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

In re:	)	
	)	
Shell Gulf of Mexico, Inc.	)	
Shell Offshore, Inc.,	)	OCS Appeal Nos. 10-01
Frontier Discoverer Drilling Unit	)	through 10-04
	)	
OCS Permit No. R10 OCS/PSD-AK-09-01	)	
OCS Permit No. R10 OCS/PSD-AK-10-01	)	
	)	

EPA REGION 10'S RESPONSE TO PETITIONS FOR REVIEW

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I. INTRODUCTION

On March 31, 2010, the Director of the Office of Air, Waste and Toxics for the U.S. Environmental Protection Agency (EPA), Region 10 issued Outer Continental Shelf/Prevention of Significant Deterioration Permit No. R10OCS/PSD-AK-09-01 (the Chukchi OCS/PSD Permit) under the Clean Air Act to Shell Gulf of Mexico, Inc. to allow exploratory oil and gas drilling operations in the Chukchi Sea. On April 9, 2010, the Director of the Office of Air, Waste and Toxics for EPA Region 10 issued Outer Continental Shelf /Prevention of Significant Deterioration Permit No. R10OCS/PSD-AK-2010-01 (the Beaufort OCS/PSD Permit) under the Clean Air Act to Shell Offshore Inc. to allow exploratory oil and gas drilling operations in the Beaufort Sea.

On May 3, 2010, the Center for Biological Diversity (CDB) and Earth Justice on behalf of several conservation groups (EJ Petitioners) filed Petitions for Review of the Chukchi and Beaufort OCS/PSD Permits.[1] Also on May 3, 2010, the Alaska Eskimo Whaling Commission (AEWC) and the Inupiat Community of the Arctic Slope (ICAS) (collectively referred to as the "AEWC Petitioners") also filed a Petition for Review of the Chukchi OCS/PSD Permit. On May 12, 2010, the AEWC Petitioners filed a Petition for Review of the Beaufort OCS/PSD Permit. On May 14, 2010, the Board consolidated review of the petitions for the Chukchi and Beaufort OCS/PSD Permits. Under 40 C.F.R. § 55.6, the procedures in 40 C.F.R. Part 124 apply to this proceeding.

[1] The EJ Petitioners include Natural Resources Defense Counsel, Native Village of Point Hope, Resisting Environmental Destruction of Indigenous Lands (REDOIL), Alaska Wilderness League, Alaska Audubon, Center for Biological Diversity, Northern Alaska Environmental Center, Ocean Conservancy, Oceana, Pacific Environment and Sierra Club. Thus, CBD both joined with the EJ Petitioners and filed a separate petition.

As explained in more detail below, the Petitions for Review should be denied in their entirety because Petitioners fail to show the permit decisions were based on either a clearly erroneous finding of fact or conclusion of law, or involve an important matter of policy or exercise of discretion that warrants review. Region 10 did not err in determining that more than attachment to the seabed by a single anchor alone was required for the Discoverer to become an OCS source under the relevant regulatory definition. Region 10 also properly applied Best Available Control Technology (BACT) requirements only on the Discoverer and not on its support vessels, because the OCS regulations do not authorize EPA to impose BACT on vessels that are not OSC sources. In addition, the permits issued by Region 10 are supported by preconstruction monitoring data that meets legal requirements and by an air quality modeling analysis that adequately accounts for secondary formation of PM2.5.[2] As will be explained below, Region 10 did not err in its BACT analysis for PM2.5 and PM10.[3] Moreover, the record for these permitting actions shows that that the new NAAQS for nitrogen dioxide (NO2) did not apply to these permits, nor did BACT requirements for emissions of carbon dioxide (CO2). Region 10 also did not err in failing to include emissions from emergency oil spill responses and unplanned operations in the potential to emit calculation for these permits. Finally, Region 10's environmental justice analysis was adequate, as explained in more detail below. Accordingly, the Board should uphold the Chukchi OCS/PSD Permit and the Beaufort OCS/PSD Permit in their entirety.

[2] PM2.5 is particulate matter with an aerodynamic diameter less than 2.5 microns.
[3] PM10 is particulate matter with an aerodynamic diameter less than 10 microns.

II. FACTUAL AND PROCEDURAL BACKGROUND

Pursuant to section 328 of the Clean Air Act (CAA), 42 U.S.C. § 7627, EPA promulgated air quality regulations applicable to Outer Continental Shelf (OCS) sources, which regulations are set forth in Title 40, Code of Federal Regulations (C.F.R.), Part 55 (OCS regulations). Under the OCS regulations, an OCS source that is a major stationary source and proposes to locate on the OCS in an area designated as "attainment" is required to obtain a Prevention of Significant Deterioration (PSD) permit before beginning construction. The requirements of the PSD program were established under Part C of Title I of the CAA, 42 U.S.C. §§ 7470-7492, and are found at 40 C.F.R. §§ 52.21 and 51.166.

Under these programs, Shell Gulf of Mexico, Inc. and Shell Offshore, Inc. (collectively referred to as "Shell") applied for two major source permits to authorize mobilization and operation of the Frontier Discoverer drill ship (Discoverer) and its associated support vessels to conduct exploratory oil and gas drilling at various drill sites on the OCS off the North Slope of Alaska: one permit for operation in the Chukchi Sea and one permit for operation in the Beaufort Sea.

On August 20, 2009, EPA Region 10 proposed a draft OCS/PSD permit for Shell's exploration drilling program in the Chukchi Sea for public comment (Chukchi August 2009 Proposed Permit). During the week of September 21, 2009, EPA conducted government-to-government consultation as requested by affected Native Villages, informational meetings, and public hearings in Barrow and Anchorage, Alaska. After reviewing the comments received on the Chukchi August 2009 Proposed Permit, EPA decided to issue a new modified proposed permit on January 8, 2010, and sought

additional public comment and held additional public informational meetings and a hearing. After review and consideration of public comments received, EPA Region 10 issued the final Chukchi OCS/PSD Permit on March 31, 2010.

