

**BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.**

In re:	)	
	)	NPDES Appeal No. 25-02
	)	
Permit applicant: Ocean Era, Inc.	)	
	)	
Permitted facility: Velella Epsilon	)	
	)	
NPDES Permit No. FL0A00001	)	
	)	
	)	

**FRIENDS OF ANIMALS' REPLY IN SUPPORT OF ITS
PETITION FOR REVIEW**

TABLE OF CONTENTS

TABLE OF CONTENTS	1
TABLE OF AUTHORITIES.....	2
TABLE OF ATTACHMENTS.....	3
INTRODUCTION.....	5
A. Friends of Animals’ Petition relates to the 2025 Permit modifications.....	6
B. EPA failed to comply with the Clean Water Act and made clear errors including its failure to issue a new Ocean Discharge Criteria Evaluation for the Modified Permit and its use of the wrong standard.	7
1. EPA failed to reasonably determine that the new structure and plastic netting material, including the shedding of microplastics, will not cause an unreasonable degradation of the marine environment.	7
2. EPA violated the law by failing to consider how the 2025 Permit may cause unreasonable degradation of the marine environment in exacerbating harmful algal blooms and by using the incorrect standard.....	12
3. In issuing the 2025 Permit, EPA failed to consider new and increased risks of fish escape, pathogens, and facility failures in severe weather.....	15
C. EPA’s determination that the Facility is not likely to harm ESA-listed species was clearly erroneous.....	17
1. EPA’s informal consultations for the Modified Permit were too conclusory and did not analyze several changed conditions that could adversely affect ESA-listed species.....	18
2. EPA did not properly analyze other issues, such as entanglement, microplastics pollution, and changed baseline conditions.	19
3. EPA’s finding that the Modified Permit will not likely adversely affect listed species through increased risk of HABs was clearly erroneous.....	21
4. EPA still failed to consider how the Modified Permit will increase the risk of harm to ESA-listed species from acting as a Fish Aggregating Device that will increase vessel strikes and bycatch.	22
D. EPA failed to comply with NEPA and arbitrarily departed from its own policies.	24
CONCLUSION AND RELIEF SOUGHT	27
STATEMENT OF COMPLIANCE WITH WORD LIMITATION	28

TABLE OF AUTHORITIES

Cases

<i>Am. Wild Horse Pres. Campaign v. Perdue</i> , 873 F.3d 914 (D.C. Cir. 2017)	21
<i>FCC v. Fox TV Stations, Inc.</i> , 556 U.S. 502 (2009).....	21
<i>Lone Mt. Processing, Inc. v. Sec’y of Labor</i> , 709 F.3d 1161 (D.C. Cir. 2013).....	5
<i>Nat’l Wildlife Fed’n v. FEMA</i> , 345 F. Supp. 2d 1151 (W.D. Wash. 2004)	14
<i>Pac. Coast Fed. of Fishermen’s Ass’ns v. U.S. DOI</i> , 655 F. App’x 595 (9th Cir. 2016).....	21
<i>Pac. Coast Fed. of Fishermen’s Ass’ns v. U.S. DOI</i> , 996 F. Supp. 2d 887 (E.D. Cal. 2014).....	21
<i>Pac. Coast Fed’n of Fishermen’s Ass’ns v. Gutierrez</i> , No. 1:06-cv-00245-OWW-GSA, 2008 U.S. Dist. LEXIS 31462 (E.D. Cal. Apr. 16, 2008)	17
<i>Pac. Coast Fed’n of Fishermen’s Ass’ns v. United States Bureau of Reclamation</i> , 426 F.3d 1082 (9th Cir. 2005).....	15

Statutes

16 U.S.C. § 1536.....	14, 17
33 U.S.C. § 1343.....	10, 11
33 U.S.C. § 1371.....	21
42 U.S.C. § 4331.....	22
42 U.S.C. § 4332.....	22

Regulations

40 C.F.R. § 122.62.....	2, 8, 10, 11
40 C.F.R. § 125.121	4
40 C.F.R. § 125.122	1, 3, 4, 8, 10, 11, 13
40 C.F.R. § 125.123	3, 10, 11, 13

Other Authorities

Endangered Status of the Gulf of Mexico’s Bryde’s Whal, 84 Fed. Reg. at 15463 (Aril 15, 2019)	14
Executive Order 14154, Unleashing American Energy, 90 Fed. Reg. 8353 (Jan. 29, 2025)	20
Voluntary Preparation of NEPA Documents, 63 Fed. Reg. 58045 (Oct. 29, 1998).....	20

TABLE OF ATTACHMENTS¹

Memorandum re: Information regarding the removal of microplastic monitoring from the final modified NPDES permit for Ocean Era, B.31 (“Microplastic Memo”).....	Attachment 1
Wu, H., Hou, J., & Wang, X. (2023). A review of microplastic pollution in aquaculture: Sources, effects, removal strategies and prospects. <i>Ecotoxicology and Environmental Safety</i> , 252, 114567, C.5 (“Wu et. al., 2023”).....	Attachment 2
Huntington, T. (2019). Marine Litter and Aquaculture Gear: White Paper, C.6 (“Huntington 2019”).....	Attachment 3
GESAMP (2016). Sources, fate and effects of microplastics in the marine environment: part two of a global assessment” (Kershaw, P.J., and Rochman, C.M., eds). (IMO/FAO/UNESCO-IOC/UNIDO/WMO/IAEA/UN/UNEP/UNDP Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection). Rep. Stud. GESAMP No. 93, 220, C.18 (“GESAMP 2016”).....	Attachment 4
Krüger, L., Casado-Coy, N., Valle, C., Ramos, M., Sánchez-Jerez, P., Gago, J., ... & Sanz-Lazaro, C. (2020). Plastic debris accumulation in the seabed derived from coastal fish farming. <i>Environmental Pollution</i> , 257, 113336., C.24 (“Krüger et. al., 2023”)	Attachment 5
Miao, C., Zhang, J., Jin, R., Li, T., Zhao, Y., & Shen, M. (2023). Microplastics in aquaculture systems: occurrence, ecological threats and control strategies. <i>Chemosphere</i> , 340, 139924, C.27, (“Miao et. al., 2023”).....	Attachment 6
Mahamud, A. S. U., Anu, M. S., Baroi, A., Datta, A., Khan, M. S. U., Rahman, M., ... & Rahman, T. (2022). Microplastics in fishmeal: A threatening issue for sustainable aquaculture and human health. <i>Aquaculture Reports</i> , 25, 101205, C.28 (“Muhamud et. al., 2022”)	Attachment 7
Lin, L., Chen, C. C., Zhu, X., Pan, K., & Xu, X. (2022). Risk of aquaculture-derived microplastics in aquaculture areas: An overlooked issue or a non-issue?. <i>Frontiers in Marine Science</i> , 9, 923471., C.37 (“Lin et. al., 2022”)	Attachment 8
Davidson, T. M. (2012). Boring crustaceans damage polystyrene floats under docks polluting marine waters with microplastic. <i>Marine pollution bulletin</i> , 64(9), 1821-1828, C.41 (“Davidson, 2012”).....	Attachment 9
Chen, G., Li, Y., & Wang, J. (2021). Occurrence and ecological impact of microplastics in aquaculture ecosystems. <i>Chemosphere</i> , 274, 129989, C.42 (“Chen et. al., 2021”)	Attachment 10

¹ The letter and number at the end of the document name indicates where the document can be found in the administrative record. For example, Attachment 1 can be found at B.31 in the administrative record.

