

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
ENVIRONMENTAL APPEALS BOARD  
WASHINGTON, DC**

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In re: )  
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Ocean Era, Inc. – Velella Epsilon Facility ) NPDES Appeal No. 20-08  
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NPDES Permit No. FL0A00001 )  
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**FRIENDS OF ANIMALS' REPLY BRIEF IN SUPPORT OF PETITION FOR REVIEW**

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## INTRODUCTION

The United States Environmental Protection Agency Region 4 (“the Region”) made serious legal and factual errors in issuing the NPDES permit to Ocean Era, Inc. for the Vellella Epsilon Project in the Gulf of Mexico (“VE Project” or “Facility”).

The Region’s decision to issue the Permit violates the Clean Water (CWA), as the Region did not properly consider all of the required statutory criteria, 40 C.F.R. § 125.122. The Region’s Response glossed over this error and failed to show how the determination of no unreasonable degradation fully considered threats to human health, or the esthetic, recreational, and economic effects of the planned discharges. In particular, criteria relating to monitoring requirements, concerns of fish escapes, pathogen/parasite transfer, and contributions to Harmful Algal Blooms (HABs) were either not fully considered or glossed over without being substantively addressed.

The Region also failed to address problems with the Endangered Species Act (ESA) analysis and conclusion that the VE Project is not likely to adversely impact threatened and endangered species. The Region failed to consider how the Facility would act as a Fish Aggregating Device, the degraded baseline conditions of the area, and how the Facility’s contribution to HABs could adversely impact listed species. Rather than address these issues in its Response, the Region merely repeats its conclusions that the Facility is “relatively” small and listed species are not known to frequent the area now.

The Board should also review the Region’s alleged compliance with the National Environmental Policy Act (NEPA). While initiated voluntarily, NEPA analysis must still be conducted properly. The Region erred in issuing a Finding of No Significance (FONSI) for the VE Project. A FONSI is inappropriate due to the many concerns involved with this facility. These concerns involved considerations that the Region should have properly looked at, but did not, including cumulative impacts, harmful algal blooms (HABs), and antibiotic resistance. The Response did not adequately address these concerns.

These are all “clearly erroneous finding[s] of fact or conclusion[s] of law” and should be reviewed by the Board. *In re Stonehaven Energy Management*, 15 E.A.D. 817, 823 (2013).

## **ARGUMENT**

### **A. The Region made clear errors in its evaluation of the Ocean Discharge Criteria.**

The Region erred in determining whether discharge will cause unreasonable degradation, as required by 40 C.F.R. § 125.122. Unreasonable degradation is defined as:

- (1) Significant adverse changes in ecosystem diversity, productivity and stability of the biological community within the area of discharge and surrounding biological communities,
- (2) Threat to human health through direct exposure to pollutants or through consumption of exposed aquatic organisms, or
- (3) Loss of esthetic, recreational, scientific or economic values which is unreasonable in relation to the benefit derived from the discharge.

40 C.F.R. § 125.121(e).

The Region’s errors in its determination represent more than just allowing “any degradation” to occur. The errors comprise serious failings to consider statutorily required factors in 40 C.F.R. § 125.122 that must be considered before the Region can make a determination of no unreasonable degradation.

Notably, the conjunction “or” in 40 C.F.R. § 125.121(e)(2) means that any one of these definitions can qualify by itself as unreasonable degradation. While § 125.121(e)(3) explicitly contemplates the balancing of losses to esthetic, recreational, scientific, or economic values with any alleged benefit from the discharge, § 125.121(e)(1) and (2) are silent about such compromises. Through the principle of *expressio unius est exclusio alterius*, **any** “threat to human health through direct exposure to pollutants or through consumption of exposed aquatic organisms” must represent unreasonable degradation. Similarly, any significant adverse changes in ecosystem diversity, productivity and stability of the biological

community within the area of discharge and surrounding biological communities constitutes an unreasonable degradation. The Permit could threaten both human health (via direct ingestion of algae and antibiotic resistance), the ecosystem (via mortality from HABs to a variety of marine species and vessel strikes to threatened and endangered animals), and loss of esthetic, recreational, scientific, and economic values (via loss of tourism and enjoyment of beaches due to HABs).

**1. The Region erred by not requiring meaningful downstream monitoring.**

The Region erred when it failed to include meaningful monitoring requirements. The Region is required under 40 C.F.R. § 125.122(a) to consider the physical transport of pollutants. The Region claimed that modeling efforts indicated that waste volumes would be low. *See* EPA Region 4's Response to Petition For Review, NPDES Appeal No. 20-08 ("Response") at 16. However, this Facility represents a brand-new, unique, and unprecedented discharge operation in federal waters. The Region fails to demonstrate that the downstream monitoring at only five meters is sufficient to assess the impact of the discharge on water, sediment, and biological quality, including, where appropriate, analysis of the bioaccumulative and/or persistent impact on aquatic life of the discharge, as required by law. 40 C.F.R. § 125.123(d). The limited monitoring does not even match up with the Region's own estimation of the radius of impacts. The Ocean Discharge Criteria Evaluation (ODCE) states that the impacts will "likely" be kept within a much larger distance, "300-500 meters from the perimeter of the cage array." Response, Attachment 18 (ODCE) at 46.

