

**IN RE SHELL GULF OF MEXICO, INC. &
IN RE SHELL OFFSHORE, INC.
(FRONTIER DISCOVERER DRILLING UNIT)**

OCS Appeal Nos. 10-01 through 10-04

ORDER ON FOUR ADDITIONAL ISSUES

Decided March 14, 2011

Syllabus

On December 30, 2010, the Environmental Appeals Board (“Board”) issued an Order Denying Review in Part and Remanding Permits (“Remand Order”) concerning two Outer Continental Shelf (“OCS”) Prevention of Significant Deterioration (“PSD”) permits (“Permits”) that the U.S. Environmental Protection Agency (“EPA” or “Agency”) Region 10 (“Region”) issued to Shell Gulf of Mexico Inc. and Shell Offshore Inc. (collectively, “Shell”). Three groups, Center for Biological Diversity, Earthjustice, on behalf of several conservation groups (“EJ Petitioners”), and Alaska Eskimo Whaling Commission and Inupiat Community of the Arctic Slope (“AEWC”), filed petitions seeking Board review of the Permits on numerous grounds, including the three issues the Board addressed in the Remand Order.

On January 21, 2011, the Board received motions for reconsideration and/or clarification of the Remand Order from both the Region and Shell. Among other things, the Region requested that the Board decide four issues that the Board had previously remanded without full analysis in the Remand Order. By order dated February 10, 2011, the Board explained that it had not previously decided the four issues on which the Region requests decision in significant part because the Region had requested the Board hold those matters in abeyance. The Board concludes that it is now appropriate, in the interests of judicial economy and finality in this permitting process, for the Board to consider the four specific issues to provide the Region with additional guidance for its permit decisionmaking on remand. These are:

- A. Is the connection between the Frontier Discoverer and the Icebreaker #2, when Icebreaker #2 is setting or retrieving the Frontier Discoverer’s anchors, sufficient for the Icebreaker #2 to be part of the OCS source, if the anchor setting or retrieval occurs during a time when the Frontier Discoverer is an OCS source?
- B. In the circumstances of this case, did the Region clearly err by not requiring modeling, as part of the source impacts analysis, for the formation of PM_{2.5} (particulate matter with a diameter of 2.5 micrometers or less) in the atmosphere from precursor pollutants emitted by the OCS source?

- C. In the circumstances of this case, did the Region inappropriately consider all particulate matter emissions – PM, PM_{2.5}, and PM₁₀ (particulate matter with a diameter of ten micrometers or less) – as PM_{2.5} emissions when it conducted a BACT analysis?

- D. In the circumstances of this case, is the Region required to account, in the potential to emit analysis, for certain pollutant emissions including emissions from the oil spill response fleet that could occur if the fleet were needed to respond to a potential emergency?

Held: Based on the record before the Board and the merits briefs previously submitted in these appeals, the Board denies review of AEW’s petitions for review on three of the four issues stated above. AEW has not demonstrated that the Region clearly erred when it determined that Icebreaker #2 is not “attached” to the Frontier Discoverer, and thus not part of the OCS source, when it is setting or retrieving the Frontier Discoverer’s anchors. Nor has AEW met its burden of demonstrating that the Region clearly erred when it chose to consider PM, PM_{2.5}, and PM₁₀ emissions as PM_{2.5} emissions in its BACT analysis for each Permit. Finally, AEW has not shown that the Region clearly erred when it decided to exclude from the potential to emit analysis certain emissions including emissions from the oil spill response fleet that could occur if the fleet were needed to respond to a potential emergency.

Because of a gap in the record, the Board does not sustain the Region’s source impacts analysis for PM_{2.5}. The Board normally defers to a permit issuer’s expertise when technical issues are raised on appeal and the Region’s general approach may be appropriate. However, under EPA’s most current guidance that addresses modeling procedures for demonstrating compliance with the PM_{2.5} NAAQS, some assessment of the potential contribution to cumulative impacts as secondary PM_{2.5} may be necessary for any facility that emits significant quantities of PM_{2.5} precursors. The Region has not identified any place within the administrative record where the Region provided an explanation that modeling secondary PM_{2.5} is not necessary because PM_{2.5} precursors will not be emitted in significant quantities. On remand, the Region should also provide an explanation of why modeling secondary PM_{2.5} is necessary or not after determining whether PM_{2.5} precursors will be emitted in significant quantities.

Before Environmental Appeals Judges Anna L. Wolgast, Edward E. Reich, and Kathie A. Stein.

Opinion of the Board by Judge Wolgast:

I. INTRODUCTION

On December 30, 2010, the Environmental Appeals Board (“Board”) issued an Order Denying Review in Part and Remanding Permits (“Remand Order”) concerning two Outer Continental Shelf (“OCS”) Prevention of Significant Deterioration (“PSD”) permits (“Permits”) that the U.S. Environmental Protection Agency (“EPA” or “Agency”) Region 10 (“Region”) issued to Shell Gulf of Mexico, Inc.

and Shell Offshore, Inc. (collectively, “Shell”). Three groups¹ filed petitions seeking Board review of the Permits on numerous grounds, including the three issues the Board addressed in the Remand Order. The Board decided that two of those three issues required remand of the Permits. The Board did not address other issues raised in the petitions for review, stating that the administrative record underlying these issues would likely be significantly altered as a result of the remand.

On January 21, 2011, the Board received motions for reconsideration and/or clarification of the Remand Order from both the Region and Shell.² Among other things, the Region requested that the Board decide four issues that the Board had previously remanded without full analysis in the Remand Order. By order dated February 10, 2011, the Board explained that it had not previously decided the four issues on which the Region requests decision in significant part because the Region had requested the Board hold those matters in abeyance, but the Board concluded that it is now appropriate, in the interests of judicial economy and finality in this permitting process, for the Board to consider the four specific issues to provide the Region with additional guidance for its permit decisionmaking on remand. Order on Motions for Reconsideration and/or Clarification (EAB Feb. 10, 2011) (“Reconsideration Order”).

II. ISSUES ADDRESSED IN THIS ORDER ON APPEAL

In this Order, the Board addresses the following four issues:

¹ The Center for Biological Diversity (“CBD”) requested review of the Permits simultaneously in a single Petition for Review designated as OCS Appeal No. 10-01. *See* Petition for Review (Apr. 30, 2010) (“CBD Petition”).

Earthjustice, representing several conservation groups including Natural Resources Defense Council, Native Village of Point Hope, Resisting Environmental Destruction of Indigenous Lands (“REDOIL”), Alaska Wilderness League, Audubon Alaska, Center for Biological Diversity, Northern Alaska Environmental Center, Ocean Conservancy, Oceana, Pacific Environment, and Sierra Club (collectively, “EJ Petitioners”), requested review of the Permits simultaneously in a single Petition for Review designated as OCS Appeal No. 10-02. *See* Petition for Review (May 3, 2010) (“EJ Petition”).

The Alaska Eskimo Whaling Commission and Inupiat Community of the Arctic Slope (“AEWC”) filed a Petition for Review of the Permit issued for exploration in the Chukchi Sea, designated as OCS Appeal No. 10-03. *See* Petition for Review (May 3, 2010) (“AEWC Chukchi Petition”). AEWC later filed a Petition for Review of the Permit issued for exploration in the Beaufort Sea, which was originally designated as OCS Appeal No. 10-12 and then later redesignated as OCS Appeal No. 10-04. *See* Petition for Review (May 12, 2010) (“AEWC Beaufort Petition”); *see also* Letter from Eurika Durr, Clerk, Environmental Appeals Board, U.S. Environmental Protection Agency, to Counsel in the Matter of Shell Gulf of Mexico, Inc. and Shell Offshore, Inc. (June 4, 2010).

² Petitioners filed a joint response opposing both the Region’s and Shell’s requests for reconsideration and/or clarification, and the Region filed a partial opposition to Shell’s request for partial reconsideration on February 7, 2011.

- A. Is the connection between the Frontier Discoverer and the Icebreaker #2, when Icebreaker #2 is setting or retrieving the Frontier Discoverer's anchors, sufficient for the Icebreaker #2 to be part of the OCS source, if the anchor setting or retrieval occurs during a time when the Frontier Discoverer is an OCS source?³
- B. In the circumstances of this case, did the Region clearly err by not requiring modeling, as part of the source impacts analysis, for the formation of PM_{2.5} (particulate matter with a diameter of 2.5 micrometers or less) in the atmosphere from precursor pollutants emitted by the OCS source?
- C. In the circumstances of this case, did the Region inappropriately consider all particulate matter emissions – PM, PM_{2.5} and PM₁₀ (particulate matter with a diameter of ten micrometers or less) – as PM_{2.5} emissions when it conducted a best available control technology (“BACT”) analysis?
- D. In the circumstances of this case, is the Region required to account, in the potential to emit analysis, for certain pollutant emissions including emissions from the oil spill response fleet that could occur if the fleet were needed to respond to a potential emergency?

III. SUMMARY OF DECISION

Based on the record before the Board and the merits briefs previously submitted in these appeals, the Board denies review of AEW's petitions for review on three of the four issues stated above. AEW has not demonstrated that the Region clearly erred when it determined that Icebreaker #2 is not “attached” to the Frontier Discoverer, and thus not part of the OCS source, when it is setting or retrieving the Frontier Discoverer's anchors. Nor has AEW met its burden of demonstrating that the Region clearly erred when it chose to consider PM, PM_{2.5}, and PM₁₀ emissions as PM_{2.5} emissions in its BACT analysis for each Permit. Finally, AEW has not shown that the Region clearly erred when it decided to exclude from the potential to emit analysis certain emissions including emissions from the oil spill response fleet that could occur if the fleet were needed to respond to a potential emergency.

However, because of a gap in the record, the Board does not sustain, on the current record, the Region's source impacts analysis for PM_{2.5}. The Board normally defers to a permit issuer's expertise when technical issues are raised on appeal and the Region's general approach may be appropriate. However, under

³ In the Remand Order, the Board remanded the Region's decision establishing when the Frontier Discoverer becomes and ceases to be an OCS source. Remand Order at 39-63.