Su, Z., Wei, L., Zhi, L., Huang, X., Wang, X., & Wang, J. (2024). Microplastics in aquafeeds: Occurrence, sources, effects and considerations for aquatic food production. <i>TrAC Trends in Analytical Chemistry</i> , 176, 117760, C.43 ("Su et. al., 2024")	Attachment 11
Lusher, A., Hollman, P., & Mendoza-Hill, J. (2017). <i>Microplastics in fisheries and aquaculture: status of knowledge on their occurrence and implications for aquatic organisms and food safety</i> . FAO, C.25, ("Lusher, et. al., 2017")	Attachment 12
Sunkara et al, <i>The Gulf of Mexico in trouble: Big data solutions to climate change science</i> , 10 <i>Frontiers in Marine Sci.</i> 1075822 (Mar. 14, 2023), B11 ("Sunkara, et al., 2023")	Attachment 13
Zhangxi Hu et al, Editorial: <i>The impacts of anthropogenic activity and climate change on the formation of harmful algal blooms (HABs) and its ecological consequence</i> , 11 <i>Frontiers in Marine Sci.</i> 1397744 (Mar. 26, 2024), B11 ("Hu, et. al., 2024")	Attachment 14
Gaonkar et al, <i>Metabarcoding reveals high genetic diversity of harmful algae in the coastal waters of Texas, Gulf of Mexico</i> , 121 <i>Harmful Algae</i> 102368 (Jan. 2023), B.11 ("Gaonkar, et al, 2023")	Attachment 15
Quinlan et al., <i>Results from the Gulf of Mexico Climate Vulnerability Analysis for Fishes and Invertebrates</i> , NOAA Technical Memorandum NMFS-SEFSC-767, (Aug. 2023), B.11 ("Quinlan, et al., 2023")	Attachment 16
NOAA, <i>Harmful Algal Blooms Observing System, What are HABs?</i>)	Attachment 17
Ocean Era Permit Modification Justification V2, A.32	Attachment 18
Engineering Design Information, A.4	Attachment 19
USEPA - FDPC Plan_VE Project_110124, A.12.....	Attachment 20
Gulf of Mexico Assessment Program for Protected Species: Marine Mammals, C.21	Attachment at 21
Ocean Era req. for expedited informal ESA and FWCA consult, B.13 ("Consultation Request").....	Attachment 22
Bath, G., Price, C., Riley, K., & Morris, J. (2023). A global review of protected species interactions with marine aquaculture. <i>Reviews in Aquaculture</i> , 2023;1-34, 16, C.4 ("Bath et al., 2023").	Attachment 23
Chatterjee, S., & More, M. (2023). Cyanobacterial Harmful Algal Bloom Toxin Microcystin and Increased <i>Vibrio</i> Occurrence as Climate-Change-Induced Biological Co-Stressors: Exposure and Disease Outcomes via Their Interaction with Gut–Liver–Brain Axis, <i>Toxins</i> , 15(4) 289, 290. ("Chatterjee et. al., 2023")	Attachment 24
CEQ Memorandum on the Implementation of the National Environmental Policy Act, C.7	Attachment 25

INTRODUCTION

Aquaculture in federal waters of the Gulf of Mexico is unprecedented. Ocean Era's Velella Epsilon Project (the "Facility") would be the first aquaculture operation of its kind in any federal waters off the contiguous United States. While the Environmental Protection Agency (EPA) issued a permit for the Facility in 2020, and reissued it again in 2022 following an EAB appeal, Ocean Era realized it could not construct the originally proposed net pen or acquire the fish it intended to cultivate. Subsequently, it sought and obtained substantial modifications to its National Pollutant Discharge Elimination System ("NPDES") Permit No. FL0A00001, including changes to the species of fish, net pen design, and net material ("2025 Permit" or "Modified Permit").

These changes are significant. The revised design includes at least 4,750 additional feet of mooring lines, and the operational footprint has more than doubled from 11 acres to 23 acres. FoA Petition, Attach. 4, Memo at 4. Ocean Era also changed the netting material from the original copper alloy mesh to a synthetic plastic material—Polyethylene Terephthalate (PET) monofilament. *Id.*

In issuing the 2025 Permit, EPA failed to adequately consider whether discharge from the Modified Permit will result in an "unreasonable degradation of the marine environment" and ignored the Ocean Discharge Criteria in 40 C.F.R. § 125.122. Moreover, EPA erred by arbitrarily concluding that the Facility will not likely adversely affect endangered and threatened species and that no formal consultation was required. EPA also erred in continuing to rely on the 2020 permit's inadequate Environmental Assessment (EA).

Finally, EPA improperly concluded that it could use outdated research and analysis that it relied on for the 2020 and 2022 versions of the permit and failed to consider the

changed conditions of the 2025 Permit. EPA's attempts in its response brief to minimize the modifications to cover up clear violations of the law are without merit.

A. Friends of Animals' Petition relates to the 2025 Permit modifications.

EPA attempts to downplay modifications to the 2025 Permit and claim that Friends of Animals' Petition goes beyond the 2025 Permit modifications. EPA Resp. at 18-24. However, this argument is both inaccurate and misleading. There were substantial modifications in the 2025 Permit, including: (1) a change in the species of fish to be cultured (from Almaco jack to red drum); (2) a change in cage net material (from copper to monofilament); (3) a shift in the type of rearing system (from a swivel point mooring system to a stationary cage attached to a grid mooring system); (4) alterations to the mooring system and lines; (5) change in the total fish production; (6) change to total nutrient load; (7) revised fish feed types and feed rates; and (8) an expanded operational footprint. *See* FoA Petition, Attach. 4, Memo at 3-4. Friends of Animals' Petition focuses on these modifications. *See* FoA Petition at 10-38.