The Response did not discuss why monitoring at this distance is not required. The Region included a monitoring site more than 500 meters away, but only upstream. Thus, the discharge pollution beyond five meters downstream will go undetected. Petition at 12. As explained below, pollutants from the facility include precursors to HABs, and such contributions are likely to constitute unreasonable degradation. Limiting downstream

monitoring to five meters is unreasonable. The Region’s failure to include actual downstream monitoring requirements—at meaningful distances—to ensure that no transport actually occurs is a clear violation of law. 40 C.F.R. § 125.123(d).

**2. The Region failed to fully consider the probability of escaped fish causing adverse changes on the ecosystem.**

In its Response, the Region does not dispute that fish escapes, which spread disease and compete with wild stocks, would result in an unreasonable degradation of the marine environment. Nor does it dispute that fish escapes have occurred in other aquaculture facilities. Instead, the Region claims that comparisons to “commercial scale facilities” are inaccurate because the VE Project will be smaller. Response at 17. However, the Region does not acknowledge the fish escape event that occurred at the same-sized Velella Gamma facility, which involved a similar net pen system. Petition at 13.

The Region again points to the Facility Damage and Control Plan (FDCP) as a means to prevent fish escapes, but such a plan does not exist. Nor will the Region create one to ensure no unreasonable degradation will occur. Instead, the Region allows the permittee to “develop and implement” the plan by itself. Response at 17. The Region fails to point to any authority that allows it to rely on a future, undisclosed, plan in its determination that there will be no unreasonable degradation. To the contrary, such reliance is a clear violation of law because the Region needs to have sufficient information to affirmatively determine that discharges will not cause an unreasonable degradation to the marine environment **before** issuing the permit. 40 C.F.R. § 125.123(c)(1). Specific regulations apply when there is insufficient information to determine there will be no unreasonable degradation—40 C.F.R. §§ 125.123(c), (d)—however, the Region expressly did not comply with those regulations. *See* EPA Region 4’s Resp. to Petition For Review, NPDES Appeal No. 20-09 at 26.

Lastly, the Region failed to explain in their Response exactly why the copper net pen allegedly has a “low probability” of fish escapes. Nor did the Region acknowledge the role of

climate change in creating more numerous and more powerful hurricanes in the Gulf of Mexico. Such clearly foreseeable occurrences should have been considered by the Region before they erroneously determined no “significant adverse changes” to the surrounding area would occur as a result of fish escapes.

**3. The Region erred by not fully considering the potential of pathogen and parasite transfer, or antibiotic resistance.**

The Region failed to adequately consider or make plans to prevent pathogen and parasite transfer from the facility to wild marine species. This represents a failure to consider two criteria under 40 C.F.R. § 125.122(a): “(6) The potential impacts on human health through direct and indirect pathways,” and “(7) Existing or potential recreational and commercial fishing, including finfishing and shellfishing.” Pathogen and parasite transfer have the ability to affect human health via antibiotic resistance and can spread diseases to wild marine species.

In its Response to Comments, the Region attempted to bolster its position by requiring a Best Management Practices (BMP) plan in the Permit. Response at 18. The BMP plan in the Permit only points the permittee to a list of requirements, vaguely stating that the permittee must “employ efficient feed management” and “identify and implement procedures.” However, the Region once again allowed the permittee to self-regulate by allowing the permittee to create and implement the BMP plan on its own. Telling a permittee to consider a statutory factor does not satisfy the requirement that the Region consider that factor itself. By shunting responsibility to consider pathogens onto the permittee, the Region has violated its duty to determine that there is no unreasonable degradation before issuing the permit.

Similarly, the Region has not fully considered the ability for antibiotic use to contribute to antibiotic resistance. The Region leans on the permittee’s assurances that “antibiotics will likely not be used,” but this once again leaves compliance completely in the

permittee's hands. Response, Attachment 16 (RTC) at 14. The Region correctly points out that none of the studies regarding antibiotics involve facilities in the Gulf of Mexico. Response at 21. However, instead of conducting studies to consider this threat to human health, the Region restates its assertions that "strong currents" and (self-imposed) "conditions of the Permit" make antibiotic resistance unlikely. *Id.* The conditions of the permit also include "veterinary oversight," but this would appear to be more for the health of the permittee's fish rather than any dangerous effects of antibiotic resistance to human health. There is no evidence that veterinary oversight will prevent pathogen and parasite transfer or alleviate concerns about antibiotic resistance.