On February 17, 2010, EPA Region 10 proposed a draft OCS/PSD permit for Shell's exploration drilling program in the Beaufort Sea for public comment (Beaufort February 2010 Proposed Permit). During the week of March 15, 2010, EPA conducted government-to-government consultation as requested by affected Native Villages, informational meetings, and public hearings in Barrow, Nuiqsut and Kaktovik, Alaska. After review and consideration of public comments received, EPA Region 10 issued the final Beaufort OCS/PSD Permit on April 9, 2010.

The Chukchi OCS/PSD Permit authorizes Shell to operate the Discoverer drill ship and associated support vessels, including icebreakers, an anchor handler, oil spill response vessels and other support vessels (collectively referred to as the "Associated Fleet") for a multi-year exploration drilling program within Shell's current lease blocks in lease sale 193 on the Chukchi Sea OCS, beyond 25 miles from Alaska's seaward boundary. The Beaufort OCS/PSD Permit authorizes Shell to operate the Discoverer drill ship and the Associated Fleet for a multi-year exploration drilling program within Shell's current lease blocks in lease sales 195 (March 2005) and 202 (April 2007) on the Beaufort Sea OCS, both within and beyond 25 miles from Alaska's seaward boundary.

Section 328 of the CAA, 42 U.S.C. § 7627, and 40 C.F.R. Part 55 distinguish between OCS sources located within 25 miles of a state's seaward boundaries and those located beyond 25 miles of a state's seaward boundaries. CAA § 328(a)(1), 42 U.S.C. § 7627(a)(1); 40 C.F.R. §§ 55.3(b) and (c).

Section 55.13 of the OCS regulations generally sets forth the federal requirements that apply to OCS sources. Sources located beyond 25 miles of a state's seaward boundaries are subject to the New Source Performance Standards (NSPS) in 40 C.F.R Part 60; the PSD program in 40 C.F.R. § 52.21 if the OCS source is also a major stationary source or a major modification to a major stationary source; standards promulgated under section 112 of the CAA if rationally related to the attainment and maintenance of federal and state ambient air quality standards or the requirements of Part C of Title I of the CAA; and the operating permit program under Title V of the CAA and 40 C.F.R. Part 71. *See* 40 C.F.R. §§ 55.13(a), (c), (d)(2), (e), and (f)(2), respectively.

Section 328 of the CAA, 42 U.S.C. § 7627, provides that the requirements for sources located within 25 miles of a State's seaward boundary are the same as would be applicable if the sources were located in the corresponding onshore area (COA).[4] Because the OCS requirements within 25 miles of a state's seaward boundaries are based on onshore requirements, and onshore requirements may change, section 328(a)(1) requires that EPA update the OCS regulations as necessary to maintain consistency with onshore requirements. On March 3, 2009, EPA proposed to approve requirements into the OCS regulations pertaining to the State of Alaska. *See* 74 Fed. Reg. 9180. On January 21, 2010, EPA finalized the consistency update and incorporated applicable provisions of the Alaska Administrative Code (AAC) regulations by reference into 40 C.F.R. § 55.14. *See* 75 Fed. Reg. 3388; *see also* 75 Fed. Reg. 3388, 3390 (March 4,

[4] Defined in 40 C.F.R. § 55.2, "Corresponding Onshore Area (COA) means, with respect to any existing or proposed OCS source located within 25 miles of a State's seaward boundary, the onshore area that is geographically closest to the source or another onshore area that the Administrator designates as the COA pursuant to § 55.5 of this part."

2010) (technical correction to include the revised applicability dates in the emission user fees provision in 18 AAC 50.410.)

III. SCOPE AND STANDARD OF REVIEW

The Board has repeatedly noted that its review of final PSD permitting decisions is discretionary and the exercise of such discretion is circumscribed. In promulgating 40 C.F.R. Part 124, EPA stated that "most permit conditions should be finally determined at the Regional level" and therefore the power of review will only be employed "sparingly." *See* 45 Fed. Reg. 33,412 (May 19, 1980); *accord In re Zion Energy, L.L.C.*, 9 E.A.D. 701, 705 (EAB 2001). Accordingly, the Board typically defers to regional permitting authorities in its review of permit appeals, especially on matters of a technical nature. *See, e.g., In re Three Mountain Power, LLC*, 10 E.A.D. 39, 54 (EAB 2001).

A petitioner bears the burden of demonstrating to the Board that review is warranted. *In re AES Puerto Rico L.P.*, 8 E.A.D. 324, 328 (EAB 1999). Under the Board's procedural rules, review may be granted in two circumstances. First, the decision by the Regional Administrator[5] may be reviewed if it is based on a "finding of fact or conclusion of law which is clearly erroneous." 40 C.F.R. §124.19(a)(1). Second, review may be authorized if the permit action involves "an exercise of discretion or an important policy consideration" which the Board believes it should review. 40 C.F.R. §124.19(a)(2); s*ee, e.g., In re Prairie State Generating Co.*, PSD Appeal No. 05-05, slip op. at 13 (EAB, Aug. 24, 2006), 13 E.A.D. __; *see also In re Knauf Fiber Glass, GmbH*, 8 E.A.D. 121, 126 (EAB 1999) (hereinafter "*Knauf I*").

[5] The authority to issue PSD permits has been delegated to the Division Director in Region 10.

The burden is on the petitioner to demonstrate that there is clear error or an important policy consideration that warrants that the permit condition should be reviewed. *See, e.g., BP West Coast Products, LLC*, 12 E.A.D. at 217; *Three Mountain Power*, 10 E.A.D. at 47; *In re Steel Dynamics, Inc.*, 9 E.A.D. 740, 743 (EAB 2001). Additionally, it is not enough that the petitioner merely repeat the objections that it made during the comment period. Instead, the petitioner must "both state the objections to the permit that are being raised for review and … explain why the permit decision maker's previous response to those decisions … is clearly erroneous or otherwise warrants review." *In re Kawaihae Cogeneration Project*, 7 E.A.D. 107, 114 (EAB 1997); *see also BP Cherry Point*, 12 E.A.D. at 217.

