

IN RE OCEAN ERA, INC.

NPDES Appeal Nos. 25-01 & 25-02

ORDER DENYING REVIEW IN PART AND REMANDING IN PART

Decided February 13, 2026

Syllabus

Petitioner environmental organizations each filed a petition for review of a decision by U.S. Environmental Protection Agency Region 4 to modify a National Pollutant Discharge Elimination System permit issued to Ocean Era, Inc. for the discharge of pollutants from an offshore aquaculture facility. Ocean Era requested the permit modification to make proposed changes to the facility, which included changing the fish species and net pen material. Petitioners assert that the Region erred in modifying the permit with respect to the requirements of the Clean Water Act, the Endangered Species Act, the National Environmental Policy Act, the Marine Mammal Protection Act, and the Marine Protection, Research, and Sanctuaries Act (known as the Ocean Dumping Act).

Petitioners also raised arguments in their reply briefs based on a memorandum from the permit writer describing internal discussions about adding a requirement to monitor microplastics as part of the modified permit. The Region filed motions for leave to file a sur-reply responding to the reply briefs and for leave to file a corrected Administrative Record Index omitting the microplastics memorandum.

Held: The Board grants the motions for leave to file a sur-reply and for leave to file a corrected Administrative Record Index. With respect to the petitions for review, the Board denies review in part and remands in part. The Board remands the permitting decision to the Region to reconsider its decision regarding whether pathogens or microplastics from the proposed facility will cause unreasonable degradation of the marine environment under the Clean Water Act. The Board denies review as to all the other issues raised in the petitions for review. Specific holdings are as follows:

- (A) The microplastics memorandum is a pre-decisional, deliberative document that the Region may properly exclude from the administrative record. Accordingly, the Board grants the Region's motion to file a corrected Administrative Record Index.

(B) Petitioners fail to demonstrate that they have met threshold procedural requirements with respect to their arguments related to the National Environmental Policy Act, the Marine Mammal Protection Act, the Ocean Dumping Act, and required permit conditions. With respect to the National Environmental Policy Act, Petitioners either fail to confront the Region's position that the statute is not applicable or fail to preserve the argument that the voluntary preparation of an environmental assessment subjects the permit modification to the requirements of the National Environmental Policy Act. Regarding the issues involving the Marine Mammal Protection Act, the Ocean Dumping Act, and required permit conditions, Petitioners fail to preserve the issues for Board review by raising them in comments on the draft modified permit. Even if the issues had been preserved, Petitioners fail to demonstrate that the Region clearly erred or that review is otherwise warranted.

(C) The Region failed to exercise considered judgment in its conclusion that the permit modification would not cause unreasonable degradation of the marine environment under the Clean Water Act with respect to pathogens and microplastics. With respect to pathogens, the Region's response to comments did not address the studies cited in the comments or explain how, given information in the record that appears to identify different pathogens affecting red drum, the Region concluded that almaco jack and red drum are susceptible to the same pathogens. With respect to microplastics, the Region fails to explain how potential risks from microplastics would be mitigated by the short duration of the fish production cycle, inspection and replacement of the netting, or dilution. Accordingly, the Board remands the permitting decision to the Region for further consideration of those issues. On remand, the Region may further explain its decision, revise the record as necessary, revise its conclusion, or take a combination of those actions. Petitioners fail to demonstrate that the Region clearly erred in modifying the permit with respect to escaped fish, harmful algal blooms, or antibiotic resistance.

(D) Petitioners fail to demonstrate that the Region clearly erred in determining that the permit modification would not jeopardize the continued existence of listed species or critical habitat under the Endangered Species Act. The Region evaluated the effects of the modification on listed species and critical habitats, reinitiated informal consultation with the National Marine Fisheries Service and obtained written concurrence that the modification either has "no effect" or is "not likely to adversely affect" listed species or critical habitat. It also obtained written confirmation from the U.S. Fish and Wildlife Service that no further action was needed.

Before Environmental Appeals Judges Aaron P. Avila and Ammie Roseman-Orr.

Opinion of the Board by Judge Avila:

I. *STATEMENT OF THE CASE*

Petitioners Center for Food Safety, Recirculating Farms Coalition, Tampa Bay Waterkeeper, Suncoast Waterkeeper, Healthy Gulf, Sierra Club, and Food & Water Watch (collectively the “CFS Petitioners”), and Friends of Animals filed petitions for review challenging a decision by the U.S. Environmental Protection Agency Region 4 (“Region”) to modify a National Pollutant Discharge Elimination System (“NPDES”) permit. The Region originally issued the NPDES permit in 2022 to Ocean Era, Inc. authorizing the discharge of pollutants from an offshore aquaculture facility. Ocean Era subsequently requested a modification of the permit to reflect proposed changes to the aquaculture operation, which included changing the fish species from almaco jack to red drum and the net pen material from copper to plastic. On May 15, 2025, the Region issued a modified permit authorizing discharges from cultivation of the new species in the proposed plastic net pen. The modified permit eliminates a requirement to monitor copper in the effluent, prohibits intentional or negligent release of fish, and requires an engineering analysis of the net pen, but does not otherwise change the requirements of the original permit.

The CFS Petitioners filed a joint petition for review with the Environmental Appeals Board and Petitioner Friends of Animals filed a separate petition. Both petitions assert that the Region erred in modifying the permit with respect to the requirements of the Clean Water Act (“CWA”), the Endangered Species Act (“ESA”), and the National Environmental Policy Act (“NEPA”). In addition, the CFS Petition asserts that the Region erred in issuing the modified permit without adequately addressing potential violations of the Marine Mammal Protection Act (“MMPA”), and the Marine Protection, Research, and Sanctuaries Act (also known as the Ocean Dumping Act).

In response to the petitions for review, the Region filed a response brief and a Certification of Index to the Administrative Record, which included a memorandum from the permit writer describing internal discussions about adding a requirement to monitor microplastics as part of the modified permit. Petitioners raised arguments based on the memorandum in their reply briefs and included the memorandum and documents cited therein as attachments. The Region filed motions for leave to file a sur-reply responding to the reply briefs and for leave to file a corrected Administrative Record Index omitting the microplastics

memorandum on the grounds that the memorandum is pre-decisional and deliberative.

As explained below, the Board grants the Region's motion for leave to file a sur-reply and has considered the proposed sur-reply filed with the motion. The Board also grants the motion for leave to file a corrected Administrative Record Index. The Board concludes that Petitioners failed to meet threshold requirements for Board review of the arguments in their petitions with respect to NEPA, the MMPA, the Ocean Dumping Act, and certain conditions of the modified permit. The Board also concludes that the Region failed to exercise considered judgment in its conclusion that the permit modification would not cause unreasonable degradation of the marine environment under the CWA with respect to pathogens and microplastics. Finally, the Board denies review of the other arguments under the CWA and ESA.

II. *LEGAL FRAMEWORK*

Because the Board addresses the CWA and ESA issues on the merits, this section provides the statutory and regulatory framework for review of the permit modification with respect to the CWA and ESA. Other statutes raised in the petitions for review are addressed in the context of our analysis of Petitioners' failure to meet threshold procedural requirements relating to those issues.

A. *The Clean Water Act*

Congress enacted the CWA in 1972 "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." CWA § 101(a), 33 U.S.C. § 1251(a). To help achieve this objective, the Act prohibits the discharge of pollutants into waters of the United States unless authorized by a permit or other specified provision of the Act. *See* CWA §§ 301(a), 402, 33 U.S.C. §§ 1311(a), 1342. The NPDES permitting program is the Act's primary means of authorizing discharges into waters of the United States. *See* CWA § 402, 33 U.S.C. § 1342.

CWA section 403 requires EPA to "promulgate guidelines for determining the degradation of the waters of the territorial seas, the contiguous zone, and the oceans" and, after EPA issues such guidelines, prohibits EPA from issuing a permit for discharge into such waters "except in compliance with such guidelines." 33 U.S.C. § 1343(a), (c). These guidelines, entitled the Ocean Discharge Criteria, provide that EPA may issue an NPDES permit if EPA determines that "the discharge will not cause unreasonable degradation of the marine environment after application of any necessary conditions." 40 C.F.R. § 125.123(a); *see also In re*

Ocean Era, Inc., 18 E.A.D. 678, 682-83 (EAB 2022) (“*Ocean Era I*”).
Unreasonable degradation of the marine environment 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 Ocean Discharge Criteria also establish factors that the Agency must consider in determining whether a discharge will cause unreasonable degradation of the marine environment. *Id.* § 125.122(a). As relevant here, the Ocean Discharge Criteria factors include:

- (1) The quantities, composition and potential for bioaccumulation or persistence of the pollutants to be discharged;
- (2) The potential transport of such pollutants by biological, physical or chemical processes;
- (3) The composition and vulnerability of the biological communities which may be exposed to such pollutants, including the presence of unique species or communities of species, the presence of species identified as endangered or threatened pursuant to the Endangered Species Act, or the presence of those species critical to the structure or function of the ecosystem, such as those important for the food chain;
- (4) The importance of the receiving water area to the surrounding biological community, including the presence of spawning sites, nursery/forage areas, migratory pathways, or areas necessary for other functions or critical stages in the life cycle of an organism.

* * * *

- (6) The potential impacts on human health through direct and indirect pathways;

* * * *

Id.

After an NPDES permit is issued, the permit may only be modified for the reasons specified in 40 C.F.R. § 122.62 or 122.64. 40 C.F.R. § 124.5(a). Under § 122.62, permits may be modified when “[t]here are material and substantial alterations or additions to the permitted facility or activity * * * which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit” or when the permit issuer “has received new information” which was not available at the time of permit issuance and would have justified different permit conditions at the time of issuance. *Id.* § 122.62(a)(1), (2). Only the modified conditions are reopened when a permit modification is prepared—all other aspects of the permit remain in effect. *Id.* §§ 122.62, 124.5(c)(2).

B. *The Endangered Species Act*

Section 7 of the ESA requires EPA, in consultation with the Secretary of the Interior or the Secretary of Commerce, as appropriate, to ensure that agency action “is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined * * * to be critical.” ESA § 7, 16 U.S.C. § 1536(a)(2); *see also* ESA § 3(15), 16 U.S.C. § 1532(15) (defining “Secretary”). Agency action subject to this requirement includes the issuance of NPDES permits. 50 C.F.R. § 402.02 (defining “action” to include “the granting of * * * permits”); *see also* 40 C.F.R. § 122.49(c) (listing ESA section 7 as a statute that may apply to the issuance of NPDES permits); *Ocean Era I*, 18 E.A.D. at 683-84.

To determine whether an agency action is likely to adversely affect listed species or critical habitat, the agency may prepare a biological assessment. 50 C.F.R. § 402.12. The agency may also engage in informal consultation with the U.S. Fish and Wildlife Service (“USFWS”) or the National Marine Fisheries Service (“NMFS”), as appropriate, to determine whether formal consultation is required. *Id.* §§ 402.02 (defining “Service”), 402.13(a). The agency is not required to conduct formal consultation if, as a result of preparation of a biological assessment or informal consultation, the agency determines, and the USFWS or NMFS concurs in writing, that the action “is not likely to adversely affect any listed species or critical habitat.” *Id.* §§ 402.12(k)(1), 402.13(c), 402.14(b)(1).