The Region also attempts to defend its cherry picking of studies. The Region admits that it discarded studies showing greater risk of antibiotic resistance while relying on others that showed a low risk. Response at 21. The Region claims that studies from larger fish farms are only relevant if they show a low risk because here the project is smaller or for a shorter term. *Id.* However, the Region does not demonstrate that the size or duration were the determinative factors indicating the level of risk of antibiotic resistance. Thus, it is not reasonable to dismiss some studies due to the size of the aquaculture facility. To the contrary, other factors such as the water temperature, surrounding environment, density of the fish, and the type or amount of antibiotics used are likely more relevant. Response, Attachment 18 (ODCE) at 41. EPA does not analyze all these factors in relation to the Facility, nor does it limit the type and amount of antibiotics that permittee could apply. Thus, there is insufficient information to conclude that the VE Project will not cause an unreasonable degradation of the marine environment.

**4. The Region erred when it determined that the facility would not significantly contribute to harmful algal blooms.**

Harmful Algal Blooms (HABs) have ravaged Florida's Southwestern coast for decades. These HABs kill multiple species of marine animals, cause esthetic, recreational,

and economic concerns, and present a direct threat to human health through respiratory ingestion. Petition, Attachment 2 (FoA Comment) at 13. These actions play into the final two statutory definitions of “unreasonable degradation.” As mentioned above, **any** threat to human health, such as one caused by HABs, constitutes unreasonable degradation. Similarly, the severe esthetic, recreational and economic concerns must be balanced with any supposed benefits of the discharge.

A permit issuer must state the reasons for its conclusions with reasonable clarity. *In re Ash Grove Cement Co.*, 7 E.A.D. 387, 417 (EAB 1997). A region’s rationale is unclear when “permitting authority provides inconsistent or conflicting explanations for its actions.” *In re Chukchansi Gold Resort*, 14 E.A.D. 260, 280 (EAB 2009). In its Response, the Region once again downplayed well-established facts underlying the occurrence of red tides: that phosphorous and nitrogen play a large role in HABs, that the Facility will be discharging phosphorous and nitrogen, that Southwestern Florida’s HABs are “on the rise in frequency, duration, and intensity in the gulf,” and that HABs generally start offshore and make their way inland. ODCE at 34. The Region seems content with dispersal of these pollutants over a wide range of ocean, but it does not monitor these discharges beyond five meters from the site.

The Region also repeatedly dismisses the impacts of HABs by arguing that this a relatively small facility, with high current flows. Response at 22-24. However, the Region never even attempts to quantify the existing condition of the water and what levels of discharge may contribute to HABs. Instead, the Region refers to the ODCE and a National Oceanic and Atmospheric Administration (NOAA) study as support for its finding. Response at 22-23. However, neither of these documents support a finding that the Facility’s contribution to HABs or Red Tides will not cause an unreasonable degradation of the environment. Nor do they demonstrate that the Region considered the facility’s contribution to HABs in determining whether there would be an unreasonable degradation.

For example, the NOAA study found that “[n]utrient enrichment and potential eutrophication related to marine fish farm effluent are an important concern raised in the U.S.” Attachment 1 (NOAA Study) at 59.<sup>1</sup> It also identified “changes in benthic communities directly attributable to fish farming as an issue warranting additional attention,” explaining that “[b]enthic community impacts are identified as being one of the most critical areas requiring systematic examination and further research in the U.S.” *Id.* at 64 (internal citation omitted). It reviewed a study showing that a fish farm “resulted in the growth of extensive algal mats along the shoreline, threatening a native soft clam fishery. The estimated economic direct loss of clams at one site was calculated at \$168,000 (Canadian dollars).” *Id.* at 59. It also noted that a study in Sicily found that chlorophyll-*a* levels in water as far as 1000m from fish cages were up to 25 higher than at five control sites.” *Id.* at 60. Studies of tropical regions also showed increase levels of chlorophyll-*a*, including one at a small-scale fish cage. *Id.* at 61. Macroalgae from that small-scale fish cage culture was “2-10 times higher than at reference locations. Nutrient measurements were above eutrophication threshold values.” *Id.* The NOAA study also noted that there are a few studies “which indicate that aquaculture effluents may contribute to the occurrence of HABs.” *Id.* at 63. It recommended that farms be sited away from areas with a history of recurring HABs. *Id.* However, the Gulf of Mexico, and in particular the location of the Facility—upstream of Sarasota, Florida—is precisely the type of area that has a history of HABs and should not be used as the location of the first aquaculture facility in U.S. federal waters. *See* Response, Attachment 18 (ODCE) at 34 (“HABs are on the rise in frequency, duration, and intensity in the Gulf, largely because of human activities.”).

