at the aquatic mixing zone boundary, with levels up to 42.27 ppt for 40% recovery and up to 43.07 ppt

for 50% recovery, the latter as a result of an increase in salinity at that boundary of 2.5 ppt. And these are just two of a number of examples of increases in salinity and resulting salinity levels predicted by the ED's CORMIX modeling that are worse than those reflected in the ED's critical conditions that Mr. Schaefer relied upon for his analysis.

**Item 4:**

No reply.

**Item 5:**

The ED contends that Ms. Cunningham's testimony was mischaracterized by the ALJs, and the ALJs misunderstood the nature of the ED's critical conditions evaluation. That is not true. The real purpose of the ED's proposal for "clarification" is to mislead the Commission with regard to several key facts, suggesting that the Commissioners can ignore the modeling scenarios that Protestants claim to be worst-case conditions for salinity.

First, the ED states that 38 of the 43 scenarios that Ms. Cunningham ran resulted in projected effluent percentages **identical** to what Ms. Cunningham identified as the critical condition. While that is true, it is very misleading in this exception, since the issue raised by the ED is the PFD discussion of the salinity levels used by the ED to define critical conditions. As can be seen from the chart of modeling results shown in Attachment 1 to the Exceptions of the Kings and Steves, which was not disputed, it does not matter what the percentages of effluent are for 38 of 43 runs, it is the increase in salinity that are important for the evaluation of the impacts of the concentrated brine on aquatic life. The ED's critical conditions for the aquatic life mixing zone boundary, results in a 1.13 ppt increase in salinity, which is **the lowest increase in salinity of any of the 43 scenarios**. There are 12 of those scenarios at that 1.13 ppt level, but there are 31 with higher salinity conditions. Each of those has worse mixing for the salinity in the effluent with that in the channel water than the critical conditions would indicate. And the same is true at the ZID boundary. Moreover, there are 12 of the 43 scenarios with salinity increases over the 2.0 ppt permit limit the ALJs recommend at the ALMZ. Thus, the ED's failure to properly apply and evaluate the salinity increases shows that the draft final permit will allow significant harm to aquatic life.

Any suggestion in the ED's exceptions that the Commission should only consider the critical conditions for evaluating the salinity levels to which marine species will be exposed needs to be rejected. The most significant concern, as nearly everyone agrees, is the impact of salinity on aquatic life. The percentage of effluent at the mixing zone boundaries is not the most relevant consideration in determining this impact of the concentrated brine in the effluent. Rather, the salinity concentrations and salinity gradients resulting from the discharge are what are meaningful.<sup>1</sup> The ED's failure to properly consider these for the worst case conditions, and the ALJs' apparent misunderstanding of this, reflect why this permit should not be issued. The evidence clearly reflects that the salinity concentrations and salinity gradients will be at levels that will cause significant lethality to aquatic life.

**Item 6:**

Here the ED again argues the PFD mischaracterizes Ms. Cunningham's testimony; and again no change is needed in the PFD. Protestants agree with the ED's statements in the first paragraph under the quote from the PFD. Ms. Cunningham agreed that the critical conditions do not determine the impact of the concentrated brine in the effluent on marine species. However, the two sentences the ED would like deleted are correct, appropriate, and needed to help explain the ALJs' recommendation for a salinity limit. The ED's exception in this regard should be rejected.

**Item 7:**

The ED requests that the following additional language be added: "For purposes of compliance with the permit, the Port Authority must use mysid shrimp (*Mysidopsis bahia*) and inland silverside (*Menidia beryllina*). The Port Authority is not required to use red drum as a test species to demonstrate compliance with the permit."