The regulations further specify when an agency must reinitiate consultation. *Id.* § 402.16. An agency must request reinitiation of consultation if the federal agency retains or is authorized by law to exercise discretionary involvement or control of the action and, as relevant here, “new information reveals effects of the

action that may affect listed species or critical habitat in a manner or to an extent not previously considered” or “a new species is listed or critical habitat designated that may be affected by the identified action.” *Id.* § 402.16(a).

III. *FACTUAL AND PROCEDURAL HISTORY*

The Region first issued an NPDES permit to Ocean Era on September 30, 2020. *Ocean Era I*, 18 E.A.D. at 690. The 2020 permit authorized discharges from a pilot-scale offshore aquaculture facility, known as the Vellella Epsilon Facility, located in federal waters approximately forty-five miles southwest of Sarasota, Florida. *See* Region 4, U.S. EPA, *Final Response to Significant Comments* at 7, 24 (Sept. 30, 2020) (“2020 Resp. to Cmts.”) (filed with EPA Region 4’s Combined Response to Petitions for Review (Aug. 15, 2025) (“Reg.’s Resp. Br.”) as attach. 17).¹ As proposed for the 2020 permit, the facility consisted of a single floating cage made of copper mesh and deployed on a swivel system allowing it to rotate in the prevailing current direction. Region 4, U.S. EPA, *Final Ocean Discharge Criteria Evaluation* at 6 (Sept. 30, 2020) (“ODC Eval.”) (filed with Reg.’s Resp. Br. as attach. 18). The 2020 permit authorized Ocean Era to produce a single cohort of approximately 20,000 almaco jack. 2020 Resp. to Cmts. at 7.

In issuing the 2020 permit, the Region evaluated whether discharges from the facility would cause unreasonable degradation of the marine environment considering the ten Ocean Discharge Criteria factors. ODC Eval. at 4-5. The Region’s analysis is documented in the Ocean Discharge Criteria Evaluation (“ODC Evaluation”). *Id.* The ODC Evaluation stated that the conditions of the permit “will ensure that the discharges from the facility do not cause unreasonable degradation of the marine environment,” but also concluded in the final paragraph that no unreasonable degradation “will *likely* occur” as a result of discharges from the facility. *Id.* at 48 (emphasis added). In addition, the Region and the U.S. Army

¹ The Administrative Record Index filed in this matter does not always clearly identify which documents are included for any given Index entry. For example, Administrative Record Index item number B.10 includes “multiple documents” described as “[c]omments received via email” without specifying who submitted the comments, the date of the comments, or other identifying information. Administrative Record Index (Aug. 12, 2025) (filed with Reg.’s Resp. Br. as attach. 20). Further complicating matters, the Region has not identified the relevant Administrative Record Index number for any of the documents cited in its response brief. For ease of reference, the Board cites to the documents filed by Petitioners and the Region by attachment number in this proceeding. On remand, the Region should take care to ensure that all documents it considered in modifying the permit are clearly identified in the Administrative Record Index.

Corps of Engineers prepared a biological assessment, identified as the Biological Evaluation, concluding that the proposed action would have “no effect” on listed species or critical habitat under the jurisdiction of the USFWS and was “not likely to adversely affect” listed species or critical habitat subject to the jurisdiction of the NMFS. Region 4, U.S. EPA & U.S. Army Corps of Eng’rs, *Final Biological Evaluation* at 27-28 (Sept. 30, 2020) (“Biological Evaluation”) (filed with Reg.’s Resp. Br. as attach. 10). USFWS did not object to issuance of the permit. Memorandum from Env’t Eng’r, U.S. EPA Region 4, to Final Modified NPDES Permit Administrative Record at 11 (May 15, 2025) (“Modification Determination Memo”) (filed with Reg.’s Resp. Br. as attach. 6). NMFS concurred with the Region’s determination that the action was “not likely to adversely affect” some species and revised the determination to “no effect” for others. *Id.*

Petitioner Friends of Animals and a consortium of groups including the CFS Petitioners² filed petitions for review of the Region’s 2020 permit decision. *Ocean Era I*, 18 E.A.D. at 680. The Board denied review in part and remanded the permit in part to the Region to “clearly state whether the Region determined that the permitted discharge will not cause unreasonable degradation of the marine environment.” *Id.* at 719. On remand, the Region revised the permit record and issued a final permit on June 8, 2022. Region 4, U.S. EPA, *Authorization to Discharge Under the NPDES Permit Number FL0A00001* (June 8, 2022) (“2022 Permit”) (filed with Reg.’s Resp. Br. as attach. 3); Modification Determination Memo at 2. Petitioners filed petitions for review of the 2022 permit in federal court, and the petitions are now consolidated in the United States Court of Appeals for the District of Columbia Circuit. *See Friends of Animals v. EPA*, No. 23-1092 (D.C. Cir. filed Apr. 4, 2023); *Food & Water Watch v. EPA*, No. 22-1253 (D.C. Cir. filed Sept. 27, 2022).³

On July 5, 2023, Ocean Era submitted a letter to Region 4 requesting modification of the 2022 permit. Letter from Founder, CEO, Ocean Era, to Env’t

² The consortium consisted of Center for Food Safety, Friends of the Earth, Recirculating Farms, Tampa Bay Waterkeeper, Suncoast Waterkeeper, Healthy Gulf, Sierra Club Florida, the Center for Biological Diversity, and Food & Water Watch.

³ The U.S. Court of Appeals for the District of Columbia Circuit has held the petitions for review of the 2022 permit in abeyance pending the outcome of the Board’s decision in this matter. *Food & Water Watch v. EPA*, No. 22-1253 (D.C. Cir. July 18, 2025) (order holding consolidated cases in abeyance) (filed with Reg.’s Resp. Br. as attach. 4).

Eng'r, U.S. EPA Region 4 (July 5, 2023) (filed with Reg.'s Resp. Br. as attach. 5). The letter proposed changes to the facility including a grid mooring system instead of the permitted swivel-point system and cultivating red drum instead of almaco jack. *Id.* at 1. Although the same number of fish would be stocked, red drum grow slower than almaco jack, so the total harvest would be 46,750 pounds compared to the anticipated harvest of 74,800 pounds of almaco jack. *Id.* at 2. In addition, the new net pen would be made of KikkoNet, a polyethylene terephthalate (PET) monofilament mesh (in less scientific terms—a plastic mesh), rather than copper mesh. *Id.* at 5. Ocean Era also submitted a revised permit application for the facility. Ocean Era, Inc., *Application for NPDES Permit to Discharge Wastewater* (July 15, 2023) (“Revised Permit Application”) (filed with Reg.'s Resp. Br. as attach. 2).

In reviewing the request for a permit modification, the Region considered the effect of the proposed changes to the facility on its ODC Evaluation. *See* Modification Determination Memo at 8-9. The Region stated that “all pollutant loadings, including the nutrient load and water column concentrations of nitrogen and phosphorus, will be reduced.” *Id.* at 9. Further, the Region determined that the water quality and depositional modeling performed for the initial ODC Evaluation remained applicable. *Id.* The modeling software used for the 2022 permit did not account for the then swivel-point cage design, thus the model was executed using a fixed cage design like the proposed modification. *Id.* The modeling also used feed and fecal settling rates and a feed digestibility rate that are within the range for red drum. *Id.* The Region concluded that:

The changes to the facility under the modified permit's discharge do not affect EPA's ODC Evaluation that was prepared for the 2022 permit. EPA has determined that the modified permit would not cause unreasonable degradation of the marine environment and that no changes to the ODC evaluation conducted for the 2022 permit are needed.

Id.

The Region also evaluated whether to reinstate ESA consultation using the thresholds identified in 50 C.F.R. § 402.16. *Id.* at 12. The Region concluded that reinitiation of consultation with USFWS was not warranted, but that it would reinitiate informal consultation with NMFS. *Id.* at 18-19. On September 24, 2024, the Region's permit writer emailed USFWS and attached a draft document justifying its decisions to not reinitiate consultation with respect to species and critical habitat falling within the jurisdiction of USFWS. Email from Env't Eng'r, U.S. EPA Region 4, to Supervisor, Div. of Env't Rev., USFWS (Sept. 24, 2024)

(“USFWS Concurrence Request”) (filed with Reg.’s Resp. Br. as attach. 12). In response, USFWS stated that “EPA has satisfied its responsibilities under the ESA” and that “[n]o further [a]ction is required.” Email from Supervisor, Div. of Env’t Rev., USFWS, to Env’t Eng’r, U.S. EPA Region 4 (Oct. 2, 2024) (“USFWS Concurrence”) (filed with Reg.’s Resp. Br. as attach. 12). With respect to species under the jurisdiction of the NMFS, the Region requested initiation of informal consultation. Letter from Env’t Eng’r, U.S. EPA Region 4, to Assistant Reg’l Adm’r for Protected Res., NMFS (Dec. 23, 2024) (“NMFS Consultation Request”) (filed with Reg.’s Resp. Br. as attach. 13). The Region informed NMFS that “EPA has determined that the modifications to the proposed activity are ‘not likely to adversely affect’ some species and critical habitats, and have ‘no effect’ for other species or critical habitats.” *Id.* NMFS concurred in the Region’s conclusions. Letter from Assistant Reg’l Adm’r for Protected Res., NMFS, to Env’t Eng’r, U.S. EPA Region 4 et al. (Feb. 18, 2025) (“NMFS Concurrence”) (filed with Reg.’s Resp. Br. as attach. 14).

On October 24, 2024, the Region published a public notice of proposed issuance of a modified permit and opened a thirty-day comment period. Region 4, U.S. EPA, *Public Notice* (Oct. 24, 2024) (filed with Reg.’s Resp. Br. as attach. 7). The draft modified permit included the following changes from the 2022 permit: (1) a change in the fish species from almaco jack to red drum, (2) a change in the maximum fish production level from 88,000 pounds to 55,000 pounds, (3) removal of effluent monitoring for total copper due to the change in cage material, and (4) a prohibition on intentional or negligent release of cultured fish. Region 4, U.S. EPA, *Draft Fact Sheet* at 4 (filed with Reg.’s Resp. Br. as attach. 9). Petitioners Healthy Gulf, Sierra Club, Center for Food Safety, Food & Water Watch, Recirculating Farms, and Suncoast Waterkeeper submitted comments raising concerns about fish production levels contributing to harmful algal blooms, also known as red tide events, and releases of farmed fish negatively impacting wild populations. Letter from Healthy Gulf et al., to U.S. EPA (Nov. 25, 2024) (“CFS Cmts.”) (filed with Petition for Review (June 14, 2025) (“CFS Pet.”) as Ex. A).⁴ Petitioner Friends of Animals also submitted comments on the draft modified permit, raising issues

⁴ Petitioner Tampa Bay Waterkeeper seemingly did not comment on the modified permit. *See* CFS Pet. at 6-7 (citing comments by other petitioners without mentioning Tampa Bay Waterkeeper); CFS Cmts. Only a person who filed comments on a draft permit or participated in a public hearing may file a petition for review. 40 C.F.R. § 124.19(a)(2). The Region did not raise this issue in its response brief, and we need not address it further as the arguments we resolve in this decision were raised by petitioners that did submit comments.

related to proposed changes to the facility and degraded environmental conditions in the Gulf. Letter from Staff Attorney, Friends of Animals, to Permitting and Grants Branch Chief, U.S. EPA Region 4 (Nov. 25, 2024) (“FoA Cmts.”) (filed with Petition for Review by Friends of Animals (June 16, 2025) (“FoA Pet.”) as attach. 2). Friends of Animals further asserted that the modified permit failed to address issues it raised with respect to the 2022 permit. FoA Cmts. at 17-20.