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<sup>1</sup> Price, C.S. and J.A. Morris, Jr. 2013. Marine Cage Culture and the Environment: Twenty-first Century Science Informing a Sustainable Industry. NOAA Technical Memorandum NOS NCCOS 164. 158 pp. (“NOAA Study”). This appears as document number C.76 in the Administrative Record index.

Like the NOAA study, the ODCE does not support the Region's finding. In the brief section relevant to HABs, the ODCE admits that "[n]utrient addition to the Gulf is of concern because they contribute to certain harmful algal blooms (HABs)." Response, Attachment 18 (ODCE) at 34. It also acknowledges that the nutrients characteristic of fish farms "may cause excess growth of phytoplankton and lead to both aesthetic and water quality problems." *Id.* Despite this, there is no real analysis of how the discharges from the VE Project will contribute to HABs, which threaten human health. To the contrary, the ODCE analysis of the VE Project on human health consists of one short paragraph that fails to mention HABs. *Id.* at 46.

At best, even according to the Region, there is not sufficient evidence on whether, or to what degree, the discharges from the Facility will contribute to new HABs or exacerbate existing HABs. The ODCE states that even given the decrease in phytoplankton concentration downstream of most net pens (5-30m), "not enough scientific evidence is available to suggest that macronutrients and micronutrients from fish farming, or the proposed project, can be directly related to the occurrence of red tides." Response, Attachment 18 (ODCE) at 35. Moreover, as discussed above, there is not sufficient monitoring of the discharges around the facility.

Thus, the Region violated the CWA when it issued the Permit. This error is further demonstrated in the Region's Response, which states its finding that existing studies do not "document a clear effect." Response at 23. The Region has switched the burden on petitioners to demonstrate a clear effect and disregarded its duty to affirmatively find that the discharges will not cause an unreasonable degradation. However, according to the CWA, if the Region is unable to obtain sufficient information on any proposed discharge to make a reasonable judgment as to its environmental effect, "no permit shall be issued." 33 U.S.C. § 1343(c)(2).

The Region also fails to address how the VE Project could cause HABs offshore to move along the coast. While correctly stating that the Facility is located 45 miles from shore, it ignored the fact that prevailing currents point right back to shore. Thus, it is likely that diluted streams of pollutants could make their way into areas **already** dealing with HABs. NOAA has also noted that hurricanes and tropical storms, which are on the rise, can carry HABs to shores and beaches.<sup>2</sup>

As mentioned in the third category of “unreasonable degradation,” the Region must balance the losses with the benefits in their determination. 40 C.F.R. § 125.121(e)(3). Even if the Facility contributes to just one red tide event during its yearlong trial run, that will outweigh any supposed benefit from a single permittee making profit by selling fish almost exclusively to sushi restaurants. This continues to degrade an area that has suffered numerous HABs in the past decade, affecting local groups of fishers, businesses that rely on tourists, and residents of Southwestern Florida. Moreover, red tide events lead to mass fish die offs, and kill dolphins, turtles, and other marine life. For example, the NPDES report that EPA referenced states that “[W]hen HABs occur near fish farms, fish may die of direct poisoning, incur gill damage or show decreased growth and vigor.” Attachment 1 (NOAA Study) at 62.

All of these negative effects demonstrate that the VE Project will cause an unreasonable degradation of the marine environment. Moreover, the loss of esthetic recreational, scientific, and economic values far outweighs the minor benefits to the permittee for discharging into the ocean.

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<sup>2</sup> NOAA, Fall 2018 Red Tide Event that Affected Florida and the Gulf Coast, <https://oceanservice.noaa.gov/hazards/hab/florida-2018.html>.

**B. The Region did not comply with the Endangered Species Act.**

**1. The Region failed to identify anywhere in the record where it analyzed how the facilities' ability to act as a Fish Aggregating Device impacts threatened or endangered species.**

The Region does not dispute that the Facility will act as a Fish Aggregating Device (FAD). However, it never addresses this in its findings that the VE Permit is not likely to adversely impact ESA-listed species. Instead, the Region merely repeats its conclusions that listed species likely in the area and other threats, such as vessel strikes and entanglement, are not likely. However, these conclusions are based on the project area as it exists now. The conclusions do not account for the fact that the VE Project will act as a FAD. This is a clear error. For example, it is not reasonable to assume a person who goes out in the ocean with no bait one day and sees no sharks or sea turtles, will get the same exact results the next day if the person goes out with bait that is highly attractive to these species. This is especially true, when as here, the species may be in the area regardless. *See* Response, Attachment 9 (BE) at 22 (“The giant manta ray may encounter the facility given its migratory patterns”); Response at 28 (acknowledging that oceanic white tip sharks are occasionally found in waters such as those where the Facility will be located).