Under the Clean Water Act regulations, when a permit is modified, *all* conditions subject to modification are reopened. 40 C.F.R. § 122.62. The regulation imposes no threshold for the degree of change required. Nor does it carve out exceptions based on EPA's subjective view of how significant the modifications are. Yet, EPA repeatedly applies an improper legal standard, asserting that certain issues need not be reopened unless the change is "significant" or has a substantial impact. *See, e.g.*, EPA Resp. at 20-21 (arguing that the modifications are "not significant"); *id.* at 25 (contending that issues raised by Petitioners do not relate to the modifications because the issues are not "significantly impacted" by the new conditions in the Modified Permit).

This approach is contrary to the plain language of the regulation and effectively rewrites the legal standard. In sum, Friends of Animals' Petition covers precisely those conditions that were reopened by the Modified Permit and which EPA is legally required to reconsider.

B. EPA failed to comply with the Clean Water Act and made clear errors, including its failure to issue a new Ocean Discharge Criteria Evaluation for the Modified Permit and its use of the wrong standard.

EPA failed to properly determine, as the Clean Water Act (CWA) requires, that no unreasonable degradation will occur from the 2025 Permit. FoA Petition at 10-13; *see also* 40 C.F.R. § 125.123. This determination must be made by considering the ten factors found at 40 C.F.R. § 125.122(a). However, EPA continued to rely on the Ocean Discharge Criteria Evaluation (ODCE) and permit record for earlier versions of the permit and never considered these factors in relation to the 2025 Permit. *See* FoA Petition at 10-13. Moreover, EPA continued to use the wrong standard in evaluating the 2025 Permit and failed to impose necessary conditions on the Modified Permit despite acknowledging that there is insufficient information to determine whether there will be no unreasonable degradation of the marine environments. *See* FoA Petition at 10-13.

1. EPA failed to reasonably determine that the new structure and plastic netting material, including the shedding of microplastics, will not cause an unreasonable degradation of the marine environment.

EPA lacks sufficient information to conclude that the new netting material—polyethylene terephthalate monofilament (KikkoNet)—will not cause unreasonable degradation of the marine environment. In response to Friends of Animals' petition, EPA wrongly claims that issues such as the release of microplastics “are not significantly impacted by changed conditions in the Modified Permit.” EPA Resp. at 24-25. This is a clear error because one of the main modifications to the 2025 Permit is the switch from copper

alloy mesh to plastic-based monofilament netting. EPA both ignored the environmental risks posed by this change and removed microplastic monitoring requirements from initial drafts of the Modified Permit.

EPA's failure to address this modification or impose monitoring requirements were so egregious that they sparked EPA's own Senior NPDES Permitting Specialist/Environmental Engineer to raise scientific integrity concerns on multiple occasions and write a memo explaining how the EPA's decision was "non-scientific." *See* Attach. 1, Memorandum re: Information regarding the removal of microplastic monitoring from the final modified NPDES permit for Ocean Era, B.31 ("Microplastic Memo") at 2. Microplastic monitoring is necessary to ensure that the discharge does not degrade water quality or pose a danger to marine life and human health. Nevertheless, EPA management made a "politically motivated and/or policy driven" decision to eliminate the microplastic monitoring requirement. *Id.*

Although EPA acknowledged that the new netting material "may introduce plastic particles into the marine environment,"² it failed to assess the required factors under the CWA, including the risk of adverse changes to the ecosystem, the potential of the bioaccumulation and persistence of microplastics, as well as the impacts to biological communities surrounding the facility and to human health. 40 C.F.R. §§ 125.121(e), 125.122(a).

Instead, EPA cited two conclusory paragraphs in its response to comments, which contain no scientific analysis, no quantitative estimates of microplastic discharges, and no finding that such discharges will not cause an unreasonable degradation. EPA Resp. at 28

² FoA Petition, Attach. 3, Resp. to Comments, B.7 at 14.

(citing Resp. to Comments at 14-15). EPA arbitrarily relies on the project duration, alleged dilution, and monitoring the thickness of the netting to mitigate all risks. *See* EPA Resp. at 28.

However, the duration of the 2025 Permit is identical to the prior versions of the permit, Microplastic Memo at 6-7, which required monitoring for copper, the previous material being used. EPA never explained why it changed its position to claim that monitoring of the material is no longer required due to the duration of the project. “[A]n agency changing its course must supply a reasoned analysis indicating that prior policies and standards are being deliberately changed, not casually ignored. Failing to supply such analysis renders the agency’s action arbitrary and capricious.” *Lone Mt. Processing, Inc. v. Sec’y of Labor*, 709 F.3d 1161, 1164 (D.C. Cir. 2013) (internal quotations and citation omitted). Moreover, there is no indication that monitoring the thickness of the netting and replacing it after it has shed microplastics will mitigate damage to the marine environment or that the microplastics will be diluted to the degree that there will be no unreasonable degradation of the marine environment.

Critically, EPA makes no attempt to justify its failure to evaluate the ocean discharge criteria for the Modified Permit. EPA entirely failed to analyze the volume, persistence, or ecological and human health impacts of microplastics from the Facility. It did not evaluate potential accumulation in fish tissue, the risk to consumers, or the potential for long-term contamination. These are serious failures, especially given the extensive evidence demonstrating the high risk of unreasonable degradation to the marine environment. Friends of Animals and EPA’s own Senior Permitting Specialist/Environmental Engineer raised alarms about these risks. *See* Friends of Animals’ Comment at 12-13; Microplastic Memo.