EPA's most current guidance that addresses modeling procedures for demonstrating compliance with the PM_{2.5} national ambient air quality standards ("NAAQS"), some assessment of the potential contribution to cumulative impacts as secondary PM_{2.5} may be necessary for any facility that emits significant quantities of PM_{2.5} precursors. The Region has not identified any place within the administrative record where the Region provided an explanation that modeling secondary PM_{2.5} is not necessary because PM_{2.5} precursors will not be emitted in significant quantities. The Board remands this issue to the Region to allow the Region the opportunity to cure the record deficiencies.

IV. RELEVANT FACTUAL AND PROCEDURAL HISTORY

The relevant factual and procedural history for the Board's decision are described in the Remand Order⁴ and in the Reconsideration Order. Additional history, to the extent necessary for the Board's decision, is described in the Board's analysis of each of the four issues discussed below.

V. STANDARD OF REVIEW

The Outer Continental Shelf Air Regulations codified at 40 C.F.R. part 55 state that "the Administrator will follow the procedures in [40 C.F.R.] part 124 used to issue [] PSD permits" when processing OCS PSD permits. 40 C.F.R. § 55.6(a)(3). The Board does not ordinarily review a PSD permit decision unless the decision is based on either a clearly erroneous finding of fact or conclusion of law, or involves an important matter of policy or exercise of discretion that warrants review. 40 C.F.R. § 124.19(a); *accord In re Power Holdings of Ill., LLC*, 14 E.A.D. 723, 725 (EAB 2010); *In re Shell Offshore, Inc.*, 13 E.A.D. 357, 369 (EAB 2007); *In re Cardinal FG Co.*, 12 E.A.D. 153, 160 (EAB 2005). The preamble to the part 124 regulations states that the Board's power of review "should be only sparingly exercised" and that "most permit conditions should be finally determined at the [permit issuer's] level." Consolidated Permit Regulations, 45 Fed. Reg. 33,290, 33,412 (May 19, 1980); *accord Shell*, 13 E.A.D. at 369; *Cardinal FG*, 12 E.A.D. at 160. Petitioners bear the burden of demonstrating that review is warranted, and petitioners must raise specific objections to the permit and explain why the permit issuer's previous response to those objections is clearly erroneous or otherwise warrants review. *Power Holdings*, 14 E.A.D. at 725; *In re BP Cherry Point*, 12 E.A.D. 209, 217 (EAB 2005); *In re Steel Dynamics, Inc.*, 9 E.A.D. 740, 744 (EAB 2001); *In re Kawaihae Cogeneration Project*, 7 E.A.D. 107, 114 (EAB 1997).

⁴ Record documents referenced in this Order are cited consistent with their previously defined short citations in the Remand Order.

When evaluating a permit appeal, the Board determines whether the permit issuer's rationale for its conclusions is adequately explained and supported by the administrative record. *E.g.*, *Shell*, 13 E.A.D. at 386; *In re Ash Grove Cement Co.*, 7 E.A.D. 387, 417 (EAB 1997) (“[T]he Region ‘must articulate with reasonable clarity the reasons for [its] conclusions and the significance of the crucial facts in reaching those conclusions.’” (quoting *In re Carolina Power & Light Co.*, 1 E.A.D. 448, 451 (Act’g Adm’r 1978))). In other words, the record must demonstrate that the permit issuer “exercised his or her considered judgment” when making permit determinations. *In re San Jacinto River Auth.*, 14 E.A.D. 688, 691 (EAB 2010); *accord In re Knauf Fiber Glass, GmbH*, 8 E.A.D. 121, 175 (EAB 1999) (remanding permit because “there are no details regarding [the Region’s] determination in the administrative record,” that would allow the Board “to judge the adequacy of the Region’s analysis”); *In re Austin Powder Co.*, 6 E.A.D. 713, 719-20 (EAB 1997) (remanding permit for permit issuer to clarify the differing rationales given for making a permit determination); *In re GSX Servs. of S.C., Inc.*, 4 E.A.D. 451, 454 (EAB 1992) (administrative record must reflect “considered judgment” necessary to support permit issuer’s permit determination). As this Board has previously observed, “[w]ithout an articulation by the permit writer of his analysis, [the Board] cannot properly perform any review whatsoever of that analysis and, therefore, cannot conclude that it meets the requirements of rationality.” *In re Gov’t of D.C. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 323, 342-43 (EAB 2002), *quoted in Shell*, 13 E.A.D. at 386.

VI. ANALYSIS

A. *Icebreaker #2 Is Not Part of the OCS Source When Setting and Retrieving the Frontier Discoverer’s Anchors*

AEWC requests the Board review the Region’s determination that Icebreaker #2 is not part of the OCS source when the Icebreaker is setting and retrieving the Frontier Discoverer’s anchors. AEWChukchi Petition at 11, 18-22; AEWBeaufort Petition at 11, 18-22. AEWChukchi contends that the Icebreaker #2 is “physically attached” to the Frontier Discoverer by the “cable connecting the Discoverer and the icebreaker/anchor handler during anchoring,” and that this connection makes Icebreaker #2 part of the OCS source under the regulatory definition of “OCS source.” AEWChukchi Petition at 18-19; AEWBeaufort Petition at 18-19.

In its response to comments, the Region concluded that Icebreaker #2’s connection to the Frontier Discoverer during the anchor setting and retrieval process does not “constitute[] ‘attachment’ as used in the definition of OCS source.” Chukchi RTC at 25. In its response to comments, the Region stated its interpretation that “[t]he purpose of ‘attachment’ within the definition of ‘OCS source’ in

40 C.F.R. § 55.2 is to prevent or minimize relative movement between two vessels * * * ." *Id.*

The Board rejects AEW's appeal of this issue and, instead, concludes that the Region did not clearly err in deciding that, during anchor setting and retrieval, Icebreaker #2 is not "physically attached" to the Frontier Discoverer as that term is used in the regulatory definition of OCS source. The definition states that "[t]his definition shall include vessels *only when* they are: * * * (2) Physically attached to an OCS facility, in which case only the stationary sources aspects of the vessels will be regulated." 40 C.F.R. § 55.2 (emphasis added).⁵ AEW does not dispute the Region's description that, during anchor setting and retrieval, "the anchor cable * * * is repeatedly connected and disconnected from one of the Discoverer's eight anchors" and "the anchor cable will be played out as Icebreaker #2 travels away from the Discoverer * * * transporting the anchor and the end of the anchor cable to the designated anchor site." Chukchi RTC at 25 (A.R. L-2 at L000091) (citation omitted). In essence, Icebreaker #2 is not held fast to the Frontier Discoverer, but instead transports the anchor end of the cable to or from the different anchor sites. Rather than challenging this factual description, instead, AEW argues that the Region violated the regulation's "plain language" when the Region stated that the "purpose of 'attachment' * * * is to prevent relative movement." AEW contends that this interpretation violates the regulation's "plain language" because, according to AEW, the regulation "contains no such requirement." AEW Chukchi Petition at 19; AEW Beaufort Petition at 19.

AEW's contention, however, must fail. Beyond merely asserting that the Region's interpretation violates the regulation's "plain language," AEW has provided no analysis identifying what the plain meaning of "physically attached" is. Instead, AEW appears to presume that any physical connection between the Icebreaker and Frontier Discoverer means that the two are "physically attached." The term "attached," however, is not ordinarily so broad. To the contrary, the *Merriam-Webster's Dictionary* defines "attach" to mean "to make fast." *Merriam-Webster's Collegiate Dictionary* 74 (10th ed. 1999). The term "fast" in this context means "firmly fixed * * * tightly shut * * * adhering firmly * * * not easily freed: stuck * * * stable." *Id.* at 423. Similarly, the *American Heritage Dictionary*, which the Region cited in the statements of basis for both permits, defines "attach" as meaning "'to fasten, secure or join.'" Modified Chukchi Statement of Basis at 21 n.7 (quoting *The American Heritage Dictionary of the English Language* (4th ed. 2006)); *see also* Beaufort Statement of Basis at 24 n.8 (same).

⁵ The regulatory definition also defines vessels as falling within the OCS source definition when "(1) Permanently or temporarily attached to the seabed and erected thereon and used for the purpose of exploring, developing or producing resources therefrom * * * ." 40 C.F.R. § 55.2. AEW does not contend, nor could it, that the Icebreaker #2 is attached to the seabed when setting and retrieving the Frontier Discoverer's anchors.

Thus, the plain meaning of “physically attached” appears to be more restrictive than AEWC argues and contemplates a firm, tight, or secure connection. Consequently, the regulation does not require the Region to treat any physical connection, no matter how short in duration and no matter how slight or tenuous, between the Frontier Discoverer and the Icebreaker as rendering the vessel part of the OCS source under all circumstances. The plain meaning of the regulation’s words contemplates a more substantial connection.

As a descriptive matter, the anchor setting and retrieval process does not fit readily within the more substantial connection contemplated by the words “physically attached.” The Region elaborated in its response to comments its interpretation regarding the purpose of attachment:

The purpose of “attachment” within the definition of “OCS source” in 40 C.F.R. § 55.2 is to prevent or minimize relative movement between two vessels, between a vessel and a dock structure, or between a vessel and the seabed. *See* 57 Fed. Reg. 40,792, 40,793-94 (Sept. 4, 1992) (referencing activities of vessels while “at dockside”). In this instance it is clear that the anchor cable, which is repeatedly connected and disconnected from one of the Discoverer’s eight anchors, is not intended in any way to restrict the location of Icebreaker #2. In fact, the anchor cable will be played out as Icebreaker #2 travels away from the Discoverer. Icebreaker #2 is merely transporting the anchor and the end of the anchor cable to the designated anchor site. EPA does not believe this constitutes “attachment” as used in the definition of OCS source.

Chukchi RTC at 25. As noted, AEWC has not identified any factual error in the Region’s description of the anchor setting and retrieval process. AEWC also has not explained how descriptive phrases, such as “repeatedly connected and disconnected” or “the anchor cable play[ing] out as Icebreaker #2 travels away from the Discoverer” can be viewed as falling within the meaning of “physically attached.” These phrases do not describe a connection by which the Icebreaker is “made fast” to the Frontier Discoverer; nor do these phrases describe the Icebreaker as “firmly fixed * * * tightly shut * * * adhering firmly * * * not easily freed: stuck * * * stable” to the Frontier Discoverer. *See Merriam-Webster’s Collegiate Dictionary* at 74, 423. The Region’s interpretation, on the other hand, that “physically attached” in the context of these Permits means “to prevent or minimize relative movement between two vessels,” Chukchi RTC at 25 (A.R. L-2 at L000091) (emphasis added), appears consistent with the dictionary definitions of attached as meaning “to make fast” or “fasten, secure or join.” *Merriam-Webster’s Collegiate Dictionary* at 74; Chukchi Revised Statement of Basis at 21 n.7.