However, that is exactly what the Region’s analysis does—it assumes nothing will change once the Facility starts raising and feeding 80,000 pounds of fish in the area. In its Response, the Region explicitly admits that its conclusion that the effects of possible entanglement are discountable was “based on the rigid and durable nature of the net pen materials, the tautness of mooring lines, and the short duration of net pen deployment.” *Id.* Response at 26 (citing Resp. Attachment 13\_NMFS Concurrence Letter). It cited nothing that the conclusion was based on, or even took into account, the Facility as a FAD.

Similarly, the Region’s conclusion about vessel strikes fails to consider the Facility as a FAD. The Region notes that the NMFS’s concurrence letter concludes that it would require approximately 200 new vessels in the area to potentially result in a sea turtle take.

Response at 27 (citing Resp. Attachment 13 (NMFS Concurrence Letter) at 6).<sup>3</sup> However, the Region never quantifies how many new vessels are likely to be in the area due to the FAD, such as fishers and tourists. Without this information, the Region cannot reasonably conclude that the Facility is not likely to adversely affect threatened or endangered species. The Region dismisses concerns about increased vessel activity by claiming that it would be unreasonable for most private fishing trips to travel to the Facility. Response at 27.

However, there is no evidence to support the Region's claim. To the contrary, the permittee touts that this Facility is likely to attract fishers. The Permittee states that "it will encourage Sarasota area fishermen to use the pen as a fish aggregating device." See Petition, Attachment 2 at 46 (Herald Tribune Article posted Sept. 29, 2019, Dale White, *Floating fish farm in Gulf proposed southwest of Sarasota*).<sup>4</sup> Moreover, a cursory search of recreational and charter fishing vessels demonstrates that many travel more than 45 miles from shore to access fish.<sup>5</sup> Thus, it was clearly erroneous for the Region to assume that the facility will

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<sup>3</sup> Notably, this number refers to vessel traffic associated with dock and marina construction. The Region fails to account that sea turtles and other marine life will be attracted to the Facility and they are likely to avoid areas where docks and marinas are under construction. Thus, the increase of vessels, even if less than 200, is likely to have an adverse impact. Again, EPA never analyzes these differences or explains why it is using estimates based solely on dock and marina construction.

<sup>4</sup> See also Petition, Attachment 2 (Comment and References) at page at 41 of the document/PDF ("The Project will also encourage recreational and charterboat fisherman to use the pan as a FAD. "); *Id.* at 42 (Ocean Era Inc., publicizing that past facilities attract "legions of tourists" and "sometimes 10-15 boats per night. "); *Id.* at 47 (noting that people can "troll around the pen to catch a mahi-mahi, watch us feed the fish or put on a snorkel and jump into the water. We want the community to come on out and see what we are doing. That's the whole point of a 'demonstration.'").

<sup>5</sup> MIDDLE GROUNDS OFFSHORE FISHING CHARTERS, <https://www.legendchartersllc.com/middle-grounds-offshore-fishing-charters/> (last visited Jan. 21, 2021) (fishing charter to area located between 80-100 miles west of the Florida Coast); FLORIDA GO FISHING, <https://www.floridagofishing.com/fishing-offshore.html> (last visited Jan. 21, 2021) (noting various fishing opportunities more than 45 miles offshore); FLORIDASFORGOTTENCOAST, <https://www.floridasforgottencoast.com/things-to-see-do/fishing/types-of-fishing/offshore-fishing/> (last visited Jan. 21, 2021) (noting waters which span 10-55

not attract any additional vessels and base its finding solely on the support and harvest vessels servicing the Facility.

Similarly, there is no support for the Region's argument that it will have no impact because "fishermen attracted to the Facility would be displaced from other locations rather than adding to the number of vessels that might interact with sea turtles." Response at 28. Not only does this contradict statements about how the VE Project would increase fishing and tourist activities, but it also fails to include any analysis of where the alleged fishers are being displaced from and whether that location has the same amount of ESA-listed species.

The Region also fails to respond to concerns about how siting a FAD in the area, as well the resulting increase in traffic, will impact endangered whales in the Gulf. Instead, it merely dismisses impacts to whales because they prefer deeper waters. Response at 29. This response is insufficient because the Region fails to consider how much noise the Facility and increased traffic would create, how far noise would travel, and whether such noise pollution would jeopardize endangered whales. Noise pollution that the Facility causes, directly and indirectly, can impact endangered whales even if the whales are not at the immediate project site.

The Region violated the ESA and committed a clear error when it failed to consider the impact of the facility and its ability to attract threatened and endangered animals, as well as other vessels, fishers, and maritime traffic. This failure undermines the Region's conclusion that the VE Project will not jeopardize or adversely affect threatened or endangered species. At a minimum, the Region should have conducted a formal consultation and prepared a biological opinion to consider these issues in more detail.