On May 15, 2025, the Region issued a modified NPDES permit. Region 4, U.S. EPA, *Authorization to Discharge Under the NPDES Permit No. FL0A00001* (May 15, 2025) (“Final Modified Permit”) (filed with Reg.’s Resp. Br. as attach. 1). The modified permit authorizes Ocean Era to discharge wastewater from the facility for one production cycle producing approximately 55,000 pounds of red drum over approximately twelve months. *Id.* at 5, 8. In the modified permit, the Region removed the copper monitoring requirement that was included in the original permit and added conditions prohibiting intentional or negligent release of fish and requiring an engineering analysis of the net pen prior to installation. Region 4, U.S. EPA, *Final Fact Sheet* at 4-5 (filed with Reg.’s Resp. Br. as attach. 16). The other requirements remain the same as in the original permit. *Id.* at 4. The Region also issued a response to comments document with the final modified permit. Region 4, U.S. EPA, *Response to Significant Comments* (May 15, 2025) (“Resp. to Cmts.”) (filed with Reg.’s Resp. Br. as attach. 15).

The CFS Petitioners and Friends of Animals filed petitions for review of the modified permit with the Board. CFS Pet.; FoA Pet. The Region filed a combined response to the two petitions. Reg.’s Resp. Br. In accordance with 40 C.F.R. § 124.19(b)(2), the Region filed, with its response to the petitions, a Certification of Index to the Administrative Record and an Administrative Record Index listing the documents included in the administrative record. Certification of Index to the Administrative Record (Aug. 12, 2025) (“Record Certification”) (filed with the Reg.’s Resp. Br. as attach. 19); Administrative Record Index (Aug. 12, 2025) (filed with Reg.’s Resp. Br. as attach. 20). The Region 4 Director of the Water Division (who signed the final permits as modified) signed the Record Certification which included a statement that “to the best of my knowledge and belief, the documents identified in the attached index constitute the administrative record that the agency considered for the Final Permit.” Record Certification. The accompanying Administrative Record Index included a “Memorandum re: removed permit conditions” as document number B.31. Administrative Record Index at 4. The memorandum, written by the permit writer, includes the permit writer’s analysis of the potential for discharges of microplastics from the facility and the permit writer’s recitation of discussions between the permit writer and Region 4 managers regarding whether to include monitoring for microplastics in the modified permit.

Memorandum from Env't Eng'r, U.S. EPA Region 4, to Administrative Record for Ocean Era's Final Modified NPDES Permit (FL0A00001) (May 14, 2025) ("Microplastics Memo") (filed with Friends of Animals' Reply in Support of its Pet. for Review (Sept. 12, 2025) ("FoA Reply") as attach. 1). The CFS Petitioners and Friends of Animals each filed a reply brief referencing and attaching the Microplastics Memo. Pet'rs' Reply to EPA Region IV's Combined Resp. to Pets. for Review (Sept. 12, 2025) ("CFS Reply"); FoA Reply.

Following the filing of the reply briefs, the Region filed a motion for leave to file a sur-reply and a motion for leave to file a corrected Administrative Record Index. The Region now asserts that the Microplastics Memo was inadvertently included in the Administrative Record Index and seeks leave to file a corrected Administrative Record Index omitting the Microplastics Memo and a corrected Certification of Index to the Administrative Record. EPA Region 4's Motion for Leave to File a Corrected Administrative Record Index (Sept. 22, 2025) ("Motion for Corrected Record"). Petitioners oppose the Motion for Corrected Record. Petitioners' Opposition to EPA Region IV's Motion for Leave to File a Corrected Administrative Record Index at 7 (Oct. 6, 2025) ("CFS Opp'n"); Friends of Animals' Response in Opposition to EPA Region 4's Motion for Leave to File a Corrected Administrative Record Index at 13 (Oct. 7, 2025) ("FoA Opp'n"). The Region also seeks leave to file a sur-reply to respond to arguments related to the Microplastics Memo that the Region maintains were raised for the first time in the Petitioners' reply briefs. EPA Region 4's Motion for Leave to File a Sur-Reply at 1-2 (Sept. 22, 2025) ("Motion for Sur-reply"). The Motion for Sur-reply is unopposed. In the following sections, we first address the principles governing Board review, then the Region's pending motions, followed by the issues raised in the petitions for review.

IV. PRINCIPLES GOVERNING BOARD REVIEW

Section 124.19 of title 40 of the Code of Federal Regulations governs Board review of NPDES permitting decisions. Modification of an NPDES permit pursuant to 40 C.F.R. § 122.62 is a permitting decision subject to the procedures in part 124. *See* 40 C.F.R. § 122.62. In any appeal from a permitting decision issued under part 124, petitioner bears the burden of demonstrating that review is warranted. *See id.* § 124.19(a)(4). "[A] petition for review must identify the contested permit condition or other specific challenge to the permit decision and clearly set forth, with legal and factual support, petitioner's contentions for why the permit decision should be reviewed." *Id.* § 124.19(a)(4)(i). In the case of a permit modification, only the permit conditions subject to modification are reopened and subject to review by the Board. *See id.* §§ 124.5(c)(2), 122.62.

In considering a petition filed under § 124.19, the Board first evaluates whether petitioners have met threshold procedural requirements, including whether each issue raised has been preserved for Board review. *Id.* § 124.19(a)(2)-(4); *In re City of Keene*, 18 E.A.D. 720, 723 (EAB 2022). To satisfy the preservation requirement, petitioners must demonstrate that the issues and arguments they raise in the petitions for review were raised during the public comment period. 40 C.F.R. §§ 124.13, .19(a)(4)(ii); *Keene*, 18 E.A.D. at 723. The issues must also have been raised with sufficient clarity to enable the permit issuer to provide a meaningful response. *In re Deseret Generation and Transmission Co-op.*, 19 E.A.D. 67, 77 (EAB 2024), *appeal docketed sub nom. Ute Indian Tribe of the Uintah and Ouray Rsrv. v. EPA*, No. 25-9531 (10th Cir. Mar. 17, 2025); *In re Gen. Elec. Co.*, 18 E.A.D. 575, 607 (EAB 2022), *pet. for review denied sub nom. Housatonic River Initiative v. EPA*, No. 22-1398 (1st Cir. July 25, 2023). If the Region has responded to issues raised in comments, the petitioners must explain why the Region's response is clearly erroneous or otherwise warrants review. 40 C.F.R. § 124.19(a)(4)(ii); *Deseret*, 19 E.A.D. at 77; *Keene*, 18 E.A.D. at 723.

The Board has discretion to grant or deny review of a permit decision. 40 C.F.R. § 124.19; *see In re Avenal Power Ctr., LLC*, 15 E.A.D. 384, 394-95 (EAB 2011) (citing Consolidated Permit Regulations, 45 Fed. Reg. 33,290, 33,412 (May 19, 1980)), *vacated & remanded on other grounds sub nom. Sierra Club v. EPA*, 762 F.3d 971 (9th Cir. 2014). Ordinarily, the Board will deny a petition for review and thus not remand the permit unless the underlying permit decision is based on a clearly erroneous finding of fact or conclusion of law, or an exercise of discretion that the Board, in its discretion, should review. 40 C.F.R. § 124.19(a)(4)(i); *Keene*, 18 E.A.D. at 723.

“When evaluating a challenged permit decision for clear error, the Board examines the administrative record that serves as the basis for the permit decision to determine whether the permit issuer exercised ‘considered judgment.’” *In re U.S. Dep’t of Energy*, 18 E.A.D. 797, 799 (EAB 2022) (quoting *In re Steel Dynamics, Inc.*, 9 E.A.D. 165, 191, 224-25 (EAB 2000); *In re Ash Grove Cement Co.*, 7 E.A.D. 387, 417-18 (EAB 1997)). “The permit issuer must articulate with reasonable clarity the reasons supporting its conclusion and the significance of the crucial facts it relied on when reaching its conclusion.” *Dep’t of Energy*, 18 E.A.D. at 799-800; *see Ash Grove*, 7 E.A.D. at 417. “As a whole, the record must demonstrate that the permit issuer ‘duly considered the issues raised in the comments’ and ultimately adopted an approach that ‘is rational in light of all information in the record.’” *Dep’t of Energy*, 18 E.A.D. at 800 (quoting *In re Gov’t of D.C. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 323, 342 (EAB 2002)).

V. MOTIONS

We first consider the Region's motions for leave to file a sur-reply and for leave to file a corrected Administrative Record Index. The Region asserts that the Microplastics Memo was "erroneously included" in the Administrative Record Index and that it "was not aware of the inadvertent inclusion until the document was raised by Petitioners in their reply briefs." Motion for Corrected Record at 5. In the pending motions, the Region requests leave to file a sur-reply to respond to the issues raised in the reply briefs and to file a corrected Certification of Index of the Administrative Record and a corrected Administrative Record Index removing the Microplastics Memo. Motion for Sur-reply at 2; Motion for Corrected Record at 8. For the reasons explained below, the Board grants both motions

A. *Motion for Leave to File a Sur-reply*

The Region seeks leave to file a sur-reply addressing arguments raised in the Petitioners' reply briefs related to microplastics. Motion for Sur-reply at 2. The Region indicates that the CFS Petitioners do not oppose the motion, and none of the Petitioners filed a response to the Motion. The Board has discretion to grant a motion for leave to file a sur-reply and typically does so "where allegations arise that a reply brief raises new arguments or where further briefing would otherwise assist the Board in resolving disputed issues." *In re City of Keene*, NPDES Appeal No. 21-03, at 2 (EAB Feb. 2, 2022) (Order Granting Motion for Leave to File Surreply) (quoting *In re Granite Shore Power Merrimack LLC*, NPDES Appeal No. 20-05, at 2 (EAB Nov. 24, 2020) (Order Granting Motion for Leave to File Surreply)); *In re GSP Merrimack Station*, NPDES Appeal No. 20-06, at 1 (EAB Nov. 10, 2020) (Order Granting Motion for Leave to File Surreply). Considering the Region's allegation that the replies raise new arguments related to microplastics and the lack of opposition, the Motion for Leave to File a Sur-reply is granted. The proposed sur-reply filed with the motion is hereby deemed filed the date it was originally submitted.