Moreover, the Region's citation in its response to comments to the discussion in the regulatory preamble regarding "vessels while 'at dockside'" confirms that the regulation's purpose was to use "attached" in its plain and ordinary sense. *See* Chukchi RTC at 25 (citing 57 Fed. Reg. 40,792, 40,793-94 (Sept. 4, 1992)). The regulatory preamble explained that the decision to treat a vessel as part of an OCS source when attached to the OCS source is "consistent with federal new source review ('NSR') requirements, under which emissions from the stationary source activities of vessels at dockside are considered primary emissions of the marine terminal and are regulated as such." Outer Continental Shelf Air Regulations, 57 Fed. Reg. 40,792, 40,793 (Sept. 4, 1992). This comparison in the preamble provides some confirmation that, in writing the regulatory definition, the Agency contemplated that the extent of the connection between a vessel "physically attached" to an OCS source would be similar to that of a "vessel at dockside." Such a vessel at dockside would be "attached" within the meaning of the regulation, unlike the circumstances of intermittent connection during anchor setting and retrieval.

The Board also rejects AEWC's argument that the Region's interpretation fails to consider Congress's intent and goals for Clean Air Act ("CAA") section 328's authorization for EPA to regulate air pollution on the OCS. AEWC Chukchi Petition at 20; AEWC Beaufort Petition at 20. As the Board explained in its Remand Order, while granting EPA authority to regulate air pollution on the OCS, Congress also maintained in section 328 a distinction between stationary and mobile sources when addressing vessels on the OCS. Remand Order at 20-38 (sustaining the Region's determination that pollutant emissions from the Associated Fleet are regulated to prevent violation of the NAAQS and increments, but that best available control technology is not required for vessels that do not attach to the OCS source). By requiring a vessel to have a connection that prevents or minimizes relative movement between the vessel and an OCS source in order for the vessel to be considered "attached" and therefore a part of the OCS source, the Region's interpretation gives expression to the statutory distinction between mobile and stationary sources and, as discussed above, that interpretation is consistent with the plain meaning of "physically attached."

In sum, the Region was not required to interpret any physical connection between the Frontier Discoverer (when it is an OCS source) and the Icebreaker #2 as constituting a regulatory attachment. The Region reasonably concluded that the intermittent and insubstantial connections of anchor setting and retrieval – where Icebreaker #2 is not held fast to the OCS source, but instead transports the anchor end of the cable to or from the anchor site – is not "physically attached" within the plain meaning of the regulation.

Thus, AEWC has failed to launch a meritorious challenge to the Region's interpretation and application of "physically attached," which the Region determined does not include the minimal and intermittent connection that will exist

between the Icebreaker and the Frontier Discoverer during the anchor setting and retrieval process.⁶ Accordingly, for the foregoing reasons, the Board concludes that AEWG has failed to sustain its burden of demonstrating clear error in the Region's determination that the Icebreaker #2 is not made a part of the OCS source solely by virtue of an intermittent and insubstantial connection formed through Icebreaker #2's transport of the Frontier Discoverer's anchor cables and anchors during the anchor setting and retrieval process. Further, the Board also notes that, on remand, the Region will make a new determination as to when the Frontier Discoverer becomes an OCS source, potentially necessitating a new analysis of the OCS source's potential to emit. This will include an accounting of the Associated Fleet's and Icebreaker's emissions during the time the Frontier Discoverer is an OCS source and those vessels are within 25 miles of the OCS source.⁷ See Remand Order at 39.

B. The Record Is Insufficient to Sustain the Region's Decision to Not Model the Formation of Secondary PM_{2.5} as Part of the Source Impacts Analysis

AEWG requests the Board grant review of the source impacts analysis for PM_{2.5}. AEWG contends that the Region clearly erred by not requiring Shell to

⁶ The Region did not rest its decision only on an interpretation of the regulatory text, as discussed above. The Region also provided a pragmatic explanation, concluding that, at most, a small fraction of pollutant emissions during the anchor setting and retrieval process would be made subject to additional regulatory requirements if, assuming arguendo, the Region were to treat the anchor handling activity as "physically attached," since only the stationary source emissions would be regulated. See *Chukchi RTC* at 24-25 ("Little, if any, anchor handling will occur while the Discoverer is an OCS source"); *id.* at 25 (noting that, in any event, only the stationary source emissions would be subject to regulation as a result of attachment). Although courts have long recognized that it is "permissible as an exercise of agency power, inherent in most statutory schemes, to overlook circumstances that in context may fairly be considered de minimis," *Ala. Power Co. v. Costle*, 636 F.2d 323, 360 (D.C. Cir. 1979); see also *Greenbaum v. EPA*, 370 F.3d 527, 534 (6th Cir. 2004); *Ober v. Whitman*, 243 F.3d 1190, 1193-95 (9th Cir. 2001), here, the Region's analysis in the record is not sufficient to stand as a de minimis determination. The record contains information provided by Shell regarding the Icebreaker's hourly emissions separately identified for the Icebreaker's propulsion engine, heat boiler, generator, and incinerator. See E-mail from Kirk Wings, Shell Consultant, to Herman Wong, U.S. EPA Region 10 (June 26, 2009) (A.R. A-26). The record, however, does not contain an analysis by the Region regarding which, if any, of these emissions are "stationary source aspect" emissions and regarding whether the cumulative stationary source aspect emissions during the portion of the anchor setting and retrieval process when the Frontier Discoverer is an OCS source are, in fact, de minimis (i.e., that the emissions are insignificant and that controlling those insignificant emissions would be excessively burdensome).

⁷ The Icebreaker's mobile source and stationary source aspect emissions are regulated under the Permits' limitations, which were established to control the permitted activity's potential to emit during the time the Frontier Discoverer is an OCS source. Those limitations control emissions to avoid violation of the NAAQS. See Modified *Chukchi Statement of Basis* at 23; *Beaufort Statement of Basis* at 25-26.

calculate or model the formation in the atmosphere of PM_{2.5} from the OCS source's emissions of nitrogen oxides ("NO_x"), volatile organic compounds ("VOCs"), sulfur dioxide ("SO₂") and ammonia (the formation of PM_{2.5} in the atmosphere is referred to as "secondary PM_{2.5}"). AEWChukchi Petition at 40-48; AEWChaufort Petition at 39-47; AEWChreply at 25-28.

EPA guidance published in the Code of Federal Regulations specifically recognizes the complex technical nature of modeling secondary formation of PM_{2.5} in the atmosphere:

Treating secondary components of PM_{2.5}, such as sulfates and nitrates, can be a highly complex and resource intensive exercise. * * * Suitability of a modeling approach or mix of modeling approaches for a given application requires technical judgment, as well as professional experience in choice of models, use of the models in an attainment test, development of emissions and meteorological inputs to the model and selection of days to model * * * .

40 C.F.R. pt. 51, app. W, § 5.2.2.1.a. The Board has frequently stated that, when a petitioner seeks review of decisions that are fundamentally technical in nature, the Board assigns a particularly heavy burden to the petitioner. *In re Peabody W. Coal Co.*, 12 E.A.D. 22, 33 (EAB 2005). "This demanding standard serves an important function within the framework of the Agency's administrative process; it ensures that the locus of responsibility for important technical decisionmaking rests primarily with the permitting authority, which has the relevant specialized expertise and experience." *Id.*; see also *In re NE Hub Partners, L.P.*, 7 E.A.D. 561, 567-68 (EAB 1998), *review denied sub nom. Penn Fuel Gas, Inc. v. EPA*, 185 F.3d 862 (3d Cir. 1999). "When issues raised on appeal challenge a Region's technical judgments, clear error or a reviewable exercise of discretion is not established simply because petitioners document a difference of opinion or an alternative theory regarding a technical matter. In cases where the views of the Region and the petitioner indicate bona fide differences of expert opinion or judgment on a technical issue, the Board typically will defer to the Region." *NE Hub*, 7 E.A.D. at 567; see also *In re Envotech, L.P.*, 6 E.A.D. 260, 284 (EAB 1996) ("absent compelling circumstances, the Board will defer to a Region's determination of issues that depend heavily upon the Region's technical expertise and experience"); *In re Gen. Elec. Co.*, 4 E.A.D. 358, 375 (EAB 1992) (same).

Generally, the Board looks to "whether the record demonstrates that the Region duly considered the issues raised in the comments and whether the approach ultimately adopted by the Region is rational in light of all the information in the record." *In re Gov't of D.C. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 323, 348 (2002); accord *NE Hub*, 7 E.A.D. at 568. Where a permitting authority has responded to public comments demonstrating that it, in fact, considered technical

issues raised in the public comments, the Board will normally not substitute its judgment for the technical expertise of the permitting authority, particularly where the petition at most demonstrates only disagreement among experts. *See In re Cardinal FG Co.*, 12 E.A.D. 153, 167 (EAB 2005).

Applying these standards in the present case, the Board finds that the Region in fact considered the technical issues raised in the public comments regarding the method for taking secondary PM_{2.5} into account in the ambient air quality and source impacts analysis and that the general approach adopted by the Region may be appropriate. The Board, nevertheless, is unable to sustain the Region's decision because of a gap in the record before the Board.

EPA guidance issued immediately before the Region issued the Chukchi Permit provides the most detailed explanation available as to what the Region should take into account in its analysis. *See* Memorandum from Stephen D. Page, Director, Office of Air Quality Planning & Standards, U.S. EPA, to EPA Regional Modeling Contacts, U.S. EPA, *Modeling Procedures for Demonstrating Compliance with PM_{2.5} NAAQS* at 3, 9 (Mar. 23, 2010) [hereinafter *Modeling Procedures for PM_{2.5}*] (A.R. B-118). This guidance recognizes that, in some cases, “[s]econdary formation of PM_{2.5} from emissions of NO_x, SO_x and other compounds from sources across a large domain * * * may be the dominant source of ambient PM_{2.5} in some cases.” *Id.* at 3. The guidance also states that “if the facility emits significant quantities of PM_{2.5} precursors, some assessment of their potential contribution to cumulative impacts as secondary PM_{2.5} may be necessary.” *Id.* at 9.