Moreover, the record is replete with evidence demonstrating how aquaculture-derived microplastics pose serious risks to marine ecosystems and human health. This includes the following:

- Attach. 2, Wu, H., Hou, J., & Wang, X. (2023). A review of microplastic pollution in aquaculture: Sources, effects, removal strategies and prospects. *Ecotoxicology and Environmental Safety*, 252, 114567, C.5 (“Wu et al., 2023”);
- Attach. 3, Huntington, T. (2019). Marine Litter and Aquaculture Gear: White Paper, C.6 (“Huntington 2019”);
- Attach. 4, GESAMP (2016). Sources, fate and effects of microplastics in the marine environment: part two of a global assessment” (Kershaw, P.J., and Rochman, C.M., eds.), C.18 (“GESAMP 2016”);
- Attach. 5, Krüger, L., et. al. (2020). Plastic debris accumulation in the seabed derived from coastal fish farming. *Environmental Pollution*, 257, 113336., C.24 (“Krüger et. al., 2023”);
- Attach. 6, Miao, C., et al. (2023). Microplastics in aquaculture systems: occurrence, ecological threats and control strategies. *Chemosphere*, 340, 139924, C.27, (“Miao et. al., 2023”);
- Attach. 7, Mahamud, A. S. U., et. al. (2022). Microplastics in fishmeal: A threatening issue for sustainable aquaculture and human health. *Aquaculture Reports*, 25, 101205, C.28 (“Muhamud et. al., 2022”);
- Attach. 8, Lin, L., et al. (2022). Risk of aquaculture-derived microplastics in aquaculture areas: An overlooked issue or a non-issue?. *Frontiers in Marine Science*, 9, 923471., C.37 (“Lin et. al., 2022”);
- Attach. 9, Davidson, T. M. (2012). Boring crustaceans damage polystyrene floats under docks polluting marine waters with microplastic. *Marine pollution bulletin*, 64(9), 1821-1828, C.41 (“Davidson, 2012”);
- Attach. 10, Chen, G., Li, Y., & Wang, J. (2021). Occurrence and ecological impact of microplastics in aquaculture ecosystems. *Chemosphere*, 274, 129989, C.42 (“Chen et. al., 2021”);
- Attach. 11, Su, Z., et al. (2024). Microplastics in aquafeeds: Occurrence, sources, effects and considerations for aquatic food production. *TrAC Trends in Analytical Chemistry*, 176, 117760, C.43 (“Su et. al., 2024”).

For example, one extensive review of the literature summarized that “aquatic microplastics will bring a variety of pollution risks to aquaculture and its surrounding environment.” Attach. 2, Wu et al., 2023, at 6. Another study warned that “[e]xisting

findings indicate that the ecological and health risks of [aquaculture-derived microplastics] cannot be neglected.” Attach. 8, Lin et. al., 2022 at 5. One review explained that:

For the aquaculture environment, the pollution of microplastics will cause the deterioration of the aquaculture environment, affect the material and energy cycle in the aquaculture environment, and affect the aquaculture benefit of aquaculture products. Microplastics in the aquaculture environment will also be released into the natural water environment after accumulation, resulting in broader environmental risks. Microplastics can cause oxidative stress in aquaculture products, affect the behavior of aquaculture products, growth and reproduction, and even lead to the death of aquaculture products, thereby reducing the economic benefits of aquaculture. The microplastics entering the human body through aquaculture products will also affect human health from multiple levels.

Attach. 2, Wu et al., 2023 at 11.

Overall, the extensive studies in the record show that microplastics can:

- Persist in the marine environment and bioaccumulate;³
- Cause toxicity, reproductive harm, and mortality in aquatic species;⁴
- Act as vectors for heavy metals, pathogens, and antibiotic resistance;⁵ and
- Pose significant threats to human health, including increased risks of cancer, cardiovascular disease, and neurodegenerative conditions.⁶

EPA never address these studies or concerns. Moreover, EPA ignored the heightened risk of microplastic pollution during extreme weather events, which can cause structural failures and widespread release of plastic debris. *See* Attach. 3, Huntington 2019 at 19; Attach. 4, GESAMP 2016 at 23–24; Attach. 10, Chen, et. al., 2021 at 3; Attach. 12, Lusher, A., Hollman, P., & Mendoza-Hill, J. (2017). *Microplastics in fisheries and aquaculture: status of*

³ *See, e.g.*, Attach. 2, Wu, et al., 2023 at 5-11; Attach. 6, Miao, et. al., 2023 at 1-5; Attach. 8, Lin, et. al., 202, at 5.

⁴ *See, e.g.*, Attach. 10, Chen, et. al., 2021 at 7; Wu, et al., 2023 at 5, 11; Attach. 8, Lin, et. al., 2022, at 2; Attach. 6, Miao, et. al., 2023 at 10.

⁵ *See, e.g.*, Attach. 2, Wu, et al., 2023 at 5; Attach. 4, GESAMP 2016 at 75; Attach. 6, Miao, et. al., 2023 at 7; Attach. 10, Chen et. al., 2021 at 7.

⁶ *See, e.g.*, Attach. 2, Wu, et al., 2023, 7-8, Attach. 4, GESAMP 2016 at 78-79; Attach. 6, Miao, et. al., 2023 at 10; Attach. 7, Muhamud et. al., 2022 at 1-7; Attach. 8, Lin et. al., 2022 at 2-5.

knowledge on their occurrence and implications for aquatic organisms and food safety. FAO, C.25, (“Lusher, et. al., 2017”) at 25.

EPA's failure to assess the threat of microplastics constitutes a clear and serious error. The agency cannot lawfully authorize a discharge without first determining that it will not cause unreasonable degradation. EPA did not, and could not, make that determination here.

2. EPA violated the law by failing to consider how the 2025 Permit may cause unreasonable degradation of the marine environment in exacerbating harmful algal blooms and by using the incorrect standard.

The Modified Permit poses a threat to human health, shorelines, beaches, and the biological community because it is likely to contribute to harmful algal blooms (HABs), also known as red tides. *See* FoA Petition at 13-18. HABs are fueled by nutrient pollution, specifically nitrogen and phosphorus, both of which the Facility will discharge. Yet EPA failed to meaningfully consider this risk, in violation of its legal obligations.

EPA's claim that addressing HAB issue in previous versions of the permit excuses it from addressing it in the 2025 Permit is without merit. *Contra* EPA Resp. at 19. According to the CWA regulations, when a permit is modified “the conditions subject to modification are reopened.” 40 C.F.R. § 122.62. EPA has modified the total amount of pollutants to be discharged, thus that condition is reopened. EPA cannot avoid its duty simply because the 2025 Permit may allow for lower overall production than previous versions of the permit. The relevant question now is whether the Modified Permit could cause an unreasonable degradation.

Namely, EPA was required to consider how the Modified Permit could contribute to HABs, threatening human health and the biological community. *See* 40 C.F.R. §§ 125.122(a), 125.121(e). EPA fails to do this. Instead, EPA relies on the Ocean Discharge Criteria Evaluation (ODCE) for the 2022 Permit. EPA Resp. at 20. EPA's reliance on its evaluation for

previous versions of the permit is particularly problematic because the 2022 determination was based on the insufficiency of evidence available at that time. EPA admitted in the 2020 ODCE that nutrients “contribute to certain harmful algal blooms,” that “HABs are on the rise in frequency, duration, and intensity in the Gulf,” and that this is “largely because of human activities.” ODCE at 34. However, it then claimed that “not enough scientific evidence is available to suggest that [nutrient discharge] from fish farms, or the proposed project, can be directly related to the occurrence of red tides.”). *Id.* at 35.