Issues and arguments raised by a petitioner that are not raised during the public comment period will not be considered preserved for review without a demonstration that they were not reasonably ascertainable at the time. *See* i*d*. at 219; *AES Puerto Rico, L.P.*, 8 E.A.D. at 335; *In re Masonite Corp.*, 5 E.A.D. 551, 585 (EAB 1994); *In re SEI Birchwood, Inc.*, 5 E.A.D. 25, 29 (EAB 1994); *see also* 40 C.F.R. §§ 124.13 and 124.19(a) ("Petitioners must demonstrate that any issues raised [on review] were raised during the public comment period … to the extent required by these requirements."). Issues must be raised during the public comment period to "ensure that the permit issuer has an opportunity to adjust its permit decision or to provide an explanation of why no adjustment is necessary." *AES Puerto Rico*, 8 E.A.D. at 335. If an issue was not properly preserved for review, the EAB will generally deny review of the issue. *See BP Cherry Point*, 12 E.A.D. at 219-20.

The Board will deny review of arguments that are purely speculative; thus, petitioners are obliged to raise arguments in a manner that is both specific and substantiated. *Three Mountain Power Company, LLC,* 10 E.A.D. at 58 (stating "the Board will not overturn a permit provision based on speculative arguments"). These requirements ensure that any issues challenged on appeal are well defined and actually represent "bona fide" disagreements between the petitioner and the permit authority. *See In re Texas Indus., Inc.,* 2 E.A.D. 277, 279 (Adm'r 1986) (stating "less speculation and more empirical evidence is needed by petitioner to justify review of the permit").

Finally, a petitioner challenging a fundamentally technical decision bears an especially heavy burden. *In re Carlotta Copper Mine,* 11 E.A.D. 692, 708 (EAB 2004). The Board has articulated its reason for assigning a heavy burden to petitioners on technical decisions, stating:

> 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.

In re Peabody Western Coal Company, 12 E.A.D. at 33. *See also In re Shell Offshore Inc., Kulluk Drilling Unit and Frontier Discoverer Drilling Unit,* OCS Appeals Nos. 07-10, 07-02, slip op. at 61 (EAB, Sept.14, 2007), 13 E.A.D. at __ (hereinafter "2007 Shell Minor Source Decision"). The Board further explained "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 view 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." *2007 Shell Minor Source*

Decision at 57 (quoting *In re NE Hub Partners, L.P.*, 7 E.A.D. 561, 567 (EAB 1998))(other internal cites omitted)).

Thus, when presented with technical issues in a petition, the EAB determines 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." *Peabody Western Coal Co.*, 12 E.A.D. at 34. If the EAB determines that the Region gave due consideration to comments received and adopted an approach in the final permit decision that is rational and supportable, the EAB typically gives deference to the Region's position. *Id.*; *In re City of Moscow, ID*, 10 E.A.D. 35, 142 (EAB 2001); *see also 2007 Shell Minor Source Decision* at 61 (explaining that the Board will not substitute its judgment for the permitting authority's technical expertise related to modeling issues).

IV. ARGUMENT

As the Board is aware, on May 27, 2010, President Obama announced that the OCS exploration activities at issue in these permits will be suspended for 2010 while the Department of Interior gathers additional information about oil spill risks and response capabilities in the Arctic waters. *See Remarks by the President on the Gulf Oil Spill* (May 27, 2010) at ¶15 (stating that "we will suspend the planned exploration of two locations off the coast of Alaska"), *available at* http://www.whitehouse.gov/the-press-office/remarkspresident-gulf-oil-spil, EPA Att. A; *see also* U.S. Department of Interior, *Salazar Calls for New Safety Measures for Offshore Oil and Gas Operations; Orders Six Month Moratorium on Deepwater Drilling* (May 27, 2010) and accompanying Fact Sheet, *available at* http://www.doi.gov/news/pressreleases/, EPA Att. B (stating that the

DOI's Applications for Permits to Drill for Shell's five wells in the Beaufort and Chukchi Seas "will not be considered until 2011 because of the need for further information-gathering, evaluation of proposed drilling technology and evaluation of oil spill response capabilities for Arctic Waters"). As indicated in EPA Region 10's pending Motion to Hold Matters in Abeyance (filed May 28, 2010), EPA does not yet know the extent to which this information gathering and review will affect the equipment necessary for Shell's Beaufort and Chukchi Sea exploratory drilling operations and whether any such effect on equipment would in fact result in additional air emissions that EPA Region 10 would need to analyze in light of CAA permitting requirements. Accordingly, Region 10 is responding to Petitioners' concerns regarding consideration of oil spill response related emissions based on the record before Region 10 when it issued these permits. Nevertheless, current events and future actions by the Administration could necessitate a change in this response, consistent with the views expressed in Region 10's Motion to Hold Matters in Abeyance.

Petitioners raise nine primary issues on appeal. The EJ Petitioners argue that Region 10 erred in requiring Best Available Control Technology (BACT) only on the Discoverer and not on the Associated Fleet. The AEWC Petitioners raise this same issue, and also argue that Region 10 erred in determining when the Discoverer becomes an OCS source and related issues regarding the definition of OCS source. The AEWC Petitioners also contend that the permits are not supported by preconstruction monitoring data that meet legal requirements; that the air quality analysis does not adequately account for secondary formation of PM2.5; that Region 10 erred in its BACT analysis for PM2.5 and PM10; that the permits fail to ensure compliance with the new NAAQS for NO2; that the

potential to emit calculation fails to include emissions from emergency oil spill responses and unplanned operations; and that Region 10's environmental justice analysis is inadequate. Petitioner CDB and the AEWC Petitioners argue Region 10 erred in not requiring BACT on CO2 emissions. For the reasons explained below, Petitioners' arguments are without merit. Petitioners fail to show the permit decisions were based on either a clearly erroneous finding of fact or conclusion of law, or involve an important matter of policy or exercise of discretion that warrants review. Accordingly, the Petitions for Review should be denied in their entirety.