Here, the record is incomplete first with respect to whether the OCS source will emit PM_{2.5} precursors at levels that are significant under the Modeling Procedures for PM_{2.5} guidance. As noted, although the Agency's recently issued guidance does not require modeling secondary formation of PM_{2.5} in all circumstances, it does state that “if the facility emits significant quantities of PM_{2.5} precursors, some assessment of their potential contribution to cumulative impacts as secondary PM_{2.5} may be necessary.” *Id.* at 3, 9. The Region in responding to AEWC's petition argues in its brief that Shell's OCS source will not emit significant quantities of the precursor pollutants. Region's Resp. at 59-60. The Region, however, has not identified any place within the administrative record where the Region provided an explanation that modeling secondary PM_{2.5} is not necessary because PM_{2.5} precursors will not be emitted in significant quantities. A post hoc rationale expressed for the first time on appeal by counsel does not provide grounds for sustaining a permitting decision. *See In re Upper Blackstone Water Pollution Abatement Dist.*, 14 E.A.D. 577, 645 (EAB 2010); *In re Gov't of D.C. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. 323, 343 (EAB 2002) (declining to consider Region's explanation expressed for the first time on appeal); *In re Haw. Elec. Light Co.*, 8 E.A.D. 66, 101-03 (EAB 1998) (rejecting consideration of new data offered for the first time on appeal).

The record is also incomplete with respect to a second critical component identified in the Modeling Procedures for PM_{2.5} guidance. Because secondary formation of PM_{2.5} may be a dominant source of ambient PM_{2.5}, the Modeling Procedures for PM_{2.5} guidance recognizes a “more prominent role” for monitored background concentrations of PM_{2.5}. Modeling Procedures for PM_{2.5} at 5. In particular, “[a]n important aspect of the monitored background concentration for PM_{2.5} is that the monitored data should account for the contribution of secondary PM_{2.5} formation representative of the modeling domain.” *Id.* at 7.⁸ What this means is that the permit issuer should pay particular attention to the collection of representative ambient PM_{2.5} data to ensure that secondary PM_{2.5} from other area sources is accurately represented in the PM_{2.5} compliance modeling.

In responding to comments regarding why it concluded that modeling secondary formation of PM_{2.5} is not necessary, the Region identified conservative assumptions, including assumptions made in the collection of representative background ambient data, and the Region concluded that “the cumulative effect of these conservative assumptions has adequately accounted for the possibility of secondary formation of PM_{2.5}.” Chukchi RTC at 122 (cross-referencing earlier discussions of assumptions at pages 88-89, 103-05). The “conservative assumptions” the Region identified included the selection of 11.4 µg/m³ as the background ambient concentration, which was then used in the source impacts modeling. *Id.* at 104.⁹ However, as a separate issue, AEWG requested review of the background ambient air quality data for PM_{2.5} and the Board remanded this issue to the Region in the Remand Order, and the Region did not request reconsideration of that re-

⁸ Further, the Agency stated that “[g]iven the importance of secondary contributions for PM_{2.5} and the typically high background levels relative to the NAAQS for PM_{2.5}, greater emphasis is placed on the monitored background contribution relative to the modeled inventory.” Modeling Procedures for PM_{2.5} at 7.

⁹ The Region explained that an additional conservatism built into the modeling was the decision to treat all PM_{2.5} as equal to all PM₁₀, rather than a smaller fraction of the latter number. Chukchi RTC at 122. The Region also explained that certain procedures were used “to bias the results to protect the NAAQS.” *Id.* at 88-89. In supplementing its analysis on remand, the Region should identify the specific procedures it used to bias the results to protect the NAAQS and should provide further explanation for why it concludes that the cumulative effect of these conservative elements is sufficient to account for the secondary formation of PM_{2.5}.

mand.¹⁰ Because, as noted in the Board's Reconsideration Order,¹¹ the Region presumably, on remand, will incorporate any newly-available background ambient air quality data, and because the background ambient air quality data is not before the Board at this time, it is not appropriate for the Board to analyze the specific challenge AEW C raises to whether the Region's selected background ambient air quality value is, in fact, conservative.¹²

For the foregoing reasons, notwithstanding the deference the Board ordinarily accords to a permit issuer's decision on these highly technical questions of how best to account for potential secondary PM_{2.5} in the source impacts analysis, the Board nevertheless concludes that the Region's determination cannot be sustained on the administrative record currently before the Board.

C. The Region Did Not Clearly Err When, for Purposes of Determining BACT Limitations, the Region Assumed That All Particulate Matter – PM, PM₁₀, and PM_{2.5} – Was PM_{2.5} When Conducting a BACT Analysis

The Region asks the Board to deny review of AEW C's petition claiming that EPA clearly erred when it chose not to distinguish between PM,¹³ PM_{2.5}, and PM₁₀ emissions in its BACT analysis for each Permit. Region's Motion at 24, 28-29. In its petitions for review and subsequent reply brief, AEW C argues that by addressing PM, PM_{2.5}, and PM₁₀ all "together" in the BACT analysis, EPA

¹⁰ AEW C argued that the background ambient air quality data were not collected in compliance with the applicable regulations. *See* AEW C Chukchi Petition at 32-40; AEW C Beaufort Petition at 32-38. In response to the petitions, the Region did not argue that the PM_{2.5} data fully complied with the regulatory requirements, but instead the Region argued that the data met the requirements "during some portions of the data collection period" and that the Region "took additional steps to verify the quality of the entire data set." Region's Resp. at 47. In its request for Board decision on four issues addressed in this order, the Region did not request that the Board decide the issue of whether the background ambient data for PM_{2.5} was collected in compliance with applicable regulatory requirements and, accordingly, the Board left undisturbed this aspect of its general remand of the Permits, that is, its remand of the PM_{2.5} ambient air quality data. *See* Reconsideration Order at 11-12.

¹¹ *See* Reconsideration Order at 11-12.

¹² *See* AEW C's Reply Brief at 26; *see also* AEW C Chukchi Petition at 46-47; AEW C Beaufort Petition at 45-46 (arguing that the Region did not make the "most" conservative judgment as to the value to use for background ambient air quality).

¹³ The Board notes that the Chukchi and Beaufort Permits contain BACT limits for PM, PM₁₀, and PM_{2.5}. Both AEW C and the Region are inconsistent in the way they refer to particulate matter in their pleadings. AEW C's Chukchi and Beaufort petitions mention PM, PM₁₀, and PM_{2.5}, yet AEW C only discusses PM₁₀ and PM_{2.5} in its reply. *See* AEW C Chukchi Petition at 48; AEW C Beaufort Petition at 46-47; AEW C Reply at 28-29. The Region responds to AEW C's petitions only in terms of PM₁₀ and PM_{2.5}. *See* Region's Resp. at 66-70. AEW C's petitions argue that the Region clearly erred when it considered particulate matter of all sizes to be PM_{2.5} in its BACT analysis, not that the BACT limits contained in the Permits are the same.

violated the plain language of CAA § 165(a)(4), 42 U.S.C. § 7475(a)(4),¹⁴ which requires BACT limits for “each pollutant subject to regulation,” and the regulation set forth at 40 C.F.R. § 52.21(j)(2),¹⁵ which requires BACT “for each regulated [New Source Review] pollutant.” AEWChukchi Petition at 48; AEWChaufort Petition at 46-48. AEW asserts that since 1997, PM_{2.5} and PM₁₀ “have been regulated as separate pollutants under the Act because they are subject to separate NAAQS.” AEWChukchi Petition at 48; AEWChaufort Petition at 46-47. The Region agrees that PM_{2.5} and PM₁₀ are separate pollutants, and responds that it has “clearly complied” with CAA § 165(a)(4), 42 U.S.C. § 7475(a)(4), and 40 C.F.R. § 52.21(j)(2). Region’s Resp. at 66-67. The Region states that both “permits contain BACT limits for PM_{2.5} and PM₁₀ individually.” *Id.* (citing Conditions 3.4 and 3.5 of the Chukchi and Beaufort Permits, setting PM₁₀ and PM_{2.5} BACT limits, respectively, for the Frontier Discoverer generator engines, and Condition 6.3 of the Chukchi and Beaufort Permits, requiring stack tests for both PM_{2.5} and PM₁₀ emissions).

For the reasons set forth below, the Board denies review of this issue. In its petitions for review, AEW does not provide more than a bald assertion that the Region violated the plain language of the CAA and the implementing regulations. AEW does not address the Region’s reasoning set forth in the Statements of Basis and Response to Comments for addressing PM, PM_{2.5}, and PM₁₀ emissions together, nor does it explain why the BACT limitations the Region chose to control particulate matter emissions are insufficient. Finally, AEW’s argument that a BACT analysis should be performed for different diameters of particulate matter because it is “obvious” that it may affect secondary formation of PM_{2.5} is not, without more, sufficient to warrant Board review.

Although AEW argues that the Region’s decision to consider particulate matter of all sizes as PM_{2.5} violates the plain language of the Clean Air Act,

¹⁴ That provision states:

(a) Major emitting facilities on which construction is commenced

No major emitting facility * * * may be constructed in any area to which this part applies unless--

* * *

(4) the proposed facility is subject to the best available control technology for each pollutant subject to regulation under this chapter emitted from, or which results from, such facility[.]

CAA § 165(a)(4), 42 U.S.C. § 7475(a)(4).

¹⁵ Section 52.21(j)(2) states that “[a] new major stationary source shall apply best available control technology for each regulated [New Source Review] pollutant that it would have the potential to emit in significant amounts.” 40 C.F.R. § 52.21(j)(2).

AEWC never specifically addresses the Region's reasoning set forth in the Statements of Basis¹⁶ and the Chukchi Response to Comments.¹⁷ The comments raised

¹⁶ In the Statements of Basis accompanying each draft permit, the Region stated the following:

Throughout the BACT section PM, PM_{2.5} and PM₁₀ emissions will be addressed together for all emissions units except the incinerator since it is assumed that essentially all of the PM and PM₁₀ emissions are also PM_{2.5} emissions, and the control technologies available for PM_{2.5} emissions on the types of equipment aboard the Discoverer will also effectively control PM and PM₁₀.