Setting aside that EPA used the incorrect standard for previous versions of the permit, now there is additional evidence that the 2025 Modified Permit may contribute to HABs and cause unreasonable degradation. *See* FoA’s Petition at 13-18.

Importantly, recent studies indicate that climate change “is poised to exacerbate impacts of coastal eutrophication,” Attach. 13, Sunkara et. al, *The Gulf of Mexico in trouble: Big data solutions to climate change science*, 10 *Frontiers in Marine Sci.* 1075822 (Mar. 14, 2023); *see also* Attach. 14, Zhangxi Hu et al, Editorial: *The impacts of anthropogenic activity and climate change on the formation of harmful algal blooms (HABs) and its ecological consequence*, 11 *Frontiers in Marine Sci.* 1397744 (Mar. 26, 2024); Attach. 15, Gaonkar et al, *Metabarcoding reveals high genetic diversity of harmful algae in the coastal waters of Texas, Gulf of Mexico*, 121 *Harmful Algae* 102368 (Jan. 2023).

Given that climate change has altered baseline conditions, it is more evident now than it was years ago that pollution from the Facility is likely to trigger HABs and cause an unreasonable degradation of the marine environment. *See* FoA Comment at 16; Attach. 16, Quinlan et al., *Results from the Gulf of Mexico Climate Vulnerability Analysis for Fishes and Invertebrates*, NOAA Technical Memorandum NMFS-SEFSC-767 (Aug. 2023), B.11; Attach. 17, NOAA, *Harmful Algal Blooms Observing System, What are HABs?*, B.11.

EPA failed to respond to any of this information or the new studies indicating the rising risk of HABs. The EPA's failure to consider new information is a clear error because the regulations mandate that EPA make its unreasonable degradation determination based on "available information." 40 C.F.R. § 125.123(a),(b).⁷ All of the information above was available and provided to EPA when it issued the 2025 Permit.

Critically, EPA never conducted monitoring that suggests that the Modified Permit will not contribute to HABs. EPA never determined what amount of nitrogen and phosphorus discharges would be safe. It did not establish any thresholds for how much of these pollutants the area could withstand without triggering or contributing to HABs and causing an unreasonable degradation of the marine environment.

EPA's failure to consider these threats was a clear error because the CWA requires EPA to consider such threats before issuing a permit. 40 C.F.R. § 125.22(a)(2)-(4),(6). In particular, EPA must consider "the effect of disposal of pollutants on human health or welfare, including but not limited to plankton, fish, shellfish, wildlife, shorelines, and beaches;" "the effect of disposal of pollutants on marine life including the transfer, concentration, and dispersal of pollutants or their byproducts through biological, physical, and chemical processes; changes in marine ecosystem diversity, productivity, and stability; and species and community population changes;" and "the effect of disposal, of pollutants on esthetic, recreation, and economic values." 33 U.S.C. § 1343(c)(1)(A)-(C).

The Modified Permit's potential to increase HABs also raises serious concerns for vulnerable biological communities, including threatened and endangered species in the Gulf. EPA failed to evaluate these risks, in violation of its obligations under 40 C.F.R. §

⁷ The regulations also allow for permit modifications based on new information, such as the increased likelihood of HABs in the area of the Facility. *See* 40 C.F.R. § 122.62(a)(2).

125.122(3) and 33 U.S.C. § 1343(c)(1)(A)-(C). The bottom line is that EPA failed to make the findings required by the CWA.

Even if EPA believes the evidence is inconclusive, that does not justify issuing the permit. To the contrary, the Clean Water Act is explicit: if EPA lacks sufficient information to reasonably assess the environmental effects of a discharge, “no permit shall be issued.” 33 U.S.C. § 1343(c)(2). Where there is uncertainty, the burden shifts to EPA to demonstrate that any discharge will not cause irreparable harm during the monitoring period. 40 C.F.R. § 125.123(c)(1). EPA has made no such finding here. *See* EPA Resp. at 29. Nor did EPA impose the safeguards required when there is insufficient information to make a determination of no degradation. *See* 40 C.F.R. § 125.123(c)(3), (d).

3. In issuing the 2025 Permit, EPA failed to consider new and increased risks of fish escape, pathogens, and facility failures in severe weather.

EPA does not dispute that it never evaluated the Ocean Discharge Criteria for the 2025 Permit. Thus, it did not consider the environment risk associated with cultivating red drum, including the risk of pathogen transmission and disease. Nor did EPA adequately consider the potential risk of red drum escaping or whether the modified Facility design can withstand severe weather events.

EPA once again attempts to circumvent its duties by comparing the Modified Permit to previous versions of the permit. EPA Resp. at 20-21. However, the CWA mandates that EPA “reopen” conditions subject to modification and make its determinations based on all “available information.” 40 C.F.R. §§ 122.62, 125.123(a), (b). EPA cannot avoid this merely by claiming the degree to which the impacts have changed is “not significant.” *Contra* EPA Resp. at 21. Moreover, EPA cites no studies for its conclusion that the changes are insignificant. EPA ignores evidence to the contrary, including that red drum have different

susceptibility to disease, different bacterial infections, and different parasites than the fish contemplated by earlier versions of the permit. *See* FoA Petition at 10-12 (citing J.A. Plumb, *Major diseases of striped bass and redfish*, 33 Vet. Hum. Toxicol. 1-34 (1991)).

EPA's reliance on its Response to Comments from the 2022 Permit is similarly misplaced. EPA Resp. at 21. That response was specific to a different facility design and different species of fish. *See* EPA Resp., Attach. 17 at 19-20. EPA acknowledged that its finding for previous versions of the permits "referred to antimicrobial qualities of copper material in discussion of risk from pathogens, saying use of copper reduced this risk." Attach. 18, Ocean Era Permit Modification Justification V2, A.33 at 9. In contrast, the new netting material increases the risk of pathogens as "[m]icroplastics can harbour pathogens," including those that "cause illness in humans, shellfish, finfish and crustaceans." Attach. 4, GESAMP 2016 at 75. EPA never addressed this.

Similarly, EPA did not adequately address the risk of severe weather events and the potential for fish escape for the new, larger facility, approved in the Modified Permit.

Ocean Era's application materials confirmed that it had not conducted "extremes analysis for their site and certain storm events." Attach. 19, Engineering Design Information, A.4 at 1. EPA's expert commented that this omission was "concerning." *Id.* The risks are real and serious, especially given that the facility is located in an area subject to hurricanes. A hurricane could damage the facility, equipment, supporting vessels, and lead to fish escapes and human injury. Attach. 20, USEPA - FDPC Plan_VE Project_110124, A.12 at 6.