A. Region 10 Did Not Err in Determining When the Discoverer Is an OCS Source

The AEWC Petitioners' contention that Region 10 failed to follow its own regulation in determining when the Discoverer is an OCS source ignores the plain language of the regulatory definition of OCS source and relies on assertions that are not supported by, and in fact are contradicted by, documents in the record. AEWC is correct that Region 10's view on when the Discoverer becomes an OCS source evolved over the course of the permitting process in response to public comments. However, such changes are not error in and of themselves, but are a clear goal of the public comment process. As the courts have long recognized, "a final permit need not be identical to the corresponding draft permit. That would be antithetical to the whole concept of notice and comment. Indeed, it is 'the expectation that the final rules will be somewhat different and improved from the rules originally proposed by the agency" *NRDC v. EPA*, 279 F.3d 1180, 1186 (9th Cir. 2002) (quoting *Trans-Pac. Freight Conference v. Fed. Mar. Comm'n*, 650 F.2d 1235, 1249 (D.C. Cir. 1980)). *See also In re Amoco Oil Co.*, 4 E.A.D. 954, 980 (EAB 1993**)** (stating "the regulations contemplate the possibility that permit

terms will be added or revised in response to comments received during the public comment period").

Moreover, and contrary to AEWC's assertion, Region10 provided a reasoned analysis and thorough explanation for why Region 10 ultimately concluded in the final permits that attachment to the seabed by a single anchor alone was not sufficient to consider the Discoverer an OCS source.

1. The Definition of OCS Source in 40 C.F.R. § 55.2

Region 10 and the AEWC Petitioners agree that the operative language in this case is the provision in the definition of OCS source in 40 C.F.R. § 55.2 that pertains to vessels. *See* AEWC Chukchi Petition at 11; AEWC Beaufort Petition at 11. The regulation states that this definition of OCS source shall include vessels *only* when they are:

> (1) Permanently or temporarily attached to the seabed and erected thereon and used for the purpose of exploring, developing, or producing resources therefrom, within the meaning of section 4(a)(1) of OCSLA (43 U.S.C. § 1331 et seq.); or (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).

2. Region 10's Conclusion Regarding When the Discoverer Becomes an OCS Source Is Consistent with the Regulation, Adequately Explained in Response to Comments, and Supported by the Record

In August 2009, Region 10 issued a proposed OCS/PSD permit for Shell's exploration activities in the Chukchi Sea, proposing that the Discoverer be considered an OCS source as defined in 40 C.F.R. § 55.2 between placement of the first anchor on the seabed and removal of the last anchor from the seabed at a drill site. Chukchi August 2009 Proposed Permit, AR EPA Ex. H-3 at H000026. Region 10 received comments on

many aspects of this proposed permit, including comments regarding when the Discoverer is an OCS source pursuant to the OCS regulations. Region 10 revised the permit in part to respond to comments and issued for public comment a new proposed permit in January 2010, replacing the Chukchi August 2009 Proposed Permit in all respects (Chukchi January 2010 Proposed Permit, AR EPA Ex. J-1). *See* Statement of Basis for Proposed OCS/PSD Permit No. R10OCS/PSD-AK-09-01, Shell Gulf of Mexico, Inc., Chukchi Sea Exploration Drilling Program, dated January 8, 2010 (Chukchi January 2010 Statement of Basis), AR EPA Ex. J-2 at J000060, n. 2.

In the January 2010 Proposed Chukchi OCS/PSD Permit, Region 10 solicited public comment on two options for determining when the Discoverer is an OCS source. Chukchi January 2010 Proposed Permit, AR EPA Ex. J-1 at J000005; Chukchi January 2010 Statement of Basis, AR EPA Ex. J-2 at J000077-78. Option 1 was the same approach as in the Chukchi August 2009 Proposed Permit, basing the Discoverer's status as an OCS source on whether the vessel is attached to the seabed by at least one anchor. Under Option 2, Region 10 proposed that the Discoverer be considered an OCS source "between the time the Discoverer is declared by an on-site company representative to be secure and stable in a position to commence exploratory activity at the drill site until, due to retrieval of anchors or disconnection of its anchors, the vessel is no longer sufficiently stable to conduct exploratory activity," as documented by certain records. *Id.* Region 10 also provided these two options for public comment in issuing the proposed Beaufort OCS/PSD permit on February 17, 2010. Beaufort February 2010 Proposed Permit, AR EPA Ex. NN-9 at NN000045; Statement of Basis for Proposed OCS/PSD Permit No. R10OCS/PSD-AK-2010-01, Shell Offshore Inc., Beaufort Sea Exploration Drilling

Program, dated February 17, 2010 (Beaufort February 2010 Statement of Basis), EPA NN-10 at NN000142.