Modified Chukchi Statement of Basis at 51; Beaufort Statement of Basis at 62. The Statements of Basis also contained the Region's BACT analysis for particulate matter emissions resulting from operation of the engines, boilers, and incinerators aboard the Frontier Discoverer. Modified Chukchi Statement of Basis at 67-77; Beaufort Statement of Basis at 76-85; Modified Chukchi Statement of Basis at 67 n.13 (noting at the beginning of the BACT analysis for particulate matter that "[a]s discussed above, except with respect to the incinerator, all PM and PM₁₀ from all emission units on the Discoverer are assumed to be PM_{2.5}, a conservative assumption"); Beaufort Statement of Basis at 76 n.14 (same).

¹⁷ In its Beaufort petition as well as its reply, AEWc asserts that the Region failed to adequately respond to AEWc's comments on the Beaufort petition because the Region relied on the explanation in the Chukchi Response to Comments. AEWc Beaufort Petition at 47. In its reply, AEWc also asserts that the Region clearly erred because the Region did not "delineate the comments made on the Beaufort permit and where the response could be found" in the Chukchi Response to Comments. AEWc Reply at 29 (citing Beaufort RTC at 18, which states that for categories J through N, "[s]ee the Chukchi Response to Comments for responses related to this category of comments").

AEWC contends first that the Region did not individually respond to similar comments raised on both the Chukchi and Beaufort Permits. In response to similar arguments from AEWc, the Board pointed out in the Remand Order that the permitting regulations do not require a permit issuer to "respond to each comment in an individualized manner." Remand Order at 45 n.53; *see also In re Russell City Energy Ctr., LLC*, 15 E.A.D. 1, 101 (EAB 2010); *In re Kendall New Century Dev.*, 11 E.A.D. 40, 50 (EAB 2003); *In re NE Hub Partners, LP*, 7 E.A.D. 561, 583 (EAB 1998), *review denied sub nom. Penn Fuel Gas, Inc. v. EPA*, 185 F.3d 862 (3d Cir. 1999). Moreover, the Region observes that in the Beaufort Response to Comments, the Chukchi Response to Comments is incorporated by reference "to reduce repetition and duplication." Region's Resp. at 69 (quoting Beaufort RTC at 7).

This Board is not aware of any requirement for a permit issuer, when responding to similar or identical comments on multiple permits, to specifically note the page number on which the response the reader seeks can be found. The Region refers readers to the Chukchi Response to Comments in several instances because the comments and responses for both the Chukchi and Beaufort Permits were identical. *See* Beaufort RTC at 7. Notably, the EJ Petitioners' comments on the PM, PM_{2.5}, and PM₁₀ BACT issue were resubmitted from comments originally made on the initial Chukchi permit proposed in August 2009. *See infra* note 18. AEWc's respective petitions on this issue are almost identical, and in most respects make the same arguments regarding the Chukchi and Beaufort Permits. This Board has previously held that a permit issuer may provide a unified response to related comments. *See Russell City*, 15 E.A.D. at 101; *Kendall*, 11 E.A.D. at 50 n.13; *NE Hub*, 7 E.A.D. at 583. Although in this instance the issue is referring readers from one Response to Comments to another, the underlying rationale of providing a reasonable response to comments still applies under the circum-

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below, incorporated by reference from the initial Chukchi permit proposed in August 2009, state that: (1) the Region did not provide adequate support for its assumption that all PM and PM₁₀ emissions are also PM_{2.5}; (2) “it is not true that control technologies for all three PM sizes are the same,” and; (3) “the same control technology will result in different control efficiencies for each PM size fraction.”¹⁸ Chukchi RTC at 30; *see also* EJ Petitioners’ Chukchi Comments ex. A at 5. The comments also state that “EPA should analyze the control technology for each PM size fraction separately or should properly articulate a reasonable basis for assuming that all technologies for all three PM sizes are the same.” Chukchi RTC at 30; *see also* EJ Petitioners’ Chukchi Comments ex. A at 5.

In its response to comments, the Region stated in relevant part:

[M]ost of the particulate matter emissions from diesel engines are in the PM_{2.5} size range. [citation omitted] Particulate control devices designed to reduce PM_{2.5} emissions from engines are also effective on particulate matter in the larger size ranges. For example, a [Catalytic Diesel Particulate Filter] filters particulate matter from the exhaust gas stream and retains it within the filter until it can be oxidized to carbon dioxide. Particulate matter control options that have significantly different control effectiveness for the different particulate matter size ranges[,] such as a cyclone, wet scrubber, or electrostatic precipitators, are

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stances of this case, where the permittee is the same and where there is considerable overlap in the comments and responses for the two Permits.

¹⁸ The Board notes that these comments were initially raised by the EJ Petitioners in October 2009, in response to the Region’s initial Chukchi draft permit proposed in August 2009. When the Region proposed the modified Chukchi draft permit in January 2010, the EJ Petitioners resubmitted their October 2009 comments as part of their comments submitted to address changes between the initial Chukchi permit proposed in August 2009 and the modified Chukchi permit proposed in January 2010. *See* EJ Petitioners’ Chukchi Comments at 1 (stating that EJ Petitioners were resubmitting comments on the August 2009 initial Chukchi draft permit because many issues previously commented on remained unchanged); *id.* ex. A at 5 (EJ Petitioners’ August 2009 comments regarding BACT for PM, PM₁₀, and PM_{2.5}). The Board considers AEWC’s petition regarding BACT for PM₁₀ and PM_{2.5} here because in compliance with 40 C.F.R §§ 124.13 and .19, EJ Petitioners specifically commented on the PM, PM₁₀, and PM_{2.5} BACT analysis issue in the draft permits, and, because AEWC participated in the public comment process as well, AEWC may petition the Board “to review any condition of the permit decision.” As this Board has stated many times, requiring that an issue be raised during the comment period to preserve it for review is not an “arbitrary hurdle,” *In re BP Cherry Point*, 12 E.A.D. 209, 219 (EAB 2005), and here the Region had the opportunity to address the issue before the draft permit became final, ensuring “[t]he effective, efficient, and predictable administration of the permitting process.” *In re Encogen Cogeneration Facility*, 8 E.A.D. 244, 249-50 (EAB 1999), *quoted in In re Indeck-Elwood, LLC*, 13 E.A.D. 126, 168 (EAB 2006) and *In re Teck Cominco Alaska, Inc.*, 11 E.A.D. 457, 479 (EAB 2004).

not relevant for use in controlling particulate matter from diesel engines. Therefore, there was no reason to evaluate BACT separately for the different particulate matter size ranges.

Chukchi RTC at 30. AEWC's petitions for review make no mention of the Region's response to comments, and instead generally claim that the Region's BACT analysis for particulate matter constitutes a violation of the Clean Air Act and its implementing regulations, without providing any further substantive analysis as to why this Board should review the Region's decision.

As stated above, it is well settled that for each issue raised in a petition for review before the Board, it is incumbent upon the petitioner to demonstrate that review is warranted by raising objections to the permit and explaining why the permit issuer's previous response to those concerns is clearly erroneous or otherwise warrants review. *Russell City*, 15 E.A.D. at 11, 12; *In re N. Mich. Univ.*, 14 E.A.D. 283, 290 (EAB 2010); *In re BP Cherry Point*, 12 E.A.D. 209, 217 (EAB 2005); *In re Steel Dynamics*, 9 E.A.D. 740, 744 (EAB 2001). Without more, AEWC's statement that it is "obvious" that had PM_{2.5} been analyzed separately then the Region would have to address not only Shell's direct emissions but also secondary formation of PM_{2.5} is unavailing. Here, the Region states that it is "not aware of any prohibition against conducting the analysis" required by CAA § 165(a)(4), 42 U.S.C. § 7475(a)(4), in the way the Region did, and that AEWC has not identified why the Region's analysis is deficient. Region's Resp. at 67. The Region further states that AEWC has not attempted "to show how particular control technologies considered for these permits would have resulted in substantially differing PM_{2.5} and PM₁₀ emission levels" that would in turn require the Region to select different emissions limitations as BACT. *Id.* (citing *Vermont Yankee Nuclear Power Corp. v. Natural Res. Def. Council*, 435 U.S. 519, 553 (1978), for the proposition that in administrative proceedings, comments must be significant enough to "step over a threshold requirement of materiality," and a comment "cannot merely state that a particular mistake was made"); see also 40 C.F.R. § 52.21(b)(12) (defining BACT and explaining that the emissions limitation is based on the maximum degree of reduction for each pollutant and is determined on a case-by-case basis). In this instance, the Board cannot sustain AEWC's objection to the Region's BACT analysis for particulate matter because AEWC offers no explanation as to why the Region's choice of BACT or its supporting analysis is insufficient.¹⁹

¹⁹ The Board notes that, in its reply, AEWC references the New Source Review manual and further states that "[w]hile EPA has long addressed issues pertaining to PM_{2.5} by addressing PM₁₀, that era has come to an end." AEWC Reply at 28 (citing Implementation of the New Source Review (NSR) Program for Particulate Matter Less Than 2.5 Micrometers (PM_{2.5}); Notice of Proposed Rulemaking to Repeal Grandfathering Provision and End the PM₁₀ Surrogate Policy, 75 Fed. Reg. 6827 (Feb. 11, 2010)).

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D. *The Region Did Not Err When It Declined to Include Emissions from Unplanned Operations of the Oil Spill and Response Vessels in the Potential to Emit Analysis*

The Region asks the Board to deny review of AEW's petition claiming that the Region must include emissions from emergency oil spill responses or unplanned operations in its potential to emit ("PTE") analyses. Region's Motion at 24, 29. In its petition for review and subsequent reply brief, AEW argues that the Region committed clear error because the PTE analysis for each Permit fails to account for the "maximum capacity" of Shell's operations. See AEW Chukchi Petition at 62; AEW Beaufort Petition at 62; AEW Reply at 4-5. Specifically, AEW asserts that the Region's PTE analyses are inadequate because they do not include emissions that would result from: (1) clean-up of a spill pursuant to Shell's Oil Spill Response Plan; (2) "other" vessels that would under routine circumstances remain more than twenty-five miles away from the Frontier Discoverer, including the oil tanker, the barge, and shallow water landing craft, and; (3) the Frontier Discoverer's propulsion engine. AEW Chukchi Petition at 62-66; AEW Beaufort Petition at 61-66; AEW Reply at 3-7.