Likewise, EPA ignored the fact that the 2025 Permit's different plastic net material has a higher likelihood of both biofouling and entangling marine animals than the original copper net, which directly implicates the "potential for bioaccumulation" of pollutants as

well as adversely impacting the surrounding biological communities and marine animals. *see* C.F.R. § 125.122(1)-(3); *infra* at 15-16.

EPA has not made the required findings under the CWA. Instead, it has applied its own vague standards in place of the regulatory requirements. For example, it cites a memo stating that the Modified Permit conditions “reduce the probability of fish contracting disease and limit pathogen transfer.” EPA Resp. at 20 (citing Final Memo at 13). But EPA never quantified that probability, nor did it analyze the risk of pathogen transfer specific to the Modified Permit. It certainly did not properly determine, as required, that the 2025 Permit would not cause an “unreasonable degradation of the marine environment.” 40 C.F.R. § 125.123(a).

Critically, if the EPA lacked sufficient information to make that determination, then conditions. 40 C.F.R. § 125.123(c). EPA has pointed to no such conditions and offered no evidence to demonstrate that the discharge authorized by the 2025 Modified Permit will not result in unreasonable degradation.

C. EPA’s determination that the Facility is not likely to harm ESA-listed species was clearly erroneous.

EPA erred in concluding that the Modified Permit will not adversely affect any listed species or their critical habitat. It failed to adequately consider the extent to which the Facility can attract listed species to it and did not consider the potential for harmful effects like plastic pollution and HABs to spread from the Facility and harm listed species. Additionally, it downplays the potential severity of these harms to listed species, especially the most vulnerable ones.

For example, the Rice’s whale is so endangered that even a single fatality from HABs, or a vessel strike or entanglement, could risk the survival of the whole 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)); *see also* Attach. 21, Gulf of Mexico Assessment Program for Protected Species: Marine Mammals, C.21 at 61. There are fewer than 150 individuals remaining, and they almost exclusively inhabit the northeastern Gulf habitat. *Id.* Attach. 21 at 61. The Facility has the potential to harm the Rice's whale and other ESA-listed Gulf species like the giant manta ray and several species of sea turtles. The EPA's determinations to the contrary were based on insufficient evidence and missed important aspects of these harms.

1. EPA's informal consultations for the Modified Permit were too conclusory and did not analyze several changed conditions that could adversely affect ESA-listed species.

EPA erred in the reinitiated informal consultations by relying on outdated information and research that applied to the original permit conditions rather than using the "best scientific and commercial data available" as required by the ESA. *See* 16 U.S.C. § 1536(a)(2), (c)(1). EPA cannot rely on deference to overcome the flaws in the consultation process. *Contra* EPA Resp 31. Merely going through the motions of the consultation process is not enough for EPA to "insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence" of any endangered or threatened species. 16 U.S.C. § 1536(a)(2). Moreover, "informal consultation is not a substitute for formal consultation." *Nat'l Wildlife Fed'n v. FEMA*, 345 F. Supp. 2d 1151, 1159 (W.D. Wash. 2004).

These reinitiated informal consultations do not entitle EPA to deference from the Court because they were too conclusory and contained many unsubstantiated claims. Agency actions "must be upheld, if at all, on the basis articulated by the agency itself," and

cannot be sustained “by reliance on the agency’s unstated assumptions” about the effects of the action. *Pac. Coast Fed’n of Fishermen’s Ass’ns v. United States Bureau of Reclamation*, 426 F.3d 1082, 1091 (9th Cir. 2005). EPA should have prepared a biological evaluation for the 2025 Permit or initiated a formal consultation to analyze the Modified Permit conditions in more detail, rather than rely on unsubstantiated assumptions. NMFS and FWS’s concurrences were short and did not contain a record of any independent scientific analysis; rather, they just briefly agreed with the EPA’s findings, which did not adequately address all the changed 2025 Permit conditions. *See* EPA Resp., Attach. 14.

The EPA could not rationally conclude based on the record that the Modified Permit is unlikely to adversely affect any listed species because the reinitiated informal consultation failed to consider several methods by which listed species may be harmed. EPA arbitrarily concluded that the Facility would cause no increase in the risk of HABs without considering factors like degraded ocean conditions or climate change. Attach. 22, Ocean Era req. for expedited informal ESA and FWCA consult, B.13 (“Consultation Request”) at 9. It also failed to consider the risk of microplastics from the Facility in detail, or that increased cleanings of the net pen will increase the amount of microplastics the net sheds. FoA Petition at 26. Finally, as Friends of Animals alleged in its comment, EPA’s analysis of the risk of pathogens in the consultation was limited to red drum’s resistance to skin flukes. FoA Petition, Attach. 2, FoA Comment at 8-9. EPA did not justify why it did not analyze the risk of other pathogens affecting red drum.

2. EPA did not properly analyze other issues, such as entanglement, microplastics pollution, and changed baseline conditions.

In analyzing the risk for entanglement of listed species, EPA again erred by relying on the original consultation process, rather than the best available information. The

Modified Permit has a different cage setup, different mooring line configuration, an increased facility size, and a different net material. FoA Petition at 25. EPA errs in assuming that the tautness of the lines alone makes up for the addition of over 5,000 feet of line. *Id.*

Keeping nets and mooring lines taut does not eliminate the risk of entanglement. Even with taut lines, there is “still concern that large whales and leatherback turtles may be at risk for entanglement and/or injury if they collide with” highly tensioned lines. Attach. 23, Bath, G., Price, C., Riley, K., & Morris, J. (2023). A global review of protected species interactions with marine aquaculture. *Reviews in Aquaculture*, 2023;1-34, 16, C.4 (“Bath et al., 2023”). Furthermore, there have been multiple instances of whale species such as humpback whales, minke whales and Bryde’s whales breaking through fish farm net pens and becoming trapped inside, sometimes fatally. *Id.* at 9, 11. At least one humpback whale has also died from being trapped under an aquaculture net pen. *Id.* at 11. ESA-listed whales or other large Gulf animals could collide with the Facility’s net, harming those animals and causing fish escapes, plastic gear being lost in the ocean, and an increased risk of further entanglements once the cage is torn loose. *Id.* at 14.