B. *Motion for Leave to File a Corrected Administrative Record Index*

The Region also seeks leave to file a corrected Certification of Administrative Record Index and a corrected Administrative Record Index that does not include the Microplastics Memo. Motion for Corrected Record at 5. The Region asserts that the Microplastics Memo should not be part of the administrative record because it is a pre-decisional and deliberative document. *Id.* In response, the CFS Petitioners assert that the Microplastics Memo is a post-decisional document. CFS Opp'n at 6. Petitioner Friends of Animals asserts that the Microplastics Memo is not deliberative, must be included in the administrative

record pursuant to regulation and EPA policy, and cannot be excluded merely because it is unfavorable to the Region, and that the Region failed to assert deliberative process privilege. FoA Opp'n at 1-2. We conclude that the Microplastics Memo is a pre-decisional and deliberative document that the Region may exclude from the administrative record.

In determining whether a document should be part of the administrative record, we first consider whether the Region is required to include the document in the administrative record pursuant to the regulations governing the contents of the administrative record. *See In re Powertech (USA) Inc.*, 19 E.A.D. 23, 43 (EAB 2024) (“The regulations specify the items that must be part of the administrative record and the decision to include or omit documents from the record should be based on that regulatory standard.”). The regulations provide that the administrative record for a final permit shall consist of the record for the draft permit and, as relevant here, (1) all comments received during the public comment period, (2) the response to comments and any new materials placed in the record under 40 C.F.R. § 124.17,⁵ (3) “[o]ther documents contained in the supporting file for the permit,” and (4) the final permit. 40 C.F.R. § 124.18(b). The Microplastics Memo was prepared by the Region’s permit writer after the close of the comment period and was not cited in or added to the record as part of the response to comments, nor is it the final permit. Accordingly, the only basis for requiring the Region to include the Microplastics Memo in the administrative record under the regulation would be as an “[o]ther document[] contained in the supporting file for the permit.” 40 C.F.R. § 124.18(b)(6).

While the regulations do not specify what constitutes the “supporting file” for a permit, the Board has declined requests to supplement the record with documents that were not relied upon by the decisionmaker or were pre-decisional and deliberative. *In re ESSROC Cement Corp.*, 16 E.A.D. 433, 453-55 (EAB 2014); *In re Dominion Energy Brayton Point, LLC*, 12 E.A.D. 490, 523-25 (EAB 2006). Pre-decisional, deliberative documents are not required to be part of the administrative record for several reasons articulated by federal courts and adopted by the Board. *Dominion*, 12 E.A.D. at 524-25; *see also Oceana v. Ross*, 920 F.3d 855, 865 (D.C. Cir. 2019). First, “review of agency action should be based on an agency’s stated justifications, not the predecisional process that led up to the final,

⁵ 40 C.F.R. § 124.17(b) provides that “any documents cited in the response to comments shall be included in the administrative record” and that EPA may document its response to new points or materials raised during the comment permit by adding new material to the record.

articulated decision.” *Dominion*, 12 E.A.D. at 525 (quoting *Ad Hoc Metals Coal. v. Whitman*, 227 F. Supp. 2d 134, 143 (D.D.C. 2002)); *see also In re Subpoena Duces Tecum Served on the Off. of the Comptroller of the Currency*, 156 F.3d 1279, 1279 (D.C. Cir. 1998) (“When a party challenges agency action as arbitrary and capricious the reasonableness of the agency’s action is judged in accordance with its stated reasons.”).⁶ Second, requiring inclusion of internal deliberations would have a “chilling effect” on open discussion and lower the quality of decisions. *Dominion*, 12 E.A.D. at 525 (quoting *Ad Hoc Metals*, 227 F. Supp. 2d at 143). Third, inclusion of such materials may confuse the public. *Id.* As the Board has stated, “[c]luttering the record with the internal discussions between all the regional staff members working on a permit decision would only serve to provide misleading, confusing, and potentially internally inconsistent information about the permit decision.” *Id.*

The Microplastics Memo at issue here is a pre-decisional, deliberative document. The memorandum was signed on May 14, 2025, the day before the permit was issued. In addition, the contents of the Microplastics Memo recount numerous earlier pre-decisional discussions and communications. *See* Microplastics Memo ¶¶ 3-5, 7-10, 24-26. The Microplastic Memo is also deliberative in that it recounts the internal discussions among regional staff and the opinions of various staff members. *See id.* ¶¶ 3-5, 7-10 (describing internal discussions), 19-23 (describing permit writer’s rationale for including monitoring), 24-26 (describing management response), 29, 43-44 (describing permit writer’s opinion and legal analysis).

The CFS Petitioners assert that the memorandum is post-decisional because it states that managers made a final decision to remove microplastics monitoring from the permit before the permit was signed. CFS Opp’n at 6. This argument fails for several reasons. First, the Region made its permit decision when the Region issued the modified permit. *See* 40 C.F.R. § 124.15(a) (“[A] final permit decision means a final decision to issue, deny, modify, revoke and reissue, or terminate a permit.”); *see also* EPA Region 4’s Reply in Support of Motion for Leave to File a Corrected Administrative Record Index at 3 (Oct. 10, 2025) (“The final decision on permit terms was not made until the permit was issued.”). The Region’s decisionmaker was free to make changes in the permit terms until the permit was

⁶ While Petitioners reference an exception for “bad faith or improper behavior,” CFS Reply Br. at 4 n.3; CFS Opp’n at 7, Petitioners have not made the “strong showing” required to justify intrusion into the decisionmaker’s thought process, *see FDA v. Wages & White Lion Invs., L.L.C.*, 604 U.S. 542, 577 (2025); Motion for Corrected Record at 8.

signed on May 15, 2025. Second, the contents of the memorandum describe discussions and communications that occurred before the Region issued the modified permit. *See* Microplastics Memo ¶¶ 3-5, 7-10, 24-26. Finally, if the memorandum was post-decisional, it would not be part of the administrative record because the record closes upon permit issuance and post-decisional materials are not before the agency at the time it issues its decision. *See* 40 C.F.R. § 124.18(c); *Dominion*, 12 E.A.D. at 518-19.

Petitioner Friends of Animals asserts that the Microplastics Memo is not deliberative because it “is largely factual and was prepared for inclusion in the administrative record, not as a confidential discussion.” FoA Opp’n at 6. Petitioner’s argument overlooks the fact that the contents of the memorandum recount internal, deliberative discussions between the permit writer and managers in the Region. *See* Microplastics Memo ¶¶ 3-5, 7-10. Communications and discussions between Agency members exchanging opinions about a permit or potential permit terms or conditions are deliberative, *see, e.g., Dominion*, 12 E.A.D. at 525 (declining to supplement record with emails between regional staff members containing preliminary thoughts and opinions about permit issue), and a memorandum documenting such discussions is no different. And to the extent that the Microplastics Memo discusses scientific and factual material, much of that is documented elsewhere in the record. *Compare* Microplastics Memo ¶¶ 12-13 (citing studies) *with* Corrected Administrative Record Index C.12, C.18, C.24, C.41, C.42, C.44, C.45 (Sept. 22, 2025) (filed with Motion for Corrected Record as attach. 2) (listing studies included in the record). This is consistent with Agency policy of separating deliberative and factual material and including only the latter in the administrative record. U.S. EPA, *EPA’s Action Development Process: Administrative Records Guidance* at 7 (Sept. 2011) (“Documents that include both deliberative material and non-deliberative material * * * should be discussed with OGC or Regional attorneys; to the extent practicable, the scientific or factual material should be copied into a non-deliberative document and placed in the record.”).

Petitioner Friends of Animals also argues that the Microplastics Memo must be included in the administrative record because it is a document “contained in the supporting file” for the permit pursuant to 40 C.F.R. § 124.18(b)(6). FoA Opp’n at 2. Petitioner argues that because the memorandum was addressed to the administrative record, it is part of the supporting file. *Id.* We disagree that the mere fact that someone addresses a document to the administrative record in and of itself makes the document “contained in the supporting file” for the permit. As discussed above, the Microplastics Memo is a pre-decisional and deliberative document that may be excluded from the record pursuant to federal court and Board precedent.

The fact that the memorandum is addressed to the administrative record does not change the nature of its contents or our analysis of whether it must be included in the record.⁷

We also find unpersuasive Friends of Animals' argument that the Agency failed to invoke or waived the deliberative process privilege with respect to the Microplastics Memo. Whether a document is properly withheld as "privileged" is a different question than whether a document is properly excluded from an administrative record based on materiality. While courts look to cases defining the scope of the deliberative process privilege as a guide in determining what is pre-decisional and deliberative, exclusion of such documents from the administrative record is based on materiality, not the applicability of a legal privilege. *See Oceana*, 920 F.3d at 865 (holding that pre-decisional, deliberative documents did not have to be included in a privilege log because they were "immaterial" and "not part of the administrative record to begin with"); *accord* U.S. EPA, *EPA's Action Development Process: Administrative Records Guidance* at 10 (Sept. 2011) (stating "decisions regarding what documents are part of EPA's administrative record do not depend on whether the documents are 'privileged' or have been released to the public as part of a docket").

The Microplastics Memo describes pre-decisional, deliberative information that the Region may properly exclude from the administrative record. Accordingly, the Region's motion for leave to file a corrected Certification of Index to the Administrative Record and corrected Administrative Record Index is granted.

⁷ While we conclude that the Region may properly exclude the memorandum from the administrative record, we are troubled by how this is even an issue. Based on the Region's motion, the Region apparently first became aware that the Microplastics Memo had been included in the Administrative Record Index *only after* Petitioners relied on the memo in their respective reply briefs. We recognize mistakes happen, but that is not how the process should work. The sequence of events here strongly suggests, at best, that a thorough review of the Administrative Record Index was not done in the Region before the person signed the Certification of Index to the Administrative Record or before the Region filed the Administrative Record Index with the Board. The lack of specificity in the Administrative Record Index, addressed above in note 1, may have contributed to this oversight.

VI. ANALYSIS

Having resolved the pending motions, we turn to the arguments raised in the petitions for review. The petitions assert that the Region clearly erred in issuing the modified permit because the permit, as modified, fails to satisfy certain requirements of the Clean Water Act, the Endangered Species Act, the National Environmental Policy Act, the Marine Mammal Protection Act, and the Ocean Dumping Act. As an initial matter, we conclude that Petitioners failed to meet threshold requirements with respect to arguments that the modified permit violates the National Environmental Policy Act, the Marine Mammal Protection Act, and the Ocean Dumping Act, as well as an argument that the Region omitted required conditions from the permit. With respect to the issues related to the Ocean Discharge Criteria, the Board concludes that the Region clearly erred in concluding that the modified permit would not cause unreasonable degradation of the marine environment because the record does not reflect that the Region exercised considered judgment regarding pathogens and microplastics. We therefore remand the permitting decision to the Region for further consideration of those issues. We also conclude that the Region did not clearly err in its decision with respect to the other Clean Water Act issues raised and its conclusion that the permit as modified is not likely to adversely affect listed species or critical habitat under the Endangered Species Act. We address each argument below.