After considering the various public comments received regarding the options put forward in the proposed permits, Region 10 selected Option 2 for defining when the Discoverer will be considered an OCS source in the final Chukchi and Beaufort OCS/PSD Permits. Contrary to AEWC's assertion, Region 10 did provide a reasoned analysis and thorough explanation for its conclusion in the final permits that more than attachment by a single anchor at a drill site is needed for the Discoverer to meet the definition of OCS source in 40 C.F.R. § 55.2, and that Option 2 better implemented the criteria in the definition and the facts specific to the Discoverer. *See* Response to Comments for OCS/PSD Permit No. R10OCS/PSD-AK-09-01, Shell Gulf Of Mexico Inc., Chukchi Sea Exploration Drilling Program, dated March 31, 2010 (Chukchi Response to Comments), AR EPA Ex. L-1 at L000082-84; Response to Comments for OCS/PSD Permit No. R10OCS/PSD-AK-2010-01, Shell Offshore Inc., Beaufort Sea Exploration Drilling Program, dated April 9, 2010 (Beaufort Response to Comments), AR EPA Ex. PP-5 at PP000354. Region 10 first explained that application of the definition of OCS source to a particular vessel or drilling rig is a fact specific determination, which is undeniably true despite the AEWC Petitioners' assertion to the contrary. The drill rigs and other vessels subject to the OCS regulations have many different configurations. Jack-up rigs, for example, do not have anchors, but instead are supported by legs on the seabed. Letter from Geoffrey Haddad at ConocoPhillips to EPA, dated February 17, 2010, re: OCS/PSD Permit No. R10OCS/PSD-AK-09-01, AR EPA Ex. K-11 at K000095-96. It would therefore make no sense to conclude that a jack-

up rig is not an OCS source until attached by an anchor to the seabed, as Region 10 had initially proposed to do with respect to the Discoverer.

Region 10 then briefly described the configuration of the Discoverer—a turret-moored drilling vessel which is anchored to the seabed at a drill site by up to eight anchors. Chukchi Response to Comments, AR EPA Ex. L-1 at L000082; Beaufort Response to Comments, AR EPA Ex. PP-5 at PP000354. Next, Region 10 considered the three required aspects of the OCS source definition and rejected the option that attachment of the Discoverer to the seabed by a single anchor was sufficient to consider the Discoverer to be an OCS source because such a position focused only on one of the three criteria for when a vessel is an OCS source – attachment to the seabed – and did not address whether the vessel was "erected on the seabed" and "used for the purpose of exploring, developing or producing resources therefrom….", the two other required elements of the definition of OCS source contained in 40 C.F.R. § 55.2. Chukchi Response to Comments, AR EPA Ex. L-2 at L000082; Beaufort Response to Comments, AR EPA Ex. PP-5 at PP000354. Region 10 used as an example a situation where the Discoverer might have a single anchor down, but would not be over a drill site. Chukchi Response to Comments, AR EPA Ex. L-2 at L000082; Beaufort Response to Comments, AR EPA Ex. PP-5 at PP000354. With a single anchor down, even at a drill site, the Discoverer remains mobile around the anchor location and is not sufficiently secure and stable to be able to drill. Another example is where the Discoverer has temporarily moved off a drill site because of approaching ice and is attached to the seabed by a single anchor at another location.

Petitioners take issue with Region 10's interpretation of the definition of OCS source in the permits, and argue that it is a new, impermissible legal interpretation of the regulations. The Agency is entitled to change a legal interpretation if the new interpretation is accompanied by a reasoned justification and is otherwise consistent with the regulation. As the Board has recognized, "the Region may decide to modify its determination. If so, the Region must identify the relevant facts in the record that support its determination and provide a sufficient explanation for it… to show how it conforms [to the relevant regulation.]" *2007 Shell Minor Source Decision*, slip op. at 48; *see also Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs*., 545 U.S. 967, 981 (2005) (stating "if the agency adequately explains the reasons for a reversal of policy, 'change is not invalidating, since the whole point of *Chevron* is to leave the discretion provided by the ambiguities of a statute with the implementing agency'" (quoting *Smiley v. Citibank (South Dakota), N. A.*, 517 U.S. 735, 742 (1996))).

In this case, Region 10 determined it was appropriate to apply the interpretation in Option 2 in order to give meaning to the entire regulatory definition of OCS source as it pertains to vessels. Region 10 appropriately concluded that the Discoverer could not be considered to be "erected on the seabed" and "used for the purpose of exploring, developing or producing resources therefrom"—key criteria in the definition of OCS source in 40 C.F.R. § 55.2—until the Discoverer is sufficiently secure and stable so as to be in a position to begin exploratory operations. In adopting this interpretation, Region 10 also explained why it was rejecting the position of an industry commenter that the Discoverer actually had to be actively drilling to be considered an OCS source. Chukchi Response to Comments, AR EPA Ex. L-2 at L000083; Beaufort Response to Comments,

AR EPA Ex. PP-5 at PP000354. The rationale, both factual and legal, for determining when the Discoverer will be considered an OCS source under the Chukchi and Beaufort OCS/PSD Permits was thus thoroughly explained and is supported by the record and regulations.

Indeed, it is AEWC's assertion regarding whether the three criteria in the definition of OCS source are met that is not only without support, but plainly contradicted by documents in the record. AEWC asserts in its petitions that the Discoverer meets all three regulatory requirements after it drops a single anchor, and AEWC states as support for this position that it is consistent with what Region 10 initially proposed in the Chukchi August 2009 Proposed Permit. AEWC Chukchi Petition at 15; AEWC Beaufort Petition at 15. AEWC further states in its petition on the Chukchi OCS/PSD permit that the record supports the one anchor theory because "EPA, MMS and Petitioners all agree that the Discoverer does not have to have all of its anchors down to engage in actual exploration related activities."[6] AEWC Chukchi Petition at 15.[7]

The AEWC Petitioners appear to presume that, because EPA stated that the Discoverer can engage in exploratory activities with fewer than eight anchors down, the Discoverer can engage in exploratory activities with only one anchor down. In fact, the record indicates that the Discoverer must be secured by at least four anchors before it can

[6] AEWC also makes a factual error here. In the document cited by AEWC, MMS states that "[u]nless and until all anchors have been set, the Alaska Region [of MMS] does not consider the Discoverer Mobile Offshore Drilling Unit (MODU) to be an OCS facility "permanently or temporarily attached to the seabed."" Letter from Jeffrey Walker, MMS, to Julie Vergeront, EPA, dated December 16, 2009, re: MMS' View on "Regulated or Authorized Under OCSLA," AR EPA Ex. D-57 at D00051.