EPA also fails to account for the increased risk of severe storms due to climate change, which increases the likelihood of lost plastic equipment, entanglement of ESA-listed species and the spread of microplastics. It will be more likely for the facility to suffer damage and have lines break off than was analyzed in the original permit analysis, and more likely for other gear and equipment to be lost in the ocean that could pose an entanglement risk. Extreme weather events can result in “entire components e.g. cages, nets, rafts and plastic containers being lost directly into the sea.” Attach. 3, Huntington 2019 at 19. These materials pose an added entanglement risk to any marine species that come upon them, including ESA-listed species. For example, sea turtles “are vulnerable to

entanglement in both horizontal and vertical lines.” Attach. 23, Bath et al., 2023 at 16. Any of this plastic gear that gets broken off the cage during a storm, or gets swept into the ocean from the Facility, will also become a permanent source of microplastics pollution in the ocean that EPA must consider.

EPA also failed to analyze the risk of microplastics from other sources than just degradation of the cage material. During the normal operation of aquaculture facilities, “plastic netting and tubing used in ocean-based aquaculture operations can directly enter the environment through improper disposal,” which should be an important concern in planning how to operate the facility and dispose of waste. Microplastic Memo at 3. Microplastic effects can also come from feed itself, feed packaging, and other cage materials besides the netting. *Id.* at 5.

3. EPA’s finding that the Modified Permit will not likely adversely affect listed species through increased risk of HABs was clearly erroneous.

EPA cannot dismiss the Facility’s risk of HABs without additional analysis. EPA is obligated to use the best available science to evaluate the likelihood of harm to listed species under the ESA. 16 U.S.C. § 1536 (a)(2); *see also Pac. Coast Fed’n of Fishermen’s Ass’ns v. Gutierrez*, No. 1:06-cv-00245-OWW-GSA, 2008 U.S. Dist. LEXIS 31462, *172-173 (E.D. Cal. Apr. 16, 2008). Here, EPA failed to use the best available science in analyzing the effects of the Modified Permit, because it did not consider the science on climate change and changed baseline conditions that has been published since the original permit was issued. *Id.* The Facility will contribute to more severe and frequent HABs, and contrary to EPA’s claims, both the analysis behind the 2022 Permit and the informal consultation for the Modified Permit failed to adequately address HABs. *See* FoA Comment at 18.

HABs cause “massive animal and human health problems,” destroy entire marine habitats, and can turn afflicted areas into a “dead zone” incapable of supporting marine life. Attach. 24, Chatterjee, S., & More, M. (2023). Cyanobacterial Harmful Algal Bloom Toxin Microcystin and Increased *Vibrio* Occurrence as Climate-Change-Induced Biological Co-Stressors: Exposure and Disease Outcomes via Their Interaction with Gut–Liver–Brain Axis, *Toxins*, 15(4) 289, 290. (“Chatterjee et al., 2023”). The Gulf ecosystem has become more vulnerable to HABs than it was in 2022 due to higher nitrogen and phosphorus levels, higher ocean temperatures from climate change, and even the presence of a new toxic dinoflagellate in the Gulf that will worsen the harmful effects of HABs. FoA Comment at 18. These effects of climate change are predicted to promote an increased “frequency, geographical expanse, and duration” of HABs. Attach. 24, Chatterjee et. al., 2023 at 290. There are new studies on the potentially catastrophic effects of HABs that have come out since the original Permit that EPA failed to take into account, and as such it failed to consider the best available science in issuing the Modified Permit. FoA Comment at 15-16.

4. EPA still failed to consider how the Modified Permit will increase the risk of harm to ESA-listed species from acting as a Fish Aggregating Device that will increase vessel strikes and bycatch.

EPA failed to rebut Friends of Animals’ arguments that the Modified Permit will harm listed species through vessel strikes and bycatch. It claims that the potential harms from vessel strikes and bycatch “were adequately addressed” by the 2022 permit record and the Modified Permit Determination Memo. EPA Resp. at 31. However, these documents did not fully analyze these issues.

EPA did not address Friends of Animals’ concerns about the increased vessel traffic relative to the original permit caused by “more regular cleanings” of the net due to increased biofouling. See FoA Petition at 23-24. Furthermore, NMFS and EPA improperly

dismissed the potential for vessel strikes and bycatch of any vessels aside from Ocean Era's own vessels in their analysis of the Modified Permit conditions. In its amended letter of concurrence for the 2022 permit, NMFS briefly considered the risk of vessel strikes from non-Ocean Era vessels like recreational and commercial fishing boats. Consultation Request at 69. However, its analysis was too conclusory and dismissed all potential impacts under the assumption that the increased traffic would be redirected from other areas of the Gulf. *Id.* Not only is this not a valid justification to avoid analyzing the risk of harm at the specific location of the Facility, but it also contradicts Ocean Era's own statements about how likely the Facility is to attract additional people and vessels.

EPA improperly dismisses the possibility that the Facility's function as a fish aggregating device will increase traffic from the shore, especially because it will be a significant source of fish clustered only 45 miles offshore. Ocean Era stated that "it will encourage Sarasota area fishermen to use the pen as a fish aggregating device." *See* FoA Petition, Attach. 6 at 45. Ocean Era claimed that past facilities allowed "[l]ocal recreational charter boat, and commercial fishermen" to catch fish "hand over fist" around the facilities, and that "dive and snorkel tour operators brought their passengers out to dive on the offshore pen sites." *Id.* at 46.

EPA failed to respond to this concern, instead claiming its informal consultation was sufficient. FoA Petition at 22; EPA Resp. at 32. However, EPA's analysis for its informal consultation with NMFS for the Modified Permit merely incorporated the deficient analysis from the 2022 Permit, dispensing of the issue of vessel strikes in a single paragraph. Consultation Request at 10.

D. EPA failed to comply with NEPA and arbitrarily departed from its own policies.

The Facility is unprecedented, and is in one of the most environmentally sensitive and degraded areas of federal waters. It presents numerous novel and unanalyzed risks. EPA's assertion that it is exempt from complying with NEPA merely because it characterized the EA as voluntary is contrary to NEPA's fundamental purpose and EPA's policy. *Contra* EPA Resp. 13-15.