A. Petitioners Fail to Meet Threshold Procedural Requirements with Respect to the National Environmental Policy Act, the Marine Mammal Protection Act, the Ocean Dumping Act, and Permit Condition Issues

Petitioners must demonstrate in their petitions for review that they have met threshold procedural requirements, including a requirement that each issue raised in the petition was raised during the public comment period and, if the Region has addressed an issue in its response to comments, a requirement to explain why the response is erroneous or otherwise warrants review. 40 C.F.R. § 124.19(a)(4)(ii); *Keene*, 18 E.A.D. at 723. Petitioners fail to demonstrate that they have met these threshold requirements with respect to their arguments related to NEPA, the MMPA, and the Ocean Dumping Act, and required permit conditions. We therefore deny review of each of these issues.

1. The National Environmental Policy Act

Petitioners argue that the Region erred by conducting an inadequate voluntary environmental assessment of the facility pursuant to NEPA procedures and failing to supplement that assessment for the modified permit. CFS Pet. at 31-40; FoA Pet. at 31-37. Petitioners fail to meet the procedural threshold

requirements for Board review of these issues because the CFS Petitioners fail to confront the Region's position that NEPA is not applicable to the permit modification and Friends of Animals fails to demonstrate that its argument that the Region's voluntary preparation of an environmental assessment subjects the permit modification to the requirements of NEPA was preserved for review.

NEPA requires federal agencies to prepare a detailed statement, known as an environmental impact statement, for "major [f]ederal actions significantly affecting the quality of the human environment." NEPA § 102(C), 42 U.S.C. § 4332(C); *Ocean Era I*, 18 E.A.D. at 685. Under EPA's regulations implementing NEPA, if a proposed action is expected to result in environmental impacts, but the significance of the impacts is unknown, the Agency must prepare an environmental assessment. 40 C.F.R. § 6.205(a). An environmental assessment is not required if the proposed action is categorically excluded. *Id.* Action by EPA under the CWA is excluded from the requirements of NEPA except for certain financial assistance and the issuance of an NPDES permit for discharge from a "new source." CWA § 511(c)(1), 33 U.S.C. § 1371(c)(1).

In issuing the 2022 permit, the Region determined that the facility did not qualify as a "new source" and that the permit was therefore exempt from the requirements of NEPA. *See Ocean Era I*, 18 E.A.D. at 695.⁸ The Region nonetheless voluntarily prepared an environmental assessment. Modification Determination Memo at 28. In reviewing the permit modification, the Region reiterated that its use of NEPA procedures in the 2022 permit action was voluntary and stated "EPA's use of the voluntary NEPA procedures also applies to the NPDES permit modification. EPA has voluntarily considered whether supplementation is warranted and has determined that it is not necessary." *Id.* at 31.

The CFS Petitioners fail to explain why the Region's position that NEPA is not applicable to the permit modification is clearly erroneous. *See* CFS Pet. at 31-

⁸ A "new source" is a source for which construction commences after the promulgation of new source performance standard applicable to the source. CWA § 306(a)(2), 33 U.S.C. § 1316(a)(2); *Ocean Era I*, 18 E.A.D. at 694. No new source performance standards are applicable to the facility. *See* 40 C.F.R. § 451.1 (applying effluent guidelines to discharges from facilities that produce 100,000 pounds or more of aquatic animals per year); Modification Determination Memo at 28 n.30 (explaining that there are no new source performance standards applicable to the facility because it does not meet the minimum threshold for application of the effluent limitations guidelines for concentrated aquatic animal production facilities).

40. Instead, the petition merely raises objections to the substance of the environmental assessment. *See id.*⁹ The Region asserted in its response to comments, as well as in a memorandum explaining the modification decision, that the permit modification was not subject to NEPA. Resp. to Cmts. at 5, n.5; Modification Determination Memo at 31. Because the CFS Petition does not confront the Region’s response, we deny review of the CFS Petitioners’ NEPA arguments. *See* 40 C.F.R. § 124.19(a)(4)(ii).

Petitioner Friends of Animals attempts to address the Region’s position but fails to demonstrate that its argument was preserved for review. To satisfy the preservation requirement, a petitioner must demonstrate that the issues and arguments it raises on appeal were raised during the comment period. *See id.*; *Keene*, 18 E.A.D. at 723. Friends of Animals was aware, before the comment period on the draft modified permit, that the Region had determined that the requirements of NEPA were not applicable to the issuance of a permit for the facility because the facility did not constitute a “new source” under the CWA. *See* 2020 Resp. to Cmts. at 28; *Ocean Era I*, 18 E.A.D. at 694-97. Yet, neither Friends of Animals nor any other commenter raised in comments on the draft modified permit the argument Friends of Animals now asserts—that the Region’s decision to voluntarily prepare an environmental assessment prior to issuing a permit for the facility subjects the Region to the requirements of NEPA for the permit modification.¹⁰ FoA Cmts. at 5-9; FoA Pet. at 31-32. Accordingly, we find the argument that because the Region elected to complete an environmental assessment, it must comply with NEPA in modifying the permit, is not preserved for our review.

The Petitioners further assert that the Region erred in failing to supplement the environmental assessment based on the modification, in the substantive analysis of the environmental effects of the project, and in the finding of no significant

⁹ Further, the CFS Petitioners fail to relate their NEPA arguments to the permit modification at issue in this case. Except for two sentences discussing the duration of the permit modification, the CFS Petitioners’ entire NEPA argument relates to the environmental assessment prepared for the 2022 permit. CFS Pet. at 36. In *Ocean Era I*, petitioners raised similar challenges to the substance of the environmental assessment, which the Board rejected on procedural grounds. 18 E.A.D. at 696-99.

¹⁰ Petitioners have not identified, and the Board has not found, any other comments on the draft modified permit that raise the argument Friends of Animals asserts. *See* CFS Cmts.; Resp. to Cmts.

impacts. FoA Pet. at 31-38; CFS Pet. at 31-40. All of these arguments rely on the preliminary argument that the Region was required to comply with NEPA, which we conclude is not preserved. Therefore, we deny review of the NEPA arguments raised in the petitions.

2. *The Marine Mammal Protection Act*

The CFS Petition asserts that EPA must obtain an authorization from NMFS for “takes” of marine mammals pursuant to the MMPA prior to issuing the modified permit. CFS Pet. at 46. We deny review of this issue because the issue is not preserved for Board review and even if it were, the CFS Petitioners have not met their burden to demonstrate clear error.

The MMPA makes it unlawful for any person, vessel, or conveyance “to take any marine mammal in waters or on lands under the jurisdiction of the United States.” 16 U.S.C. § 1372(a)(2)(A). “The term ‘take’ means to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal.” *Id.* § 1362(13). The Secretaries of Commerce or Interior may issue permits authorizing taking of marine mammals. *Id.* § 1374(a); *see also id.* § 1362(12) (defining “Secretary” as the Secretary of the Department within which the National Oceanic and Atmospheric Administration is operating with respect to certain species, and the Secretary of the Interior with respect to other species).

In evaluating whether the Region erred in failing to obtain authorization under the MMPA, we first consider whether the Petitioners preserved the issue. *See* 40 C.F.R. § 124.19(a)(4)(ii). “Petitioners must demonstrate, by providing specific citation to the administrative record, including the document name and page number, that each issue being raised in the petition was raised during the public comment period.” *Id.* Here, the CFS Petition fails to identify where the MMPA issue was raised in comments on the draft modified permit. *See* CFS Pet. at 46-47. Moreover, Petitioners’ comments on the draft modified permit fail to mention the MMPA or potential “takes” of marine mammals. CFS Cmts. at 1-4; *see also* Reg.’s Resp. Br. at 38 (noting that the MMPA issue was not premised on any comments on the permit modification).¹¹ Because Petitioners have not

¹¹ To the extent the CFS Petitioners rely on their comments on the 2022 permit, *see* CFS Cmts. at 1 (incorporating by reference “all prior objections to approval of this permit”), the Board previously concluded that those comments did not preserve the MMPA issue with respect to Petitioners’ challenge to the original permit. *Ocean Era I*, 18 E.A.D. at 693-94. The Board explained:

preserved the MMPA issue in their comments during the comment period on the draft modified permit, we deny review.

Even if the issue had been preserved, we would deny review because the CFS Petitioners have failed to demonstrate the Region clearly erred or that review is otherwise warranted. 40 C.F.R. § 124.19(a)(4)(i). The CFS Petitioners assert that “[d]ue to the inevitable ‘takes’ of marine mammals, EPA must obtain proper authorization from NMFS before authorizing this permit.” CFS Pet. at 46. But the CFS Petitioners cite no authority for this proposition. *Id.* As the Board previously noted, “the MMPA requirement [is] for *the owner or operator of a vessel*—not an NPDES permit issuer—to obtain authorization from NMFS if their activities will result in a ‘take’ of any marine mammal.” *Ocean Era I*, 18 E.A.D. at 693 n.14. The CFS Petitioners have not identified any statutory or regulatory authority that requires EPA to obtain take authorization before issuing an NPDES permit. Accordingly, the CFS Petitioners have not met their burden to demonstrate clear error or that review is otherwise warranted, and we deny review of the MMPA issue. 40 C.F.R. § 124.19(a)(4)(i).

3. *Ocean Dumping Act*

The CFS Petition asserts that the Region clearly erred because the Region failed to consider that, if equipment from the facility is damaged due to extreme weather or abandoned, this would be considered unlawful dumping under the Ocean Dumping Act. CFS Pet. at 47-49. The CFS Petitioners failed to preserve this issue for review and, even if they had, fail to demonstrate review is warranted.

The only mention of the MMPA in CFS’s comments on the draft permit—that the Board has identified—is contained in a single sentence that states, “when the listed species to be taken are marine mammals, the take must first be authorized pursuant to the [MMPA] and the [incidental take statement of the biological opinion issued pursuant to the ESA] must include any additional measures necessary to comply with the MMPA take authorization.” CFS Suppl. Cmts. at 5. This statement however does not argue that EPA is obligated to obtain authorization from NMFS for potential “takes” as part of the NPDES permitting process, let alone provide any legal basis for that assertion. This statement does not contain “a reasonable degree of specificity and clarity,” *Lowell*, 18 E.A.D. at 131, “to enable a meaningful response,” *Steel Dynamics*, 9 E.A.D. at 230.

Ocean Era I, 18 E.A.D. at 693-94. Comments that were inadequate to preserve the MMPA issue with respect to the original permit cannot now serve to preserve the issue with respect to the modification.

The Ocean Dumping Act prohibits the transport of materials from the United States or from any location by a United States-registered or flagged vessel or aircraft of any material for the purpose of dumping it into ocean waters. 33 U.S.C. § 1411(a). The Ocean Dumping Act also prohibits the dumping of material from outside the United States into the territorial seas of the United States or the contiguous zone. *Id.* § 1411(b). “Dumping” is defined as “a disposition of material” with certain exceptions, including that “dumping”:

does not mean the construction of any fixed structure or artificial island nor the intentional placement of any device in ocean waters or on or in the submerged land beneath such waters, for a purpose other than disposal, when such construction or such placement is otherwise regulated by Federal or State law or occurs pursuant to an authorized Federal or State program.