Protestants object to this proposed addition. Although WET Testing provides some information, it is not the sole basis on which to determine the potential harm from the discharge. The experts agree that WET Testing does not consider salinity, and even the Port's own expert testified that WET Testing does not make sense in the context of the potential harm from a desalination plant, for which the primary harmful constituent is hypersaline wastewater. The ED's

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<sup>1</sup> 30 Tex. Admin. Code § 307.4(g)(3) (salinity gradients in the estuary must "be maintained to support attainable estuarine dependent aquatic life uses" and careful consideration must be "given to all activities that may detrimentally affect salinity gradients.")

proposed addition conflates the issue and distracts from the ALJs' analysis. The ED's proposed addition should be rejected.

**Item 8:**

No reply.

**B. Finding of Facts**

**Finding of Fact 95:**

No reply.

**Finding of Fact 114:**

The ED requests that the finding be changed to reflect that the proposed discharge will be located at least 60 feet below the water surface, rather than the 50 feet noted in the finding. Protestants object to this proposed change. As noted in PAC's exceptions, the Port's evidence regarding the discharge is terribly inconsistent. The Port's bathymetry map shows the depth of the water body at the location of the discharge as between 65.0 and 63.4 feet.<sup>2</sup> The ALJs noted that the discharge ports would be on risers four to six feet off the channel bottom.<sup>3</sup> But the Port has not committed to limit the risers to six feet, and the two options for riser heights in the initial application were 12.6 and 15.75 feet high,<sup>4</sup> with the barrel for the typical diffuser above the bottom, not buried.<sup>5</sup> Given all of these factors, the record does not at all establish that the discharge will be "at least 60 feet below the water surface" as alleged by the ED. Moreover, the final draft permit has no limit on depth.

**Finding of Fact 122:**

No reply.

**C. Conclusion.**

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<sup>2</sup> PFD at 97; AR-R 4 Admin Record – Remand Tab I at Figure 1 Diffuser Location (Bates 00254).

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<sup>5</sup> S App 0000344.

Protestants request that the ED's exceptions, as noted above, be overruled and the proposed changes be rejected. Protestants further respectfully request that the TCEQ deny the Port's permit, because that permit, even as proposed by the ALJs for modification, fails to demonstrate that the facility to be operated will be protective of public health and the environment. Further, Protestants request such other and further relief to which they may show themselves justly entitled.

Respectfully submitted,

*/s/ Benjamin Rhem*

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*/s/ Richard Lowerre*

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**CERTIFICATE OF SERVICE**

I certify that a copy of this document was served on all parties of record on this date, July 21, 2022, in accordance with the applicable service procedures.

*/s/ Benjamin Rhem*

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First, the ED states incorrectly that 38 of the 43 scenarios that Ms. Cunningham ran resulted in projected increases in salinity and/or the resulting levels of salinity in the ship channel **identical** to what Ms. Cunningham identified as the critical condition. That is not true, as can be seen from the chart of modeling results shown in Attachment 1 to the Exceptions of the Kings and Steves. In fact, that chart, which has not been disputed, shows that the increase in salinity for the ED's critical conditions at the aquatic life mixing zone boundary, at 1.13 ppt, is **the lowest increase in salinity of the 43 scenarios**. There are 12 of those scenarios at that 1.13 ppt level, but there are 31 scenarios with higher salinity conditions, i.e., each with worse mixing of the salinity in the effluent with that in the channel water, than the critical conditions would indicate. And the same is true at the ZID boundary. Moreover, 12 of the 43 scenarios show salinity increases over the 2.0 ppt permit limit the ALJs recommend at the ALMZ. Thus, the ED's failure to properly apply and evaluate the critical conditions – for the constituent of greatest concern, salinity – has resulted in a draft final permit that will allow significant harm to aquatic life.

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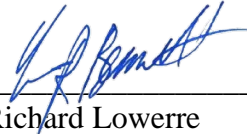
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CONSERVANCY**



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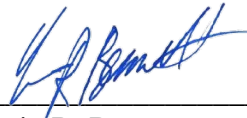
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**CERTIFICATE OF SERVICE**

I certify that a copy of this document was served on all parties of record on this date, July 21, 2022, in accordance with the applicable service procedures.



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Craig R. Bennett