Under its own policy, EPA may voluntarily prepare NEPA documents when it would be "beneficial in addressing Agency actions." Voluntary Preparation of NEPA Documents, 63 Fed. Reg. 58045, 58046 (Oct. 29, 1998). However, once it chooses to do so, EPA must comply with NEPA procedures, including those in 40 C.F.R. Part 6, which adopted Council on Environmental Quality (CEQ) regulations. *Id.*⁸ EPA may only deviate from these regulations when it determines that compliance is not "practicable or appropriate," and in such cases, EPA must notify the public of the exemption. *Id.*

Here, EPA voluntarily prepared an EA, finding that the "analysis would be beneficial." FoA Petition, Attach. 4, Memo at 28. Yet, contrary to its own long-standing policy, EPA failed to follow the applicable NEPA regulations, made no finding that compliance was impracticable or inappropriate, and issued no public notice of any claimed exemption. EPA's unexplained departure from its own policies violates the APA. Agencies may not "depart from a prior policy *sub silentio*["] *FCC v. Fox TV Stations, Inc.*, 556 U.S. 502,

⁸ The CEQ and EPA are revising NEPA regulations pursuant to Executive Order 14154, Unleashing American Energy, 90 Fed. Reg. 8353 (Jan. 29, 2025). CEQ has provided guidance, stating that "[w]hile these revisions are ongoing, agencies should continue to follow their existing practices and procedures for implementing NEPA" and that agencies should consider voluntarily relying on the rescinded CEQ regulations to defend "against challenges to reviews completed while those regulations were in effect." Attach. 25, CEQ Memorandum on the Implementation of the National Environmental Policy Act, C.7. When EPA issued the 2025 Permit, the NEPA regulations in effect were in 40 C.F.R. Part 6.

515 (2009). Rather, an agency must (1) display “awareness that it *is* changing position,” (2) show that “the new policy is permissible under the statute,” (3) believe the new policy is better, and (4) provide “good reasons” for the new policy. *Id.* at 515-16. A “central principle of administrative law” is that agencies “must at a minimum acknowledge” their departure from past policies and “offer a reasoned explanation for it.” *Am. Wild Horse Pres. Campaign v. Perdue*, 873 F.3d 914, 923 (D.C. Cir. 2017). Here, EPA’s failure to follow its own voluntary NEPA policy or acknowledge or justify the deviation renders its action arbitrary and capricious.

Moreover, although the CWA states that certain actions are not major federal actions under NEPA, this does not shield agencies from judicial scrutiny or excuse clear errors when agencies voluntarily prepare EAs and FONSIIs. *See* 33 U.S.C. § 1371(c)(1); *see also Pac. Coast Fed. of Fishermen’s Ass’ns v. U.S. DOI*, 996 F. Supp. 2d 887, 899-900 (E.D. Cal. 2014) (holding that “once an agency elects to prepare an EA, the EA is subject to independent review, even if it has already been determined that no EIS is required”), *remanded on other grounds* 655 F. App’x 595 (9th Cir. 2016).

Rejecting clearly erroneous EAs—even when prepared voluntarily—is consistent with NEPA’s fundamental policies. Congress established NEPA in response to the growing recognition of how human activities such as population growth, urbanization, industrial expansion, resource extraction, and technological advances, have increasingly profound and interconnected impacts on the environment and overall well-being of society. 42 U.S.C. § 4331(a). NEPA underscores the critical need to restore and maintain environmental quality, not just for ecological health, but for the broader welfare of humanity. *Id.*

Through NEPA, Congress declared a national policy of environmental stewardship, requiring agencies to work with other governments and the public to promote conditions

where “man and nature can exist in productive harmony” and to ensure that decisions impacting the environment consider the long-term sustainability of nature and society. *Id.* NEPA requires agencies to use “all practicable means” to improve and coordinate their actions to protect environmental quality for current and future generations. *Id.* § 4331(b).

NEPA further mandates that agencies implement its policies “to the fullest extent possible,” and “utilize a systematic, interdisciplinary approach” to decision-making. 42 U.S.C. § 4332; *Id.* § 4332(A). Accordingly, EAs must be consistent with NEPA’s requirements and purpose. Deficient analyses, whether voluntary or otherwise, must not be upheld.

Here, EPA’s EA was plainly deficient and violated NEPA by (1) failing to supplement the EA after significant permit modifications, (2) failing to take a hard look at the 2025 Permit’s impacts, and (3) failing to prepare an EIS. *See* FoA Petition at 32-38. Shielding these clear errors from judicial review merely because the EA was voluntary is inconsistent with NEPA’s fundamental purpose and policies. Friends of Animals provided evidence demonstrating that EPA failed to take a hard look at HABs and the use of pharmaceuticals, and that the Facility meets several regulatory factors requiring an EIS. *See* FoA Petition 34-38. EPA did not respond to these arguments.

EPA also ignored arguments regarding supplementation. It asserted, without analysis, that supplementation was unnecessary because “[t]he underlying assumptions of the original analysis remain valid and still support the Region’s FONSI.” EPA Resp. at 14-15. This conclusory statement entirely fails to engage with Friends of Animals’ arguments demonstrating that the original analysis did not adequately account for the significant permit modifications. *See* FoA Petition 32-34.

For example, the substantial changes to the net pen and the fish species raise environmental concerns, including risk of entanglement and pollution. *See id.* Further, new

information highlights the facility's potential for significant harm, including HABs, fish escapes, and microplastic pollution. *Id.* EPA violated NEPA by failing to supplement the EA with this new information.

CONCLUSION AND RELIEF SOUGHT

EPA failed to adequately determine if the 2025 Permit would result in unreasonable degradation of the marine environment, failed to fully consider the impact on threatened and endangered species, and failed to take a hard look at the environmental impacts of the Facility. Due to the clearly erroneous actions by EPA in issuing the 2025 Permit, Friends of Animals requests that the EAB vacate the 2025 Permit in its entirety and remand it back to EPA.

Date: September 12, 2025

/s/Jennifer Best
Jennifer Best
Director, Wildlife Law Program

Friends of Animals
7500 E. Arapahoe Rd., Ste. 385
Centennial, CO 80112
Tel. (720) 949-7791
jennifer@friendsofanimals.org

STATEMENT OF COMPLIANCE WITH WORD LIMITATION

In accordance with 40 C.F.R §§ 124.19(d)(1)(iv) and (d)(3), I hereby certify that this Petition 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 petition contains 6,996 words (including footnotes), as counted by Microsoft Word.

CERTIFICATE OF SERVICE

I, Jennifer Best, hereby certify that on September 12, 2025, I served a true and correct copy of the foregoing Petition for Review to the following by email, and through the EAB's e-filing system.

For EPA:

Paul Schwartz
Counsel for EPA Region 4
Office of Regional Counsel
EPA Region 4
61 Forsyth St., SW
Atlanta, GA 30303
Schwartz.paul@epa.gov

For Ocean Era, Inc:

Mr. Neil Anthony Sims
CEO, Founder
Ocean Era, Inc.
P.O. Box 4239
Kailua-Kona, Hawaii 96745
neil@ocean-era.com