Id. § 1402(f).

Petitioners failed to raise any objection to the permit based on the Ocean Dumping Act during the comment period. CFS Cmts. at 1-4. Petitioners’ comments on the draft permit modification do not mention or cite the Ocean Dumping Act. *Id.* The CFS Petitioners state that they “raised concerns about debris and pollution from the project in their comments,” citing their September 2019 and February 2020 comments on the 2022 permit. CFS Pet. at 49. The September 2019 comments raised concerns about pollution in the context of arguments that the permit violated NEPA, the CWA, and the ESA. Letter from Senior Oceans Campaigner, Friends of the Earth, et al., to NPDES Permitting Section, Water Div., U.S. EPA Region 4 (Sept. 29, 2019) (filed with CFS Pet. as Ex. C). The February 2020 comments assert that warm waters in the Gulf have contributed to increasing storm events and that the operator “must demonstrate its technology is capable of protecting the environment from its fish farm in the event of a major storm.” Letter from Fla. Dir., Senior Att’y, Ctr. for Biological Diversity, to NPDES Permitting Section, Water Div., U.S. EPA Region 4, at 17 (Feb. 4, 2020) (filed with CFS Pet. as Ex. E). Neither of these comments raised the issue the CFS Petitioners now raise before the Board—that the Region erred in failing to consider potential violations of the Ocean Dumping Act in issuing the permit. *See* CFS Pet. at 49.

To preserve an issue for review, the petitioner must raise the issue during the comment period with “a reasonable degree of specificity and clarity.” *In re City of Lowell*, 18 E.A.D. 115, 131 (EAB 2020) (quoting *In re Westborough*, 10 E.A.D. 297, 304 (EAB 2002)). “General comments on a topic are not sufficient to preserve a specific argument on a distinct issue for review.” *Ocean Era I*, 18 E.A.D. at 691. The CFS Petitioners’ general comments on pollution and storm damage are not

sufficient to preserve their arguments on the distinct Ocean Dumping Act issue for review. Accordingly, we deny review of this issue. *See* 40 C.F.R. § 124.19(a)(ii).

Even if the CFS Petitioners had preserved their argument that the Region erred in failing to consider potential violations of the Ocean Dumping Act, Petitioners have not demonstrated that the Region clearly erred or that review is otherwise warranted. The Ocean Dumping Act imposes penalties on a person who transports material for the purpose of dumping it into ocean waters or who dumps material into ocean waters in violation of the Act. *See* 33 U.S.C. §§ 1411, 1415. The CFS Petitioners fail to explain how a possible future violation of the Ocean Dumping Act relates to the Region's issuance of the modified NPDES permit at issue here. *See id.* § 1402(f) (excluding intentional placement of a device for purposes other than disposal when such placement is regulated by federal law); CFS Pet. at 47-49. We therefore deny review of the Ocean Dumping Act claims.

4. *Permit Conditions*

The CFS Petition asserts that the Region failed to include two conditions required by 40 C.F.R. § 125.123(d), including conditions necessary “because of local environmental conditions” and a condition providing that the “permit shall be modified or revoked at any time if, on the basis of any new data, the director determines that continued discharges may cause unreasonable degradation of the marine environment.” CFS Pet. at 30-31 (citing 40 C.F.R. § 125.123(d)(3)-(4)). Petitioners failed to preserve this issue for review. *See* 40 C.F.R. § 124.19(a)(4)(ii). The CFS Petition does not identify where this issue was raised during the comment period, and the argument does not appear in comments on the draft modified permit. CFS Pet. at 30-31; CFS Cmts. at 1-4.

Even if the issue had been raised, the CFS Petitioners misinterpret the regulation. The conditions listed in 40 C.F.R. § 125.123(d) are mandatory only if a permit is issued under 40 C.F.R. § 125.123(c), that is, where there is “insufficient information to determine prior to permit issuance that there will be no unreasonable degradation of the marine environment.” 40 C.F.R. § 125.123(c). Under 40 C.F.R. § 125.123(a), a permit may be issued if EPA determines “that the discharge will not cause unreasonable degradation of the marine environment after application of *any necessary conditions* specified in § 125.123(d).” *Id.* § 125.123(a) (emphasis added). Here, the Region issued the permit under 40 C.F.R. § 125.123(a). Reg.'s

Resp. Br. at 29; Modification Determination Memo at 9.¹² The CFS Petitioners fail to demonstrate clear error on this issue.

B. The Region Failed to Exercise Considered Judgment in Determining That the Permit Would Not Cause Unreasonable Degradation of the Marine Environment With Respect to Pathogens and Microplastics But Not with Respect to the Other Clean Water Act Issues Raised in the Petitions

Petitioners assert that the Region clearly erred in issuing the modified permit by failing to adequately evaluate the impacts of the modified permit under the Ocean Discharge Criteria. CFS Pet. at 23-29; FoA Pet. at 10-18. Specifically, Petitioners assert that the Region failed to adequately consider impacts from pathogens, microplastics, escaped fish, harmful algal blooms, and antibiotic resistance. CFS Pet. at 23-29; FoA Pet. at 10-18. We note at the outset that our review is limited to the modified permit provisions. *See* 40 C.F.R. §§ 122.62, 124.5(c)(2). With respect to two of the issues raised in the petitions, we conclude that the record does not reflect the Region’s considered judgment of modifications to the permit.

1. The Record Does Not Reflect That the Region Exercised Considered Judgment with Respect to Pathogens and Microplastics

a. Pathogens

Petitioners maintain that in issuing the modified permit, the Region failed to adequately consider the potential for the facility to introduce pathogens into the marine environment in light of the change from cultivating almaco jack to red drum. CFS Pet. at 28-29; FoA Pet. at 11-12.

“When evaluating a challenged permit decision for clear error, the Board examines the administrative record that serves as the basis for the permit to determine whether the permit issuer exercised its ‘considered judgment.’” *Ocean Era I*, 18 E.A.D. at 681. The record must demonstrate that the Region considered issues raised in the comments and adopted an approach that is reasonable in light of all the information in the record. *Id.* Applicable regulations require the Region to consider “[t]he quantities, composition and potential for bioaccumulation or

¹² As discussed below, we remand the permitting decision for further consideration of two issues related to the Ocean Discharge Criteria. If the Region changes its determination with respect to these issues on remand, it must reevaluate whether the conditions in 40 C.F.R. § 125.123(d) are necessary to prevent unreasonable degradation or mandatory under the regulations.

persistence of the pollutants to be discharged” and “[t]he potential transport of such pollutants by biological, physical or chemical processes” in determining whether a discharge will cause unreasonable degradation of the marine environment. 40 C.F.R. § 125.122(a)(1), (2).

In their comments on the draft modified permits, Petitioners cited scientific literature documenting the susceptibility of red drum to parasites and diseases and argued that the Region failed to adequately analyze the potential spread of pathogens and need to use pharmaceuticals as a result of changing the species cultivated. FoA Cmts. at 8; CFS Cmts. at 4. The CFS Petitioners cited a study documenting an outbreak of disease in farmed red drum caused by *Nocardia seriolae* bacteria. CFS Cmts. at 4 (citing Rodolfo Enrique del Rio-Rodriguez et al., *First evidence of fish nocardiosis in Mexico caused by Nocardia seriolae in farmed red drum (Sciaenops ocellatus, Linnaeus)*, 44 J. Fish Dis. 1117 (2021)). Friends of Animals stated that “[t]he scientific literature available regarding red drum susceptibility to diseases demonstrates that several parasites (*Amyloodinium*, *Trichodina*, and *Ambiphrya*), bacterial infections (*Vibrio*, *Aeromonas*, *Cytophaga columnaris*, and *Eubacterium tarantellus*), and fungus (*Saprolegnia*) can occur in red drum cultivation.” FoA Cmts. at 8. Friends of Animals further noted that even though under the modified permit Ocean Era would be changing the fish species from almaco jack to red drum, Ocean Era was *not* planning to change the drugs or therapeutants used and asserted that it was illogical to rely on the same therapeutic regime for a new species. *Id.* Friends of Animals asserted that the Region relied on Ocean Era’s representations and failed to analyze the likelihood of disease and consequent use of pharmaceuticals in red drum. *Id.*

The Region’s response does not demonstrate that the Region considered the arguments raised in the comments regarding pathogens or adopted a reasonable approach in light of all the information in the record. In its response to comments, the Region asserted that both almaco jack and red drum are native to the Gulf and “are susceptible to many of the same pathogens,” citing a 2019 thesis on disease management in almaco jack. Resp. to Cmts. at 11. The thesis states that *Seriola* species (which include almaco jack) “can be infected by a range of viral, bacterial, fungal, and parasitic agents.” Genevieve Patrick, Health and Disease Management of Almaco Jack *Seriola rivoliana* at 17-18 (2019) (M.S. thesis, Univ. of Fla.). The thesis, however, does not state that almaco jack are susceptible to any of the specific pathogens or parasites that affect red drum according to the sources cited by the commenters, except for vibriosis, caused by the *Vibrio* bacteria. *Id.* at 17-20, 55-61. The Region’s response to comments did not address the studies cited in the comments or explain how, given information in the record that appears to identify

different pathogens affecting red drum, the Region concluded that almaco jack and red drum are susceptible to the same pathogens.

The Region's statement that almaco jack and red drum are susceptible to many of the same pathogens forms the basis for the Region's reliance on its prior analysis. In its response to comments, the Region stated that it "responded to comments related to the discharge of pathogens in the 2022 permit's [response to comments] document, and the potential impact from pathogens and parasites is not significantly altered by the change in species in the modified permit." Resp. to Cmts. at 11. The Region thus relied on its prior analysis instead of evaluating the "quantities, composition and potential for bioaccumulation or persistence" of the pathogens and "potential transport of such pollutants by biological, physical or chemical processes" as required by the Ocean Discharge Criteria. 40 C.F.R. § 125.122(a)(1), (2); see Resp. to Cmts. at 11. The Region's prior analysis concluded that permit conditions including health management conditions and a requirement for a certificate of health from a veterinarian would address any concerns. *Ocean Era I*, 18 E.A.D. at 708. While this may still be true, without an analysis of the pathogens and parasites common in red drum, the record does not reflect that the Region exercised considered judgment of this issue.

"Where the administrative record fails to demonstrate that a permit issuer has exercised 'considered judgment,' the Board typically remands the permit." *In re Gen. Elec. Co.*, 17 E.A.D. 434, 561 (EAB 2018). Accordingly, the Board remands the decision to issue the modified permit to the Region to consider the comments related to pathogens, supplement its analysis if needed, and explain its conclusion as to whether the modified permit will cause unreasonable degradation of the marine environment in consideration of the Ocean Discharge Criteria factors.

b. *Microplastics*

Petitioners also assert that the Region failed to evaluate the risks to the marine environment from the discharge of microplastics due to the change in the proposed cage material in the modified permit. Friends of Animals argues that "abrasive cleaning of the mono-filament material, such as the planned brushing or pressure washing, will risk shedding microplastics into the ocean" and "cause degradation of the marine environment." FoA Pet. at 27. The CFS Petitioners state that "[m]icroplastics and associated chemicals can accumulate in fish and shellfish, potentially entering the human food chain, raising concerns about inflammation, hormonal disruption, and links to cancer." CFS Pet. at 48. Petitioners argue that the Region failed to evaluate these risks under the Ocean Discharge Criteria. FoA Reply at 9; CFS Reply at 4; see 40 C.F.R. § 125.122(a)(6) (requiring consideration of "[t]he potential impacts on human health through direct and indirect pathways");

Resp. to Cmts. at 13-15; Sur-reply at 4-6 (Sept. 22, 2025) (filed with Motion for Sur-reply as attach. 1).