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miles off the coast "are renowned as one of the most fruitful fishing spots in Florida); FINTASTIC, <https://fintasticinc.com/go-the-distance> (Last visited Jan. 21, 2021) (advertising fishing 40-60 miles offshore).

**2. The Region's conclusion that the VE Project is not likely to adversely impact threatened or endangered species is clearly erroneous because it fails to consider adverse baseline conditions.**

Rather than show how the Region considered the baseline conditions of the marine environment, the Region merely states that it acknowledged the Deepwater Horizon Spill in the EA, and it repeats claims that the impacts of the Facility will not be significant because it will be a "small, pilot-scale Facility." Response at 29-30. However, this is precisely the problem with the Region's analysis. It failed to consider the current conditions or quantify what impact could jeopardize the species. Just because the Region categorizes the Facility as relatively small compared to facilities in other areas or compared to other significant sources of pollution in the Gulf of Mexico, does not excuse it from considering the impacts of the VE Project and conducting a formal biological opinion.

Moreover, the Region's claim that it considered baseline conditions because the EA referenced the Deepwater Horizon oil spill/blowout is without merit for several reasons. First, there is no mention of the degraded baseline in the Region's no effects finding or Biological Evaluation. This demonstrates that the Region failed to take this into account when determining if ESA-listed species are likely to be adversely impacted.

Second, the EA also fails to analyze degraded baseline conditions and the potential impact of the Facility. In fact, the EA merely cites another document that acknowledges "[m]ore information on the short- and long-term impacts of the DWH blowout is needed to assess whether the additional stress caused by the DWH blowout has resulted in a cumulative effect beyond current thresholds. (NMFS, 2015b)." Response, Attachment 4 (EA) at 50. The EA repeats that the impacts from the spill are "still relatively unknown." *Id.* Without knowing more about the current conditions or whether previous events have pushed the ecosystem beyond or near current thresholds, the Region cannot reasonably conclude the VE Project is unlikely to adversely impact threatened or endangered species.

The Region's error is particularly problematic where evidence suggests that even a small impact could jeopardize threatened and endangered species. *See, e.g.,* Endangered Status of the Gulf of Mexico's Bryde's Whale, 84 Fed. Reg. at 15463, 15446 (finding that given the species' small population and restricted range, "**any** human induced mortality can have population-level consequences") (emphasis added)).

Moreover, the Region failed to quantify the impact of the VE Project and how it could affect ESA-listed species' chances of survival and recovery. In fact, there is no analysis in the Biological Evaluation of how the VE Project could impact the recovery of ESA-listed species. *Nat'l Wildlife Fed'n. v. Nat'l Marine Fisheries Serv.*, 524 F.3d 917, 936 (9th Cir. 2008) ("It is only logical to require that the agency know roughly at what point survival and recovery will be placed at risk before it may conclude that no harm will result from 'significant' impairments to habitat that is already severely degraded."). In its response, the Region does not address this issue or point to any analysis indicating at what point survival or recovery would be put at risk.

Finally, NMFS's concurrence letter does not fix these errors. Rather, NMFS merely deferred to the Region's finding and failed to consider degraded baseline conditions.

### **3. The Region failed to consider the impact of the VE Project on harmful algal blooms and ESA-listed species.**

In response to Friends of Animals' concerns that the Region failed to consider the impact of the VE Project on HABs and ESA-listed species, the Region references the ODCE. The problems with the ODCE discussed above apply equally to Friends of Animals' claims in the ESA context. *See supra* at 7-10. Moreover, the Region fails to address the ESA's requirement that its finding be based on the best available science, and that it does not require conclusive evidence. 16 U.S.C. § 1536(a)(2). Here, the ODCE does not purport to use the best available science to determine if the VE Project is likely to contribute to or increase HABs. Nor does it use the best available science to consider the impact on ESA-listed

species. Instead, it concludes that “not **enough** scientific evidence is available” to determine if the proposed project can be directly related to the occurrence of red tides. Response, Attachment 18 (ODCE) at 35.

The Region also references NMFS’s concurrence letter as support for its finding. Response at 30-31. However, the concurrence letter suffers the same defects identified above. It references the “relatively” small amounts of discharge and concludes that it expects impacts from the Facility to be limited to 500 m from the cage. Response at 31 (citing Attachment 13 (NMFS Concurrence Letter) at 7). Aside from the fact that the Region is not requiring sufficient modeling, it also fails to consider that the Gulf is prone to HABs and sparking even one HAB could adversely impact listed species. *See, e.g.*, Endangered Status of the Gulf of Mexico Bryde’s Whale, 84 Fed. Reg. 15446, 15475 (finding that HABs are considered a threat to the critically endangered Gulf Bryde’s whale and that “a HAB-induced mortality of a single breeding female would significantly degrade the status of the population.”).