[7] In AEWC's petition on the Beaufort permit, AEWC modified this statement some, stating "This is demonstrated by the record, which makes it clear that the Discoverer does not need to have all of its anchors set to engage in actual exploration related activities." AEWC Beaufort Petition at 15.

be engaged in exploratory activities. U.S. Patent, "Quick Disconnect/Connect Mooring Method and Apparatus for Turret Moored Drill Ship, Patent Number 4,509,448, dated April 9, 1985 (Drill Ship Patent), AR EPA Ex. B-6 at B000359. Prior to this, the drill ship is not considered sufficiently stable or secure. It is primarily for this reason that EPA does not believe that the Discoverer can fairly be said to be "erected on the seabed and used for the purpose of exploring, developing, or producing resources therefrom" when the Discoverer is attached to the seabed by a single anchor.

The AEWC Petitioners further assert that there is no support for Region 10's effort to draw a distinction between when the drill ship is a "ship" and when it is an OCS source. AEWC's position on this issue is also itself an unsupported assertion that is contrary to the record. As discussed below, in promulgating the OCS regulations, EPA made clear its understanding that Congress intended vessels to be regulated differently under CAA section 328 depending on whether a vessel is operating as an OCS source, in which case the vessel would be regulated as a stationary source, or whether a vessel is operating as a vessel, in which case the vessel would be regulated as a mobile source. *See* 57 Fed. Reg. 40,792, 40,793-94 (Sept. 4, 1992), AR EPA Ex. B-13; 56 Fed. Reg. 63,774, 63,777-78 (December 5, 1991), AR EPA Ex. B-11.[8]

[8] The AEWC Petitioners also contend that Region 10 did not adequately respond to its comment that Region 10's application of the regulatory definition of OCS source failed to regulate the Discoverer when engaged in preconstruction activities because Region 10 responded by incorporating by reference the response to a previous comment. In support of this assertion, the Petitioners cite to cases holding that a total lack of response to a comment cannot be cured by reference to an earlier comment where the referenced statement "merely provides a conclusion without supportive reasoning." AEWC Beaufort Petition at 31 (discussing Chukchi Response to Comments, AR EPA Ex. L-1 at L000078, Comment F.1.b); AEWC Chukchi Petition at 31(same). A review of the Chukchi Response to Comments makes clear that the referenced response did not simply provide a conclusion without supportive reasoning, but instead relied on statutes and case

In summary, the AEWC Petitioners have not demonstrated clear error in EPA's conclusion that the Discoverer is not an OCS source within the meaning of 40 C.F.R. § 55.2 until it is sufficiently secure and stable at a drill site and ready to commence exploration operations. EPA's conclusion on this issue is consistent with the regulatory definition and supported by the record, and review of this issue should therefore be denied.

3. There Are No Emissions from the Propulsion Engine While the Discoverer Is an OCS Source

The AEWC Petitioners make two assertions in their petitions with respect to the propulsion engine on the Discoverer, neither of which is correct.[9] First, they state that Region 10 committed clear legal error in determining that the Discoverer's propulsion engine does not meet the regulatory definition of OCS source. Second, the AEWC Petitioners contend that Region 10 has failed to regulate the Discoverer's propulsion engine. AEWC Chukchi Petition at 11 and 14; AEWC Beaufort Petition at 11 and 14.

Region 10 agrees with the Petitioners that the propulsion engine on the Discoverer is part of the OCS source when the Discoverer is an OCS source. The permits, however, prohibit operation of the Discoverer's propulsion engine when the Discoverer is an OCS source. *See* Chukchi OCS/PSD Permit, AR EPA Ex. L-1 at L000019, Condition D; Beaufort OCS/PSD Permit, AR EPA Ex. PP.2 at PP000197, Condition D. There are,

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law to support Region 10's conclusion. *See* Chukchi Response to Comments, AR EPA Ex. L-2 at L000077-78, Comment F.1.a.

[9] Petitioners' assertion that EPA erred in not regulating emissions from the propulsion engine is fundamentally tied to their view on when the Discoverer becomes an OCS source. As discussed in Section IV above, Petitioners have not shown clear error in EPA's determination that attachment by more than a single anchor is needed for the Discoverer to meet the definition of OCS source.

therefore, no emissions from the propulsion engine when the Discoverer is an OCS source. Furthermore, Region 10 has "regulated" emissions from the Discoverer's propulsion engines by prohibiting operation of the propulsion engine while the Discoverer is an OCS source. Chukchi Response to Comments, AR EPA Ex. L-1 at L000091-92; Beaufort Response to Comments, AR EPA Ex. PP-5 at PP000354. Again, the AEWC Petitioners have not demonstrated a clear legal or factual error in Region 10's regulation of the Discoverer's propulsion engine under the permits.

4. Icebreaker # 2 Is Neither Attached to the Discoverer Nor Has "Stationary Source Aspects" While Assisting the Discoverer in the Anchoring Process

The AEWC Petitioners also contend there is clear error in Region 10's determination that Icebreaker #2 is not an OCS source when it is assisting the Discoverer in setting and retrieving the Discoverer's anchors. For purposes of this argument, the Petitioners and Region 10 agree that for Icebreaker #2 to be considered an OCS source under 40 C.F.R. § 55.2, it must be "physically attached to an OCS facility," because Icebreaker #2 does not satisfy the regulatory requirements for being considered an OCS source in its own right (e.g. not permanently or temporarily attached to the seabed and erected thereon and used for the purpose of exploring, developing, or producing resources therefrom). *See* 40 C.F.R. § 55.2 (definition of OCS source). AEWC Chukchi Petition at 18-19; AEWC Beaufort Petition at 18-19.