Petitioners raised concerns about microplastic pollution from the new cage material in their comments on the draft modified permit. Friends of Animals stated that “instead of biodegrading, ‘plastic waste often breaks down into tiny pieces known as microplastics (less than 5 mm in size), which are nearly impossible to clean up once they are in the environment.’” FoA Cmts. at 12 (quoting EPA’s website entitled, *Learn About Aquatic Trash*, available at <https://www.epa.gov/trash-free-waters/learn-about-aquatic-trash> (last updated June 6, 2025)). Friends of Animals cited a meta-study collecting data on microplastics in fish and asserted that the proposed facility will be an additional source of microplastics that poses a threat to human health through consumption of fish. *Id.* at 13 (citing Inês Sequeira et al., *Worldwide contamination of fish with microplastics: A brief global overview* 160 *Marine Pollution Bull.* 111681 (Nov. 2020)).

Further, studies in the record indicate that gear and feed from aquaculture contribute microplastics to the marine environment. Haodi Wu et al., *A review of microplastic pollution in aquaculture: Sources, effects, removal strategies and prospects*, 252 *Ecotoxicology and Env’t Safety* 114567, at 3-4 (2023); Lotte Krüger et al., *Plastic debris accumulation in the seabed derived from coastal fish farming*, 257 *Env’t Pollution*, 113336 (2020); Guanglong Chen et al., *Occurrence and ecological impact of microplastics in aquaculture ecosystems*, 274 *Chemosphere* 129989, at 4-5 (2021); Zeliang Su et al., *Microplastics in aquafeeds: Occurrence, sources, effects and considerations for aquatic food production*, 176 *Trends in Analytical Chemistry* 117760 (2024).

While the Region’s response to comments acknowledges a potential for shedding of microplastics from the KikkoNet mesh cage material, the Region concludes that “[t]he short duration of the facility within federal waters, replacement of net material as necessary, and the large amount of dilution available in the Gulf of America adequately mitigates any risk of microplastics.” Resp. to Cmts. at 14. The Region’s response reflects a lack of considered judgment.

First, the basis for the Region’s reliance on the short duration of the facility is unclear. While the modified permit authorizes the discharge of wastewater from the facility for only *one* production cycle of fish over the course of approximately twelve months, the modified permit places no limit on how long the cage may remain in the Gulf. Final Modified Permit pt. II.A, .B.14. The permit may also be renewed before it expires. *See id.* at 1 (providing that “[t]he permittee shall reapply

for NPDES coverage before January 8, 2027 * * * if the permittee intends to continue to discharge at the facility beyond the term of this permit”). The Region has failed to adequately explain how the limited production term relates to the discharge of microplastics from the cage given that the modified permit does not limit cage placement to the limited production term and thus it is permissible under the modified permit for the cage to remain in place well before and well after the limited production term and possibly through permit renewal.

Second, the Region asserts that the risk of microplastics is mitigated by monitoring the width of the netting material and replacing the cage when the netting is less than 1.4 millimeters thick. Resp. to Cmts. at 14. The Region, however, fails to adequately explain its conclusion that replacing the cage *after* it has degraded will mitigate harm from the microplastics introduced from the prior cage degradation.

Finally, the Region’s assertion that the risks will be mitigated by dilution also lacks considered judgment. While the original ODC Evaluation considered dilution of other pollutants, it did not address microplastics. ODC Eval. at 33-44. Thus, without additional analysis in connection with the modified permit of dilution of microplastics, we fail to see how the Region’s original ODC Evaluation can carry the day here.

As noted above, the Board typically remands a permit where the administrative record fails to demonstrate that the permit issuer exercised considered judgement. *Gen. Elec. Co.*, 17 E.A.D. at 561. “Additionally, the Board has frequently remanded permits where discrepancies or inconsistencies exist between a permit issuer’s conclusion and the administrative record.” *Id.* Here, the record contains comments and multiple studies identifying potential risks from microplastics associated with aquaculture. The Region fails to explain how such risks would be mitigated by the short duration of the fish production cycle, inspection and replacement of the netting, or dilution. The record fails to demonstrate that the Region exercised considered judgment of the microplastics issue, and the Board remands the permitting decision to the Region to further address the comments and record regarding microplastics.

2. *Petitioners Fail to Demonstrate Clear Error with Respect to Escaped Fish, Harmful Algal Blooms, or Antibiotic Resistance*

a. *Escaped Fish*

Both petitions assert that the Region failed to adequately consider the effects of escaped red drum as a pollutant. CFS Pet. at 29; FoA Pet. at 11. Petitioners

assert that the Region failed to consider Ocean Discharge Criteria factors, including the “quantities, composition and potential for bioaccumulation or persistence of the pollutants to be discharged,” “potential transport of such pollutants,” and the “importance of the receiving water area to the surrounding biological community,” in light of the change in species and instead relied on the prior ODC Evaluation. 40 C.F.R. § 125.122(a)(1), (2), (4); CFS Pet. at 29; FoA Pet. at 11.

The Board addressed similar arguments regarding escaped fish in *Ocean Era I* and concluded that Petitioners had not demonstrated clear error in the Region’s consideration of escaped fish. *Ocean Era I*, 18 E.A.D. at 708-10. The Board explained that the Region responded to comments regarding escaped fish by stating that the proposed cage was impact resistant and designed to withstand storm events, resulting in a low probability of escape. *Id.* at 708. The Board also noted that the farmed species was native to the Gulf and any impacts from escaped fish would be mitigated because the farmed fish have the same genetic makeup as wild populations. *Id.* at 709.

Here, Petitioners reiterate the same arguments that were previously made and rejected by the Board. With respect to the net pen design, Friends of Animals asserted that the new design does not eliminate the risk of escapes. FoA Cmts. at 19. In its response to comments, the Region stated that the cage system is designed to be completely submerged during storm events and that EPA has determined that the design will result in a low probability of escapes. Resp. to Cmts. at 20. Further, the modified permit, like the original permit, requires structural maintenance and a facility damage prevention and control plan. *Id.*

With respect to the new fish species, Petitioners raised the same concerns about impacts to wild populations as were raised during the initial permit proceedings. FoA Cmts. at 19. In response, the Region asserted that red drum are native to the Gulf and that only first-generation progeny of wild caught fish will be cultivated. Resp. to Cmts. at 20. Neither the brood stock nor fingerlings will undergo any genetic modification or selective breeding and would therefore be unlikely to pose a competitive risk to wild stock. *Id.* The Region further asserted that fish escapes were analyzed in the 2022 permit record and that there is not an appreciable difference in impacts from fish escapes based on the change in species. *Id.*

The petitions for review reiterate the comments on this issue without explaining how the Region’s analysis is incorrect or explaining why the Board’s prior analysis of this issue should change in light of the modifications to the permit. *See* CFS Pet. at 29; FoA Pet. at 11. The petitions allege that the Region erred in

failing to consider the quantities, composition and potential for bioaccumulation of escaped fish, transport of escaped fish, and importance of the receiving water area to the surrounding biological community. The Region, however, addressed these factors in its response to comments, stating that the likelihood of escapes was low and that the origin of the cultivated fish mitigated any impacts on wild populations. Resp. to Cmts. at 20. The petitions fail to explain why this response is clearly erroneous or otherwise warrants review. *See Ocean Era I*, 18 E.A.D. at 691. Further, Petitioners fail to explain how the modifications to the permit warrant review given the Board's prior determination that Petitioners had not demonstrated clear error with respect to this issue. *Id.* at 708-10. Accordingly, the Board concludes that Petitioners have not demonstrated clear error with regard to fish escapes.

b. *Harmful Algal Blooms*

Petitioners assert that the Region clearly erred by failing to consider how the facility will contribute to harmful algal blooms ("HABs"). CFS Petitioners largely reiterate their objections to the analysis conducted for the 2022 permit. CFS Pet. at 25-27. Friends of Animals asserts that "there is mounting evidence that the [facility] would cause HABs in the stated location," citing several recent studies associating the increase in HABs with climate change. FoA Pet. at 14-15. The Region responds that the arguments about HABs do not relate to the changed conditions in the modified permit, that the discharge of nutrients would decrease under the modified permit, and that the continued occurrence of HABs and progression of climate change "are not new or unanticipated issues." Reg.'s Resp. Br. at 20.

The Board previously considered and rejected Petitioners' arguments that the Region clearly erred in its evaluation of the Ocean Discharge Criteria factors as they relate to HABs. *Ocean Era I*, 18 E.A.D. at 702-705. In their petitions for review of the modified permit, Petitioners assert similar arguments and fail to explain how the arguments raised relate to the modified permit terms. *See* 40 C.F.R. § 124.5(c)(2) ("In a permit modification under this section, only those conditions to be modified shall be reopened when a new draft permit is prepared."). In its response to comments, the Region stated that the modified permit reduces the potential for nutrient-related contributions to HABs because total weight of fish produced is expected to be reduced from 80,000 pounds to 55,000 pounds, resulting in a 28% reduction in nitrogen and a 40% reduction in phosphorus loads. Resp. to Cmts. at 17. Petitioners do not dispute this statement.

Petitioner Friends of Animals attempts to relate its argument to the modified permit by citing studies indicating that climate change has exacerbated HABs since

the original permit was issued. FoA Pet. at 15. The Region addressed this information in its response to comments, stating that the climate issues do not relate to the changes effected by the permit modification and that the modified permit reduces the potential for the facility to contribute to HABs. Resp. to Cmts. at 17, 19. Petitioners fail to rebut the Region’s conclusion that there is “no increase in nutrient discharge[] that would warrant a new consideration of climate-based changes to baseline-conditions.” *Id.* at 17. In any event, while the studies cited by Friends of Animals to support its position discuss nutrient contributions to HABs, they do not address nutrient contributions to HABs from aquaculture operations. See Miles Medina et al., *Nitrogen-enriched discharges from a highly managed watershed intensify red tide (Karenia brevis) blooms in southwest Florida*, 827 *Sci. of the Total Env’t* 154149 (2022); Saurabh Chatterjee et al., *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*, 15 *Toxins* 289 (2023); 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 (2024); Vishwamithra Sunkara et al., *The Gulf of Mexico in trouble: Big data solutions to climate change science*, 10 *Frontiers in Marine Sci.* 1075822 (2023); Chetan C. Gaonkar and Lisa Campbell, *Metabarcoding reveals high genetic diversity of harmful algae in the coastal waters of Texas, Gulf of Mexico*, 121 *Harmful Algae* 102368 (2023). Accordingly, the Board denies review of this issue.

c. *Antibiotic Resistance*

The CFS Petitioners assert that the Region failed to evaluate human health risks associated with antibiotic resistance due to use of antibiotics at the facility. CFS Pet. at 27. The issue of antibiotic resistance was raised in Friends of Animals’ comments on the draft permit. FoA Cmts. at 10. This issue was addressed in the Board’s previous decision, which found that the Region had evaluated the potential discharge of antibiotics in its ODC Evaluation. *Ocean Era I*, 18 E.A.D. at 706. The CFS Petition does not raise any new arguments, instead basing its arguments on the original ODC Evaluation. CFS Pet. at 27-28. The Board denies review as this issue has already been considered and rejected.