**C. The Region’s NEPA analysis is clearly erroneous for multiple reasons.<sup>6</sup>**

The Region relies on the exemption in 33 U.S.C. § 1371(c)(1) to claim that it has no NEPA responsibilities. Response at 31. This is a technical loophole in the definition of “new source,” whereby the VE Project does not qualify because it produces 80,000 pounds of harvested fish, instead of 100,000 pounds. This minor difference in magnitude ignores the fact that the Facility is the first of its kind in any federal waters of the United States,

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<sup>6</sup> The Council on Environmental Quality updated the regulations implementing NEPA on July 16, 2020. *See* Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act, 85 Fed. Reg. 43304 (July 16, 2020). The Regulations provide that agencies can apply earlier regulations to documents that began before September 14, 2020. *Id.* at 43372-73. Here it appears the Region relied on earlier regulations. Thus, citations reflect the earlier regulatory language in place at the time the Region began NEPA review.

involves new and unknown technology, and **will** discharge untreated pollutants directly into the ocean.

Yet, the Region also admits in its Response to Comments (RTC) that “a NEPA analysis would be beneficial.” Response, Attachment 16 (RTC) at 28. In its response, the Region stated that it voluntarily underwent NEPA procedures “in order to inform its decision-making.” Response at 31. The Region recognizes the importance of NEPA analyses at the same time it downplays its own responsibilities.

Whether the Region is legally mandated to follow NEPA in this instance is in either case a moot point. The Region **chose** to follow NEPA, therefore they must follow NEPA properly. Although the CWA states that certain actions shall not be deemed a major Federal action within the meaning of NEPA, it does not excuse clear errors when the agency prepares an EA and FONSI. 33 U.S.C. § 1371(c)(1).

**1. The Region erred by not taking a hard look at cumulative impacts of the facility.**

Even after repeatedly recognizing the VE Project as the prototype for an extensive aquaculture industry in the Gulf of Mexico, the Region erroneously limits its impacts analysis to this individual Facility, for a single production cycle. Response at 34. The Region’s analysis is misleading because it suggests that this Facility will be the only one, after which point the budding aquaculture industry will disappear. In fact, nothing could be further from the truth.

The permittee, Ocean Era, Inc., describes the VE Project as “pioneering” and a “demonstration.” Response, Attachment 16 (RTC) at 29. It is highly unlikely that the permittee will cease operations after this “pilot” project. All indications suggest that Ocean Era, Inc. will continue to expand, either using larger pens or arrays of pens, and possibly both. Furthermore, other potential permittees are likely to get involved as well, as we see in planned aquaculture operations off the coast of Southern California, the only other

designated Aquaculture Opportunity Area (AOA) in the United States. This Facility has the ability to set precedent for future facilities in the Gulf of Mexico. Thus, it is reasonably foreseeable that the impacts of the Permit will extend well beyond a single trial run.

Pollutant deposition and downstream monitoring—which the Region will not require sufficient monitoring of—could easily have additional effects when multiple dischargers are running at the same time. Yet, the Region failed to include these cumulative effects in the Region’s NEPA analysis.

**2. The Region failed to take a hard look at the possibility that discharges could contribute to harmful algal blooms.**

As discussed above in section (A)(4), the planned VE Project has the potential to exacerbate the already-existing water quality situation near Southwestern Florida vis-a-vis HABs. The Region originally took a hardline approach to this possibility, but as mentioned in the Petition, was forced to admit in its Response to Comments that increased nutrient loads **do** stimulate HABs. Response, Attachment 16 (RTC) at 24.

Similarly, the Region has shown no reason why it inappropriately relies on studies from different parts of the world with different levels of sunlight and temperature. This is not the “hard look” required by NEPA. *Nat. Res. Def. Council, Inc. v. Morton*, 458 F.2d 827, 838 (D.C. Cir. 1972). Many factors contribute to HABs, including nutrients, light, and temperature. But the Region has not looked at the specifics of these factors in the Gulf of Mexico. In fact, the Region failed to respond to Petitioner’s discussion of the differences in temperature and light in the Gulf of Mexico in its Response. Thus, the Region has not “duly considered the issues raised in comments,” nor is its decision “rational in light of all of the information in the record.” *In re City of Attleboro, MA Wastewater Treatment Plant*, 14 E.A.D. 398, 411 (2009).

The Region mentions several times how the facility is located offshore, but the Region did not consider the fact that HABs **originate** offshore and then migrate toward the

coastline. Petition at 37. Thus, there exists a high likelihood that the facility will exacerbate the current situation off the coast of Southwestern Florida. The Region did not address this issue in its Response.

**3. The Region erred by not fully considering or providing mitigations for the potential for antibiotic resistance.**

EPA's own guidance documents state that NPDES permits "will contain limits on what you can discharge, monitoring and reporting requirements, and other provisions to ensure that the discharge does not hurt water quality or people's health."<sup>7</sup> Yet, the Permit issued here does not contain any limits regarding the use of antibiotics. The Permit only requires that the applicant report antibiotic usage **after** usage takes place.