As explained in the Statements of Basis for the proposed permits and in the Responses to Comments, Icebreaker # 2 is not "physically attached" to the Discoverer within the meaning of 40 C.F.R. § 55.2 during the time it is assisting the Discoverer in the anchor setting and retrieval process at a drill site. Chukchi January 2010 Statement of Basis, AR EPA Ex. J-2 at J000078, n. 7; Beaufort February 2010 Statement of Basis at

NN-10 at N000142, n. 8; Chukchi Response to Comments, AR EPA Ex. L-2 at L000090; Beaufort Response to Comments, AR EPA Ex. PP-5 at P000354 and P000356-357.[10] The preamble to the final OCS regulations demonstrates that the intent of the regulatory language in the definition of OCS source in 40 C.F.R. § 55.2 for vessels "attached" to an OCS source was to make EPA's OCS regulations consistent with the Department of Interior OCS-related regulations, "which specifically cover vessels used to transfer production from an offshore facility when the vessel is physically attached to the facility." *See* 57 Fed. Reg. at 40,793 (citing to 30 C.F.R. § 250.2), AR EPA Ex. B-13. The intent of the OCS regulatory language was also to ensure consistency with PSD requirements for marine terminals, "under which emissions from the stationary source activities of vessels at dockside are considered primary emissions of the marine terminals and regulated as such." *Id.* The connection of Icebreaker #2 to the Discoverer via a wire cable or line attached to one of the Discoverer's eight anchors is simply not "attachment" as contemplated by EPA in its promulgation.

Even if such a connection could be considered "attachment" within the meaning of the definition of OCS source for vessels attached to OCS sources in 40 C.F.R. § 55.2, there are no "stationary source aspects" of Icebreaker #2 during the time it is engaging in the anchor handling process, and the definition states that "only the stationary source aspects" of a vessel physically attached to an OCS facility will be regulated as an OCS

[10] The anchor setting and retrieval process takes a maximum of 42 hours for each drill site. Chukchi January 2010 Statement of Basis, AR EPA Ex. J-2 at J000076. In addition, little, if any anchor handling will occur while the Discoverer is an OCS source because the Discoverer is not an OCS source until it is sufficiently secure and stable to commence drilling operations, *see* Chukchi Response to Comments, AR EPA Ex. L-2 at L000090-91, and the Discoverer must be secured by a minimum of four anchors to be able to engage in drilling operations, *see* Drill Ship Patent, AR EPA Ex. B-6 at B000359.

source. The preamble supports the position that EPA did not intend to, and did not believe it had authority to, regulate mobile source activities (i.e., non-stationary source activities) of vessels under section 328 of the CAA as stationary sources. *See* 57 Fed. Reg. at 40,793-40,794, AR EPA Ex. B-13 ("Only the stationary source activities of vessels at dockside will be regulated under title I of the Act (which contains NSR and PSD requirements), since EPA is prohibited from directly regulating mobile sources under that title."). During the anchor setting and retrieval process, Icebreaker #2 is using its propulsion engines to move the Discoverer's anchors and anchor lines to different locations around the drill site, and thus is engaging in mobile source, and not stationary source, activities. Indeed, during the anchor setting and retrieval process, Icebreaker #2 is a mobile source and not a stationary source, in the same way that a cement truck laying a foundation for a building covered by a PSD permit is not considered part of the "stationary source" that is the building.

AEWC's concern appears to stem from the fact that BACT has not been applied to Icebreaker #2; however, Shell requested and the permits require Icebreaker #2 to use ultra-low sulfur diesel in all engines, which has been determined to be BACT for sulfur dioxide (SO2) for all other engines that comprise the OCS source. Chukchi Final OCS/PSD Permit, AR EPA Ex. L-1 at L000011, Condition B.5; Beaufort Final OCS/PSD Permit, AR EPA Ex. PP-2 at PP000179-180, Condition B.5. In addition, the propulsion engine that will be powering Icebreaker # 2 during the anchor setting and retrieval process will be equipped with and required to use selective catalytic reduction (SCR) in order to comply with the NAAQS and NO2. Chukchi Final OCS/PSD Permit, AR EPA Ex. O-1 at O000048, Condition O.1.8; Beaufort Final OCS/PSD Permit, AR EPA Ex. PP-

2 at PP000228, Condition P.1.8. SCR was determined to be BACT for the Discoverer's generator engines. Chukchi January 2010 Statement of Basis, AR EPA Ex. J-2 at J000114; Beaufort February 2010 Statement of Basis, AR EPA Ex. NN-10 at NN000186. Icebreaker #2 is also subject to numerous other restrictions on fuel usage and operations to ensure that, in conjunction with emissions from the Discoverer and other vessels in the Associated Fleet, the project will not cause a violation of the NAAQS or increments. Chukchi Final OCS/PSD Permit, AR EPA Ex. L-1 at L000047-53, Condition O; Beaufort Final OCS/PSD Permit, AR EPA Ex. PP-2 at P000228-234, Condition P.

In short, Petitioners have not demonstrated clear error in Region 10's determination that Icebreaker #2 is not an OCS source during the anchor setting and retrieval process, both because it is not "attached" to the Discoverer during this time and because Icebreaker #2 does not have "stationary source aspects" during this time.

B. The OCS Regulations Do Not Authorize EPA to Impose BACT on Vessels That Are Not OCS Sources

As an initial matter, the repeated assertions of the AEWC Petitioners that the permits do not regulate or control emissions from the Associated Fleet[11] are simply not correct. AEWC Chukchi Petition at 11, 14; AEWC Beaufort Petition at 11, 14. As explained below, Region 10 did not require Shell to provide a BACT analysis for the Associated Fleet, nor did Region 10 impose BACT on the Associated Fleet, and that decision is consistent with the OCS regulations. EPA stated in the preamble to the OCS

[11] In this discussion, "Associated Fleet" does not refer to the supply ship when it is attached to the Discoverer while the Discoverer is an OCS source. In other words, "Associated Fleet" as used in this Section IV. B includes the supply ship except when it is an OCS source.

regulations that it believed that Congress did not intend for EPA to directly regulate as stationary sources vessels that are not themselves OCS sources, but that Congress did intend that emissions from such associated vessels be considered emissions of the OCS source for purposes of the air quality analysis and offsets. *See* 57 Fed. Reg. at 40,794, AR EPA Ex. B-13; 56 Fed. Reg. 63,777 and 63,778, AR EPA Ex. B-11.