For the reasons set forth below, the Board denies review of AEW's petitions on this issue.²⁰ The Region's decision – to include in the PTE analyses emissions from the oil spill response ("OSR") fleets' planned training drills that take place within twenty-five miles of the Frontier Discoverer while the drillship is an OCS source, but to exclude OSR fleet emissions that could result from a response to an actual spill or other emergency – was reasonable given the record before the

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2010)). The surrogate policy that AEW refers to "authorized the interim use of PM₁₀ as a 'surrogate' for PM_{2.5} in meeting the PSD requirements because of 'significant technical difficulties' attending full implementation of PSD requirements for PM_{2.5}, largely resulting from a lack of adequate tools for calculating PM_{2.5} emissions." *In re Vulcan Constr. Materials, LP*, 15 E.A.D. 163, 171 (EAB 2011); see *id.* at 10-16 (discussing evolution of surrogate policy). In this instance, the Region did not determine that PM₁₀ could serve as a surrogate for PM_{2.5} in its BACT analysis; rather, the Region chose to treat all PM as PM_{2.5} because it determined that the control technology available for PM_{2.5} would also effectively control PM and PM₁₀ emissions.

²⁰ Both the Region and AEW acknowledge that, pending completion of the Department of the Interior's ("DOI") review of the safety and emergency planning requirements for offshore drilling activities, initiated in response to the *Deepwater Horizon* spill, DOI may impose further mandates for oil spill response activities. Region's Motion at 29; Region's Resp. at 12-13, 92; AEW Reply at 3-4. The Region and AEW also both acknowledge that these unknown requirements may affect the predicted emissions for Shell's proposed operations, which in turn could alter the Region's PTE analyses. Depending on the result of DOI's review, the Region may need to reanalyze PTE to accommodate any additional elements DOI deems essential for the oil spill response ("OSR") fleet. For instance, any increase in the OSR fleets' operation of emissions units within twenty-five miles of the Frontier Discoverer when it is an OCS source, whether such increase is for training drills or any other purpose, must be included in the Region's PTE analyses accompanying the permits reissued at the conclusion of remand proceedings.

Board. AEWC does not acknowledge the Region's inclusion of these foreseeable and planned training drills in the PTE analyses, and, in advocating for inclusion of all contingent emissions from the OSR fleet in the PTE analyses, AEWC fails to substantively address long-standing precedent that interprets 40 C.F.R. § 52.21(b)(4) to mean that the "maximum capacity" of a source includes federally enforceable permit limits that are necessarily distinct from a source's worst case operations and emissions scenario. Thus, AEWC fails to demonstrate that the Region clearly erred by excluding from the PTE analyses OSR fleet emissions that could result from a potential response to an oil spill or other emergency.

Similarly, AEWC fails to establish that the Region clearly erred when it excluded from the PTE analyses "other" vessels, including the tanker, the barge, and shallow water landing craft, as well as the Frontier Discoverer's propulsion engine. The record shows that both Permits prohibit these "other" vessels from operating within twenty-five miles of the Frontier Discoverer when it is an OCS source, and similarly prohibit operation of the propulsion engine on the Frontier Discoverer while it is an OCS source.

1. *Emissions from Clean-Up of an Oil Spill or Other Unplanned Emergency*

a. *AEWC's Arguments and the Region's Response*

AEWC argues that the Region's decision to exclude from the PTE analyses emissions resulting from the OSR fleet responding to an emergency was clear error because it violates the plain language of EPA's regulatory definition of PTE.²¹ AEWC Chukchi Petition at 64-65; AEWC Beaufort Petition at 64-65;

²¹ In its pleadings, AEWC refers to the regulatory definition of potential to emit:

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.

40 C.F.R. § 52.21(b)(4) (emphasis added). AEWC further notes that within 40 C.F.R. part 55, which encompasses OCS air regulations, the definition of potential emissions "is nearly identical" to the potential to emit definition stated above, except that the potential emissions definition adds at the end that "[p]ursuant to section 328 of the Act, emissions from vessels servicing or associated with an OCS source shall be considered direct emissions from such a source while at the source, and while enroute to or from the source when within 25 miles of the source, and shall be included in the 'potential to emit' for an OCS source." 40 C.F.R. § 55.2.

AEWC Reply at 4-5. In support of its argument, AEW C asserts that cleaning up an oil spill or responding to an emergency requires physically moving the OSR fleet to the drill site and conducting response activities, which would result in the use of propulsion engines, generators, and other equipment, and may also require in situ burning. AEW C continues that any combination of these activities would increase Shell's air emissions, and thus a PTE analysis completed without counting these emissions does not reflect the "maximum capacity" of Shell's operations. AEW C Chukchi Petition at 64-65; AEW C Beaufort Petition at 64-65. AEW C asserts that these emissions are not speculative or unplanned because Shell's clean-up operations are well-documented and rehearsed, as required by DOI regulations contained in Title 30 of the Code of Federal Regulations, and, further, that without this documentation detailing Shell's planned response to an oil spill or other emergency, Shell's proposed operations cannot be authorized. AEW C Chukchi Petition at 65; AEW C Beaufort Petition at 65;²² AEW C Reply at 5-6 ("Oil spills are foreseen and planned for in the OCS. * * * Therefore, these emissions must be included within the potential to emit.") (citations omitted). AEW C also argues that by not counting emissions that would occur if the OSR fleet mobilized to address an oil spill or other emergency, the Region violates EPA's long-standing policy under the PSD program that prohibits automatic exemptions from emissions requirements during malfunctions. AEW C Chukchi Petition at 65-66 (citing *In re Indeck-Elwood, LLC*, 13 E.A.D. 126, 174 (EAB 2006) and *Ariz. Pub. Serv. Co. v. EPA*, 562 F.3d 1116, 1129 (10th Cir. 2009)); AEW C Beaufort Petition at 65-66 (same); AEW C Reply at 5-6 (citing *Ariz. Pub. Serv. Co.*, 562 F.3d at 1129).

The Region responds that AEW C's claim that OSR fleet emissions should be included in the PTE analyses is "contrary to precedent," and that AEW C fails to address "well established interpretations of the PSD regulations positing that speculative emissions that could be associated with possible emergency response

²² AEW C's petitions refer to Shell's Oil Discharge Prevention and Contingency Plan ("C-Plan") for both the Chukchi and Beaufort proposed operations. The C-Plans are required to demonstrate, among other things, compliance with oil spill response requirements mandated by the Oil Pollution Act of 1990 and implemented by 40 C.F.R. part 254, subpart B. Although they do not appear to be reproduced in the record, *see* AEW C Reply at 6 n.3, Shell's respective C-Plans, submitted to the DOI's former Minerals Management Service ("MMS"), contain, in relevant part, information required by federal and state regulations regarding training and spill response exercises pursuant to requirements set forth in 30 C.F.R. § 254.29 and 18 A.A.C. § 75.425(e)(3)(I). *See* Chukchi Sea Regional Exploration Oil Discharge Prevention and Contingency Plan at 3-42 to -44 (May 2009) ("Chukchi C-Plan"), available at http://www.alaska.boemre.gov/ref/ProjectHistory/2009_Chukchi_Shell/2009_0623Shell_cplan.pdf (last visited Feb. 25, 2011); Beaufort Sea Regional Exploration Oil Discharge Prevention and Contingency Plan at 3-40 to -44 (Sept. 2007) ("Beaufort C-Plan"), available at http://www.alaska.boemre.gov/ref/ProjectHistory/Shell_BF/2007_cplan.pdf (last visited Feb. 25, 2011).

situations are not included as allowable emissions²³ in the required analysis for PSD permits.” Region’s Resp. at 88-89. Specifically, the Region notes that EPA regulations state that emissions from emergency or upset conditions are not considered in determining the allowable emissions used to conduct the air quality analysis for PSD permits. *Id.* at 89; Chukchi RTC at 93 (citing 40 C.F.R. pt. 51, app. W, § 8.1.2 n.a).²⁴ The Region further explains that “any emissions resulting from an oil spill emergency or any response to it will [] be evaluated and responded to in accord with EPA’s excess emission policies.” Region’s Resp. at 90; *see also id.* at 94 & n.35 (citing memoranda that comprise EPA’s excess emissions policy); Chukchi RTC at 66 n.10 (same); Beaufort RTC at 66 n.10 (same).

b. Analysis

AEWC does not acknowledge in its pleadings that emissions from OSR fleet training drills²⁵ conducted while the Frontier Discoverer is an OCS source

²³ Section 52.21(b)(16) defines “allowable emissions” as follows:

Allowable emissions means the emissions rate of a stationary source calculated using the maximum rated capacity of the source (unless the source is subject to federally enforceable limits which restrict the operating rate, or hours of operation, or both) and the most stringent of the following:

- (i) The applicable standards as set forth in 40 CFR [p]arts 60 and 61;
- (ii) The applicable State Implementation Plan emissions limitation, including those with a future compliance date; or
- (iii) The emissions rate specified as a federally enforceable permit condition, including those with a future compliance date.

40 C.F.R. § 52.21(b)(16).

²⁴ Appendix W to part 51 is entitled “Guideline on Air Quality Models.” The footnote to § 8.1.2 states:

Malfunctions which may result in excess emissions are not considered to be a normal operating condition. They generally should not be considered in determining allowable emissions. However, if the excess emissions are the result of poor maintenance, careless operation, or other preventable conditions, it may be necessary to consider them in determining source impact.