The Region inappropriately relies on unfounded assertions by the applicant that "antibiotics or other therapeutants will likely not be used." Response, Attachment 16 (RTC) at 14. This reliance ignores the consistent application of antibiotics in other aquaculture facilities around the world. It also ignores the fact that the VE Project is the first of its kind. Antibiotic use is rampant across aquaculture facilities, both on-land and in the ocean. The Region cannot say with any certainty what the actual level of antibiotic usage will be, and thus has not duly considered this aspect of the NPDES permit.

While stating that antibiotic use is unlikely, the Region also provides for three FDA-approved antibiotics. After-the-fact reporting does little, if anything, to address the use of antibiotics. The Region gives "veterinary oversight" as one of the alleged precautions, but this only makes sense if concerns are limited to the health of the fish inside the pen. In fact, antibiotic use can go much further than this. Even antibiotic use inside the pen can contribute to antibiotic-resistant pathogens, since antibiotic resistance has been documented among bacteria in the effluents of fish farms. Response, Attachment 18

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<sup>7</sup> Environmental Protection Agency, NPDES Permit Basics, <https://www.epa.gov/npdes/npdes-permit-basics> (last updated July 12, 2019).

(ODCE) at 40. The Region does not discuss this in its Response or provide for any meaningful protection against this occurring. The Region inappropriately concluded that antibiotic use “will not have a significant impact.” Response at 37.

**4. The Region’s Finding of No Significant Impact is clearly erroneous.**

Despite all the risks from this unprecedented permitting action, the Region has decided to issue a Finding of No Significant Impact (FONSI). The Region erred in issuing the FONSI. Whether an action is “significant” requires consideration of context and intensity. 40 C.F.R. § 1508.27.

The Region first failed to properly evaluate factors for intensity, specifically the degree to which the proposed action will affect public health and safety (factor #2), the unique characteristics of the geographic area (factor #3), the degree to which the possible effects on the human environment are highly uncertain (factor #5), the degree to which the action may establish a precedent for future actions (factor #6), whether the action is related to other actions with individually insignificant but cumulatively significant impacts (factor #7), and the degree to which the action may adversely affect endangered or threatened species (factor #9).

The Region “must address the issues raised in a meaningful fashion.” *In re Wash. Aqueduct Water Supply Sys.*, 11 E.A.D. 565, 585 (EAB 2004). As discussed above, the Region has failed to meaningfully address these factors, all of which swing in favor of the existence of a significant impact. The Region’s decision to issue the permit was clearly erroneous because so many of these factors point toward significant impacts. For example, the Region did not evaluate the unique characteristics of the Gulf of Mexico in regard to the light and temperature requirements for HAB formation. As a first-of-its-kind facility in federal waters, the VE Project has highly uncertain impacts, such as those from nutrient discharge or antibiotic resistance. The action also sets a precedent, as it was designed to be “pioneering” and “a demonstration.” The co-founder of Ocean Era, Inc. has stated that he

wants to work with the community about “how this industry might move forward.” Response, Attachment 16 (RTC) at 29. The Region failed to analyze cumulative impacts from future facilities (see above), but a proper consideration should include these. Lastly, as discussed in section B, the Region has not properly considered how the facility may adversely affect threatened and endangered species.

For these reasons, the Region failed to take a hard look at the impacts of the VE Project and erred in concluding that there would be no significant impact. While its initial decision to undergo NEPA analysis may have been voluntary, it does not have discretion to commit clear errors in the NEPA process.

### **CONCLUSION**

For the foregoing reasons and those in the Petition, Petitioners respectfully request that the Board review and remand the contested conditions, decisions, and determinations in NPDES Permit No. FLOA00001.

Respectfully submitted,

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**STATEMENT OF COMPLIANCE WITH WORD LIMITATION**

In accordance with 40 C.F.R §§ 124.19(d)(1)(iv) & (d)(3), I hereby certify that this brief does not exceed 7,000 words. Not including the cover page, tables, signature block, statement of compliance with word limitation, and certificate of service, this brief contains 6,835 words (including footnotes), as counted by Microsoft Word. This brief is written in Cambria, 12-point font.

/s/ Jennifer Best

Jennifer Best

Date: February 1, 2021

**CERTIFICATE OF SERVICE**

I, Jennifer Best, certify that on this 1<sup>st</sup> day of February 2021, a true and correct copy of the foregoing Reply in Support of Petition for Review was served by electronic mail, pursuant to the Revis Order Authorizing Electronic Service of Documents in Appeals on the following persons:

By EAB eFiling System to:

Clerk of the Board  
U.S. Environmental Protection Agency  
Environmental Appeals Board  
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