C. *The Region Did Not Clearly Err in Concluding that the Modified Permit Is Not Likely to Adversely Affect Listed Species or Critical Habitat Under the Endangered Species Act*

Petitioners next argue that the Region clearly erred in concluding that the modified permit is “not likely to adversely affect” species listed as endangered or

threatened under the ESA or designated critical habitat. FoA Pet at 18; CFS Pet. at 41. “On appeal, the Board reviews for clear error whether a permit issuer has satisfied its obligation under the ESA when issuing an NPDES permit” and will uphold the permit issuer’s exercise of discretion if it is explained and supported in the record. *Ocean Era I*, 18 E.A.D. at 715. In modifying the permit at issue, the Region fulfilled the requirements of the ESA by reinitiating informal consultation with NMFS and concluding, with the concurrence of USFWS and NMFS, that the modified permit will have “no effect” or “is not likely to adversely affect” listed species or critical habitat.

Prior to issuing the 2022 permit, the Region and the U.S. Army Corps of Engineers jointly prepared the Biological Evaluation, concluding that the permit would have “no effect” on listed species and critical habitat under the jurisdiction of USFWS and “may affect, but is not likely to adversely affect” listed species and critical habitat under the jurisdiction of NMFS. Biological Evaluation at 27-28. USFWS and NMFS reviewed the Biological Evaluation; USFWS did not object and NMFS concurred in its conclusions. *Ocean Era I*, 18 E.A.D. at 715. In reviewing the permit modification, the Region evaluated the impact of the modification on listed species and habitats and again concluded that the action will have “no effect” or is “not likely to adversely affect” listed species and critical habitat. NMFS Consultation Request at 1.

The Region further evaluated whether the permit modification required reinitiation of ESA consultation under 50 C.F.R. § 402.16. The Region identified “a limited amount of new information related to the revised project cage material, increased gear, and changed fish species that was not previously considered” by NMFS. *Id.* at 12-13. The Region also identified and evaluated the impacts of the modified permit on listed species and critical habitats identified since the 2022 permit. *Id.* at 12-16. Based on this evaluation, the Region elected to reinitiate informal consultation under 50 C.F.R. § 402.16(a)(2) and (a)(4). *Id.* at 12-13. The Region provided its evaluation of the impacts of the modified permit to USFWS and NMFS. *See id.*; USFWS Concurrence Request. NMFS concurred in writing with the Region’s conclusion that the permit modification was not likely to adversely affect listed species and critical habitat. NMFS Concurrence at 1-2. USFWS stated that the Region had satisfied its responsibilities under the ESA and no further action was required. USFWS Concurrence.

The CFS Petition raises several objections to the Biological Evaluation conducted for the 2022 permit. CFS Pet. at 41-45. Similarly, the Friends of Animals Petition asserts that in issuing the original permit, the Region failed to consider the impacts of HABs on listed species. FoA Pet. at 30. These arguments

reiterate claims that Petitioners made, and the Board rejected, in its review of the 2022 permit. In that matter, the Board considered Petitioners' arguments that the Biological Evaluation failed to consider the impacts to listed species from release of excess food, light pollution, fish escapes, the potential to act as a fish aggregating device, degraded baseline conditions, and the effects of HABs. *Ocean Era I*, 18 E.A.D. at 716-18. The Board concluded that the Petitioners had not demonstrated clear error. *Id.* at 719. The only issue before us in this matter is whether the Region clearly erred in modifying the permit. Accordingly, we decline to revisit arguments that the analysis conducted for the 2022 permit was inadequate.

To the extent Petitioners raise new objections related to the permit modification, the Petitioners' arguments fail because the Region evaluated the identified impacts on listed species and critical habitat. Petitioners assert that the Region erred in concluding that the modified permit was not likely to adversely impact listed species because the Region failed to consider how modifications to the project would attract listed species, generate vessel traffic, and increase the risk of entanglement. FoA Pet. at 20-26; CFS Pet. at 43. The Region considered the effect of the change in cage material on attracting listed species. The Region acknowledged that the new material may have increased risk of biofouling compared to the copper alloy and that fish and sea turtles might be attracted to feed on algae and crustaceans. NMFS Consultation Request at 10-11. The Region stated that to reduce this risk, Ocean Era would implement biofouling reduction strategies, such as inspection and maintenance, brushing, and pressure washing of the cage. *Id.* The Region concluded that the increase in biofouling would be negligible, and that the modification of the permit would have insignificant effects due to fish aggregation. *Id.*¹³ This analysis was provided to NMFS, which concurred in the Region's conclusion that the modification was not likely to adversely affect listed species. NMFS Concurrence at 1-2.

The Region also considered the effect of the modifications on maritime traffic. NMFS Consultation Request at 10. The Region explained that Ocean Era was not proposing more vessels or trips to the facility for the modified permit action. *Id.* The Region further stated that the traffic from boats not affiliated with Ocean Era is expected to be the same as was evaluated in the record for the 2022

¹³ Petitioner Friends of Animals also asserts that the Region clearly erred in stating that feed for red drum would be lower in protein when in fact it has a higher protein concentration. FoA Pet. at 21; Modification Determination Memo at 3, 5. Petitioner, however, fails to explain how this error is material given the overall reduction in the quantity of feed. Modification Determination Memo at 3.

permit. *Id.* Petitioner Friends of Animals cites the larger footprint of the modified facility and the additional cleaning of the cage in support of its argument that the Region failed to consider increased maritime traffic due to the permit modification. *See* FoA Pet. at 23. The Region, however, provided information about the operational footprint and more frequent cage cleaning to NMFS, which concurred that the modification was not likely to adversely impact listed species. NMFS Consultation Request at 6, 9; NMFS Concurrence at 1-2.

The Region further considered how the modifications impacted the risk of entanglement of listed species and determined that the change in cage design would not increase adverse effects on listed species. While the modified cage design increased the number of mooring lines, the bridle lines would no longer be slack during normal operations. NMFS Consultation Request at 11. The Region explained, citing a 2023 review of entanglements at aquaculture operations, that tensioning of mooring lines decreases the risk of entanglement. *Id.* The Region further explained that some lines would be slack during raising and lowering but that Ocean Era would implement a protected species monitoring plan to monitor for listed species during those periods. *Id.* The Region concluded that the modification would not increase the risk of entanglement. *Id.* at 12. The Region's analysis of the impacts of the permit modification on listed species and critical habitats was provided to USFWS and NMFS, both of which agreed that the Region had fulfilled its ESA obligations. NMFS Concurrence at 1-2; USFWS Concurrence.

Petitioner Friends of Animals further asserts that the Region failed to adequately consider the effects on endangered species from changed conditions in the Gulf related to climate change and HABs. FoA Pet. at 28-30. But the record reflects that the Region considered these issues. Resp. to Cmts. at 16-17. Regarding HABs, the Region explained that the project authorized by the modified permit will have a smaller nutrient load than as authorized in the 2022 permit, thereby reducing the potential for contribution to HABs. *Id.* at 17. Regarding climate change, the Region explained that it had considered climate risks in issuing the 2022 permit and is requiring a facility damage prevention and control plan to mitigate impacts from a disaster. *Id.* The Region further stated that the post-2022 permit information related to climate change does not relate to modifications in the permit. *Id.* Petitioner argues that the changes in the species and net material will impact nutrient discharges and biofouling and that without considering changed baseline conditions, the Region could not adequately predict the effect of these changes. FoA Pet. at 29-30. The Region, however, separately addressed these concerns and found that neither increased the impact on listed species. NMFS Consultation Request at 9-10.

Finally, CFS Petitioners assert that the Region failed to consider impacts to newly identified species including the Rice's whale. CFS Pet. at 41. The record disproves this argument. The Region evaluated the effect of the modification on endangered and threatened species and critical habitats that had been listed or proposed to be listed since the Region issued the 2022 permit. NMFS Consultation Request at 13-16. This included an evaluation of impacts on the critical habitat of the Rice's whale. *Id.* at 14. The Region stated that the proposed facility will be located in water approximately forty meters deep, "well-inshore" of the 100-to 400-meter depth identified as the proposed critical habitat of the Rice's whale. *Id.* Moreover, effluent from the facility will not extend more than thirty meters from the facility, which is still within water approximately forty meters deep. *Id.* Accordingly, the Region concluded that there will be "no effect" on the Rice's whale critical habitat and did not change its conclusion that the permit is "not likely to adversely affect" the Rice's whale. *Id.* NMFS concurred in this determination. NMFS Concurrence at 1-2.

Here, the Region evaluated the effects of the modification on listed species and critical habitats, reinitiated informal consultation with NMFS, obtained written concurrence from NMFS that the modification either has "no effect" or is "not likely to adversely affect" listed species or critical habitat, and obtained written confirmation from USFWS that no further action was needed. This fulfilled the Region's consultation obligation under ESA section 7. *See* 50 C.F.R. § 402.13(c). No formal consultation was required. *Id.* § 402.14(b)(1). Petitioners have not demonstrated that the Region clearly erred in determining that the permit modification would not jeopardize the continued existence of listed species or critical habitat under the ESA. *See* ESA § 7, 16 U.S.C. § 1536(a)(2); 40 C.F.R. § 124.19(a)(4).

VII. CONCLUSION

For the reasons discussed above, we remand the permitting decision to the Region to reconsider its decision regarding whether pathogens or microplastics from the proposed facility will cause unreasonable degradation of the marine environment. On remand, the Region may further explain its decision, revise the record as necessary, revise its conclusion, or take a combination of those actions. The Region should take care to ensure that the administrative record is complete and demonstrates that the Region adopted an approach that is rational in light of all the information in the record. We deny review as to all the other issues raised in the petitions for review.

The Region's final permit decision on remand will become the final agency action subject to judicial review. 40 C.F.R. § 124.19(l)(2). Although a petition for

review by the Board is generally a prerequisite to seeking judicial review, a petition to the Board is not required after the Board remands a permit decision unless the Board “specifically provides that appeal of the remand decision will be required to exhaust administrative remedies.” *Id.* § 124.19(1)(2)(iii); *see also In re Wabash Carbon Servs., LLC*, 19 E.A.D 128, 148-49 (EAB 2025). Under the circumstances of this case, the Board is not requiring, and will not accept, a petition for review of the final permit decision following remand.

So ordered.