40 C.F.R. pt. 51, app. W, § 8.1.2 n.a.

²⁵ As evidence of the foreseeable, planned nature of an oil spill or similar emergency, AEWC cites to the regulations implementing requirements for detailed oil spill response plans contained in Title 30 of the Code of Federal Regulations, which mandate, among other things, training and drills to ensure the OSR fleet is well prepared. AEWC Chukchi Petition at 65; AEWC Beaufort Petition at 63, 65; AEWC Reply at 6-7. However, as the Region points out in its response, DOI requires exploration

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are included in the Region's PTE analyses for the Permits. The record clearly demonstrates that Shell's OSR fleets²⁶ will conduct training drills while they are within twenty-five miles of the Frontier Discoverer when the Frontier Discoverer is an OCS source, and that the Region properly included emissions from the OSR fleets' training drills in the PTE analysis for both Permits.²⁷ In contrast to emissions from responding to a potential oil spill or emergency that might or might not occur, emissions from the respective OSR fleets' training drills are foreseeable and planned. The Region modeled the emissions conservatively at two to three kilometers downwind of the Frontier Discoverer even though the OSR fleet will typically be operating several miles downwind of the Frontier Discoverer. See Beaufort Application at 114; Chukchi Application at 58. While emissions from regularly scheduled training drills can and should be modeled and included in the PTE analyses, the mere existence of the C-Plans,²⁸ including plans to mitigate an

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plans to demonstrate an OSR fleet will be standing by "not because an oil spill or well failure is likely," but because the potential environmental consequences of a spill that occurs while drilling in remote areas of the OCS warrant having an OSR fleet on site to respond quickly and efficiently to such an emergency. Region's Resp. at 91 (citing 2010 Outer Continental Shelf Lease Exploration Plan, Camden Bay, Alaska, app. H, at 201 (May 2009) ("Beaufort EP") (A.R. EE-1)).

²⁶ The OSR fleets for the proposed Chukchi and Beaufort exploratory drilling operations vary slightly. The Chukchi OSR fleet will consist of a main oil spill response ship, the Nanuq, and three thirty-four-foot work boats. See Chukchi Permit at 5. The Beaufort OSR fleet includes, in addition to the Nanuq and two thirty-four-foot work boats, one slightly larger forty-seven-foot work boat, a tug, and a barge. See Beaufort Permit at 13; see also OCS Pre-Construction Air Permit Application, Frontier Discoverer Beaufort Sea Exploration Drilling Program at 2 (Jan. 18, 2010) (A.R. AA-1) ("Beaufort Application").

²⁷ See Chukchi Permit at 5 (listing in tabular form the emissions units contained in the OSR fleet, including the make, model, and rating, and noting that "[p]ermit conditions may limit operation to less than rated capacity"); Beaufort Permit at 13 (same); Modified Chukchi Statement of Basis at 23 ("In determining the PTE * * * EPA included potential emissions from the Discoverer while operating as an OCS source, as well as the potential emissions from the Associated Fleet – the ice breaker, the anchor handler/icebreaker, the supply ship, and the OSR fleet – when operating within 25 miles of the Discoverer while the Discoverer is an OCS source."); Beaufort Statement of Basis at 26 (same); see also Chukchi Application at 19 ("The OSR fleet will perform daily training when weather and seas permit, but will stay in the same area as the Discoverer, 2 or more [kilometers] downwind. The emissions from the training exercises of this OSR fleet are based on daily training, eight hours per day, for the 168[-]day season and the emission factors are taken from the Kulluk permit which represent the highest emission factors for the source category."); Beaufort Application at 28 (discussing training exercises and OSR fleet training impacts); Beaufort EP, app. H, at 206.

²⁸ AEWG cites, as support for its contention that the PTE analysis requires inclusion of OSR fleet emissions when responding to a spill or emergency, several DOI regulations that govern the oil spill response plan, including a requirement that the plan include a "description of worst case discharge scenario" and a description of operators' "emergency plans to respond to a blowout, loss, or disablement of a drilling unit, and loss of or damage to support craft." AEWG Reply at 5 (citing 30 C.F.R. § 250.219(a) and 30 C.F.R. § 250.220(a), respectively). AEWG's rationale in this regard is completely unsupported in the statutory and regulatory framework of the CAA. AEWG has not shown the rele-

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oil spill, is not by itself emblematic of the routine, foreseeable nature of an oil spill or other emergency when conducting exploratory drilling activities on the OCS.²⁹

Furthermore, AEWC's argument that the OSR fleet emissions due to an emergency response should be counted in the PTE analysis misconstrues the definition of potential to emit set forth in 40 C.F.R. § 52.21(b)(4) and later interpreted in federal case law, and the definition of potential emissions in 40 C.F.R. § 55.2. AEWC asserts that the Region's PTE analyses do not reflect the "maximum capacity" of the stationary source. However, as this Board has stated before, the CAA and its implementing regulations require that a PTE analysis take into account any federally enforceable physical or operational limitations on the capacity of a source to emit a pollutant. *See In re Shell Offshore Inc.*, 13 E.A.D. 357, 392 (EAB 2007) (citing 40 C.F.R. § 52.21(b)(4)). AEWC makes no mention of the

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vance of the regulations contained in Title 30 of the Code of Federal Regulations to the PTE analysis mandated under title I of the CAA and corresponding regulations at 40 C.F.R. parts 52 and 55. Furthermore, as explained above, the mere description of the worst case scenario as part of an oil spill response plan does not mean such an event is likely or foreseeable, and in turn mandate that emissions from such a scenario be included in the respective OSR fleets' PTE analyses.

²⁹ AEWC also claims, without providing any support, that emissions from the OSR fleet responding to an emergency or a spill should not be excluded from the allowable emissions determination pursuant to 40 C.F.R. part 51, appendix W, § 8.1.2, footnote a, *see supra* note 24. AEWC theorizes that because emissions resulting from "poor maintenance, careless operation, or other preventable conditions" may be considered when determining the source impact, and because these three factors "are all common factors that lead to oil spills," thus oil spills can be foreseen and avoided, and any emissions resulting from a response to an oil spill or other emergency should be included in the PTE analysis. AEWC Reply at 5-6.

The Board finds AEWC's interpretation of the footnote in Appendix W unjustified, as it seems to assume without warrant that Shell, or in fact any operator on the OCS, will necessarily conduct its operations in a careless or substandard manner. The Permits the Region issued to Shell both contain distinct provisions requiring that Shell, at all times and to the extent practicable, maintain and operate each emission unit in a manner consistent with good air pollution control practices for minimizing emissions, including during periods of startup, shutdown, and malfunction. *See* Chukchi Permit at 15; Beaufort Permit at 37; *see also* Chukchi Permit at 5-6 (stating that compliance with all permit terms is required, and that all enforcement provisions of the CAA apply to the permittee); Beaufort Permit at 16 (same); *see also In re Prairie State Generating Co.*, 13 E.A.D. 1, 43 (EAB 2006) (rejecting Petitioners' arguments that an authorization contained in the PSD permit, to burn washed coal produced off-site during unforeseen interruption of the mine-mouth coal supply, would result in permittee circumventing PSD requirements, because "[b]y the [p]ermit's terms," the interruption must be outside the permittee's control, and the "authorization does not allow a permanent change in operation * * * and it does not relieve Prairie State from compliance with any BACT emissions limit or other permit conditions"); *In re Newmont Nev. Energy Inv., LLC*, 12 E.A.D. 429, 474-75 (EAB 2005) (rejecting petitioner's argument that permit terms were not practically or continuously enforceable and noting that the PSD permit "contains a substantial number of compliance monitoring and recordkeeping obligations that, taken together, will ensure * * * BACT emissions limits are fully enforceable on a continuous basis").

federally enforceable limitations contained in both Permits that, among other things, restrict fuel usage and impose NO_x emission limits for the Nanuq, the management vessel to be used in both the Chukchi and Beaufort OSR fleets. See Chukchi Permit at 54-55; Beaufort Permit at 81-82. The PTE of the OSR fleet under either Permit can only be calculated accurately if these permit limitations are included, illustrating that an OCS source's "maximum capacity" pursuant to 40 C.F.R. § 52.21 and 40 C.F.R. § 55.2 does not, as AEWC suggests, include every contingent source of emissions. While AEWC may prefer that Shell be required to calculate the OSR fleets' maximum capacity based on worst possible operation³⁰ or worst case scenario, "neither the Act nor the applicable regulatory provisions require such a calculation." *Shell Offshore*, 13 E.A.D. at 392.

Finally, AEWC misconstrues the "longstanding policy under the PSD program that the Clean Air Act does not allow automatic exemptions for malfunctions"³¹ as it relates to emissions that would result from the OSR fleet responding

³⁰ AEWC also does not address the Region's citation to *United States v. Louisiana-Pacific Corp.*, 682 F. Supp. 1141 (D. Colo. 1988), which succinctly summarizes the holding of *Alabama Power Co. v. Costle*, 636 F.2d 323 (D.C. Cir. 1979):

The broad holding of *Alabama Power* is that potential to emit does not refer to the maximum emissions that can be generated by a source hypothesizing the worst conceivable operation. Rather, the concept contemplates the maximum emissions that can be generated while operating the source as it is intended to be operated and as it is normally operated. * * * *Alabama Power* stands for the proposition that hypothesizing the worst possible emissions from the worst possible operation is the wrong way to calculate potential to emit.

United States v. La.-Pac. Corp., 682 F. Supp. at 1158, quoted in Region's Resp. at 90.

³¹ This policy, also referred to as EPA's excess emissions policy, was developed and clarified in several memoranda. See Memorandum from Kathleen M. Bennett, Office of Air, Noise & Radiation, U.S. EPA, to Assistant Administrator for Air, Noise & Radiation, and Regional Administrators, U.S. EPA, *Policy on Excess Emissions During Startup, Shutdown, Maintenance, and Malfunctions* (Sept. 28, 1982) ("1982 Bennett Memo"); Memorandum from Kathleen M. Bennett, Office of Air, Noise & Radiation, U.S. EPA, to Regional Administrators, U.S. EPA, *Policy on Excess Emissions During Startup, Shutdown, Maintenance, and Malfunctions* (Feb. 15, 1983) ("1983 Bennett Memo"); Memorandum from John Rasnic, Director, Stationary Source Compliance Division, Office of Air Quality Planning & Standards, U.S. EPA, to Linda M. Murphy, Director, Air, Pesticides & Toxics Management Division, Region 1, U.S. EPA, *Automatic or Blanket Exemptions for Excess Emissions During Startup and Shutdowns Under PSD* (Jan. 28, 1993) ("Rasnic Memo"); Memorandum from Eric Schaeffer, Director, Office of Regulatory Enforcement, U.S. EPA, to Regional Counsels et al., *Guidance on the Appropriate Injunctive Relief for Violations of Major New Source Review Requirements* (Nov. 17, 1998) ("Schaeffer Memo"); Memorandum from Steven Herman, Assistant Administrator for Enforcement & Compliance Assurance, U.S. EPA, to Regional Administrators, U.S. EPA, *State Implementation Plans: Policy Regarding Excess Emissions During Malfunctions, Startup, and Shutdown* (Sept. 10, 1999) ("Herman Memo").

to an oil spill or other emergency on the OCS,³² and fails to demonstrate that the Region's response to comments does not address the excess emissions policy and its application to the OSR fleet.³³ See AEW C Chukchi Petition at 65; AEW C Beaufort Petition at 65.

AEW C has failed to demonstrate the alleged linkage between EPA's excess emissions policy and the technical requirements of a PTE analysis. As explained on the previous pages, emissions that could occur due to the OSR fleets' response to a potential emergency are properly excluded from the Region's PTE analyses. How EPA chooses to enforce any exceedance of emissions limitations that may occur is wholly inapposite to whether the Region's PTE analyses were proper in this regard.

The Board also disagrees with AEW C's characterization of the Region's response to comments on this issue. The Region clearly addressed the excess emissions policy in several places in the Response to Comments,³⁴ and made clear that

³² Specifically, AEW C maintains that by not including in the PTE analyses emissions that could result from a response to an oil spill or other unplanned emergency, the Region inappropriately grants Shell an automatic exemption for those emissions. AEW C Chukchi Petition at 65-66; AEW C Beaufort Petition at 65-66. AEW C cites *In re Indeck-Elwood, LLC*, 13 E.A.D. 126, 174 (EAB 2006) and *Arizona Public Service Corporation v. EPA*, 562 F.3d 1116, 1129 (10th Cir. 2009), to support its contention that automatic exemptions for malfunctions are not appropriate under the PSD program. AEW C Chukchi Petition at 65-66; AEW C Beaufort Petition at 65-66. Finally, AEW C claims that EPA's statement, that EPA will provide a proper response to any excess emissions when they occur, is "not adequate." AEW C Chukchi Petition at 66; AEW C Beaufort Petition at 66.

³³ The excess emissions policy defines a "malfunction" as a sudden and unavoidable breakdown of process or control equipment. The term "excess emission" means an air emission rate that exceeds any applicable emission limitation. See 1983 Bennett Memo; Herman Memo.

The excess emissions policy prohibits automatic exemptions for malfunction, but it also provides the permit issuer with enforcement discretion. See Herman Memo attach. at 2 ("The best assurance that excess emissions will not interfere with NAAQS attainment, maintenance, or increments is to address excess emissions through enforcement discretion."). The enforcement discretion approach requires sources to demonstrate an unavoidable malfunction of the source, which encourages good maintenance procedures and allows the permit issuer discretion as to how to handle periods of excess emissions, which are considered violations under the policy. 1982 Bennett Memo at 1. Here, AEW C's claim that EPA's intention to address excess emissions that could result from the OSR fleet responding to a potential emergency is inadequate, see *supra* note 32, is not only undercut by EPA's stated policy that enforcement discretion is an appropriate response to excess emissions, but also overlooks the additional benefit of encouraging good maintenance procedures, which addresses another of AEW C's concerns. See *supra* note 29.

³⁴ The Region highlights its enforcement discretion pursuant to the excess emissions policy several times throughout the Response to Comments. See Chukchi RTC at 61 ("The requirement to report excess emissions does not relieve the permittee of its duty to comply with all requirements of this permit * * * [;] failure to do so is a violation of Section 111(e) and 165 of the CAA, subject to enforcement under the CAA"); *id.* at 65-66 ("EPA will evaluate any continued operation [beyond the
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violations of emissions limits resulting from the OSR fleets' response to an oil spill or emergency situation will be addressed under the excess emissions policy.³⁵ *See, e.g.,* Chukchi RTC at 95.

AEWC has failed to demonstrate that the Region's decision to exclude from the PTE analyses OSR fleet emissions that could result from an OSR fleet response to an oil spill or similar emergency constitutes clear error. The Board denies review of this issue.

2. *Emissions from "Other" Vessels More Than Twenty-Five Miles Away and Emissions from the Frontier Discoverer's Propulsion Engine*

AEWC argues that the Region's decision to exclude from the PTE analyses both emissions from "other" vessels that would remain more than twenty-five miles away from the Frontier Discoverer, including the oil tanker, the barge, and shallow water landing craft, as well as emissions from Frontier Discoverer's propulsion engine, was clear error. AEWChukchi Petition at 64-65; AEWChukchi Beaufort Petition at 64. AEWChukchi states that "[t]his violated the plain language of EPA's regulations defining the potential to emit." AEWChukchi Petition at 65; AEWChukchi Beaufort Petition at 64.

Under section 328(a)(1) of the CAA, 42 U.S.C. § 7627(a)(1), EPA is authorized to control air pollution from OCS sources. Thus, EPA's authority to regulate air emissions on the OCS is triggered only when the Frontier Discoverer is an OCS source. *See* Remand Order at 39. As the Region notes, "EPA's authority to impose emission limitations and other operating restrictions on the Discoverer is limited to when the Discoverer is an OCS source." Chukchi RTC at 66. The Permits and the corresponding Response to Comments documents make clear that neither the "other" vessels AEWChukchi refers to nor the Frontier Discoverer's propul-

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number of drilling days allowed under the permit] in accordance with EPA's excess emissions policy"); *id.* at 81 ("EPA is authorized to bring enforcement actions against a permittee, such as Shell, for violations of an OCS/PSD permit"); *id.* at 95 (stating that to the extent any of the OSR fleet respond to emergency conditions, EPA will evaluate any such operation in accordance with EPA's excess emissions policy).

³⁵ In addition, the Permits contain requirements that Shell report excess emissions to, and file permit deviation reports with, the Region. *See* Chukchi Permit at 8 (condition A.15); Beaufort Permit at 18-19 (condition A.17); Chukchi Permit attach. A (entitled "EPA Notification Form; Excess Emissions and Permit Deviation Reporting"); Beaufort Permit attach. A (same). Any unavoidable emergency, malfunction, non-routine repair, emission limit exceedance, or throughput limit exceedance is required to be reported to the Region within three business days. Chukchi Permit at 8; Beaufort Permit at 18. The record shows that the Region has a system in place to document and conduct enforcement actions pertaining to excess emission violations from the OSR fleets.

sion engine will be in operation within twenty-five miles of the Frontier Discoverer when it is an OCS source.³⁶ See Chukchi Permit at 19 (“The permittee shall not operate Unit FD-7 [Discoverer propulsion engine] for any reason when operating the Discoverer as an OCS source.”); Beaufort Permit at 42 (same); Chukchi Permit at 14-15 (stating in condition B.8.5 that the permittee “shall not” allow any vessel not authorized as listed in Tables 1 through 5 of the Permit “to approach within 25 miles of the Discoverer, while the Discoverer is an OCS source”); Beaufort Permit at 37 (stating the same in condition B.21.5).

AEWC fails to demonstrate that the Region clearly erred when it excluded from the PTE analyses the “other” vessels, including the tanker, barge, and shallow water landing craft, and the propulsion engine on the Frontier Discoverer. As explained in Part IV.D.1, above, the PTE analysis is used to determine the “maximum capacity of a stationary source to emit a pollutant under its physical and operational design.” 40 C.F.R. § 52.21(b)(4). In this instance, the stationary source is the OCS source. See Remand Order at 45 n.52. The PTE analysis of the maximum capacity of the stationary source must then only encompass the equipment in use and within twenty-five miles of the Frontier Discoverer when it is an OCS source. Since the terms of the Permits prohibit the tanker, barge, and shallow water landing craft from approaching closer than twenty-five miles to the Frontier Discoverer when it is an OCS source, and similarly prohibit operation of the Frontier Discoverer’s propulsion engine when the Frontier Discoverer is an OCS source, the Region reasonably determined not to include them in the PTE analyses. The Board denies review of this issue.

³⁶ With respect to the “other” vessels, the Region states:

[T]he tanker, barge, and shallow water landing craft were not included in the EPA’s review for the PSD permit. Under normal and routine operations, these vessels are not expected to operate within 25 miles of the Discoverer while the Discoverer is an OCS source. A provision has been added to Permit Condition B.8 to ensure that these vessels * * * do not come within 25 miles of the Discoverer while it is an OCS source. To the extent any of these vessels do so in response to emergency conditions, EPA will evaluate any such operation in accordance with EPA’s excess emissions policy.

Chukchi RTC at 95; see also Beaufort RTC at 20-22 (referring readers to Chukchi RTC for information on prohibited activities and the OSR fleet, and discussing tanker requirements). Similarly, in the Responses to Comments the Region addresses the propulsion engine and states that “[u]nder this permit, there is no scenario where the Discoverer’s propulsion engine will operate while the Discoverer is an OCS source.” Chukchi RTC at 66; Beaufort RTC at 20 (referring readers to Chukchi RTC).

VII. CONCLUSION

In summary, the Board concludes that the Region did not clearly err when it determined that Icebreaker #2 was not “attached” to the Frontier Discoverer when setting and retrieving anchors, and thus Icebreaker #2 is not part of the OCS source. The Board also concludes that the Region’s decision to consider PM, PM_{2.5}, and PM₁₀ emissions as PM_{2.5} emissions in its BACT analysis for each Permit was not clear error. Finally, the Region did not clearly err in its decision to exclude from the PTE analyses emissions from the OSR fleets that could occur if the fleets were needed to respond to potential emergencies, emissions from “other” vessels including the oil tanker, the barge, and shallow water landing craft, and the propulsion engine emissions on the Frontier Discoverer.

As explained above, the Board does not sustain the Region’s source impacts analysis for PM_{2.5}, and instead remands this issue to the Region for further consideration in light of the most recent Agency guidance discussing modeling procedures for demonstrating compliance with the PM_{2.5} NAAQS. Upon remand, the Region should incorporate accurate and representative background ambient air quality data for PM_{2.5}. The Region should also provide an explanation of why modeling secondary PM_{2.5} is necessary or not necessary, after determining whether PM_{2.5} precursors will be emitted in significant quantities.

So ordered.