Although Region 10 did not impose BACT on the Associated Fleet, the emissions from these vessels are regulated consistent with PSD program requirements. The Chukchi and Beaufort OCS/PSD Permits both contain conditions that Shell requested or that Region 10 otherwise imposed to ensure that emissions from the Associated Fleet, in conjunction with emissions from the Discoverer while the Discoverer is an OCS source, will not cause or contribute to a violation of any applicable NAAQS or increments. Chukchi OCS/PSD Permit, AR EPA Ex. L-1 at L000042-57, Conditions B.6, N, O, P and Q; Beaufort OCS/PSD Permit, AR EPA Ex. PP-2 at PP000179 at PP000222-238, Conditions B.5 and N-R. This treatment of emissions from vessels associated with the OCS source that are not themselves OCS sources and are not subject to BACT thus does indeed result in regulation and control of emissions from the Associated Fleet.

The Petitioners make essentially two substantive arguments to support their claim that EPA erred in not imposing BACT on the Associated Fleet. The AEWC Petitioners' main argument is that the definition of OCS source in the OCS regulations is not consistent with section 328(a)(4)(C) of the Clean Air Act, 42 U.S.C. § 7627(a)(4)(C), and therefore should be disregarded by the Board. As shown below, not only is AEWC raising this issue far beyond the allowed timeframe for challenges to a rule promulgated under the Clean Air Act, but the OCS regulations were upheld in 1994 as a valid

interpretation of the definition of OCS source under section 328(a)(4)(C) of the CAA. *Santa Barbara County Air Pollution Control District v. EPA*, 31 F.3d 1179, 1180 (D.C. Cir. 1994).

The EJ Petitioners apparently concede that the Associated Fleet does not meet the statutory or regulatory definition of OCS source, s*ee* EJ Petition at 10, but assert that the Associated Fleet is nonetheless subject to all of the same requirements as an OCS source, including BACT, *see* EJ Petition at 25-28. Congress would not have made a distinction between the OCS source and emissions from vessels associated with the OCS source if Congress had intended there to be no substantive difference in the requirements applicable to the two different categories. In short, neither group of Petitioners has demonstrated clear error in EPA's decision not to impose BACT on emissions from the Associated Fleet.

1. The Regulatory Definition Of OCS Source Can Not Be Challenged in This Proceeding

As discussed above, section 328(a)(4)(C) of the CAA provides that:

> The terms "Outer Continental Shelf source" and OCS source include any equipment, activity, or facility which—
>
> (i) emits or has the potential to emit any air pollutant,
> (ii) is regulated or authorized under the Outer Continental Shelf Lands Act [43 U.S.C. 1331 et seq.], and
> (iii) is located on the Outer Continental Shelf or in or on waters above the Outer Continental Shelf.
>
> Such activities include, but are not limited to, platform and drill ship exploration, construction, development, production, processing, and transportation. For purposes of this subsection, emissions from any vessel servicing or associated with an OCS source, including emissions while at the OCS source or en route to or from the OCS source within 25 miles of the OCS source, shall be considered direct emissions from the OCS source.

CAA section 328(a)(4)(C), 42 U.S.C. § 7627(a)(4)(C).

EPA published a proposed OCS rule implementing section 328 of the CAA on December 5, 1991 that included a definition of OCS source. 56 Fed. Reg. at 63,787, AR EPA Ex. B-11. The definition of OCS source in the proposal did not directly address when vessels would be considered OCS sources. *Id.* The preamble to the proposal, however, stated that EPA interpreted the statutory definition of OCS source to exclude marine vessels other than drill ships. *Id.* at 63,777. EPA stressed that vessel emissions related to an OCS source are accounted for by including vessel emissions in the "potential to emit" of the associated OCS source. *Id.* In the final rule, EPA maintained its view that the statutory definition of OCS source did not include marine vessels in transit. *See* 57 Fed. Reg. at 40,793, AR EPA Ex. B-13. However, in response to comments, EPA added language to the definition of OCS source to clarify that vessels would be considered OCS sources only when they are "permanently or temporarily attached to the seabed and erected thereon and used for the purpose of exploring, developing, or producing resources therefrom…" 57 Fed. Reg. at 40,793-94 and 40,807, AR EPA Ex. B-13. In addition, the final rule provided that vessels would also be considered OCS sources when they are "physically attached to an OCS source facility, in which case only the stationary source aspects of the vessels will be regulated." *Id.*

Pursuant to section 307(b) of the CAA, 42 U.S.C. § 7607(b), which governs challenges to nationally applicable regulations under the CAA, the Santa Barbara County Air Pollution Control District (Santa Barbara APCD) filed a petition challenging the OCS regulations in the D.C. Circuit within 60 days of final promulgation of the regulations. *See Santa Barbara County*, 31 F.3d at 1180. One of the issues in the appeal was whether

it was "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law for the Administrator of the Environmental Protection Agency to adopt provisions in 40 C.F.R. § 55.2 to exclude vessels from the definition of OCS source when such vessels are not permanently or temporarily attached to the sea bed or erected thereon or not physically attached to an OCS facility[.]" Brief of Petitioner Santa Barbara County Air Pollution Control District, EPA Att. C at 000026. Like AEWC in this case, the Santa Barbara APCD argued that EPA's exclusion from the regulatory definition of OCS source of vessels associated with an OCS facility and that were within 25 miles of the OCS facility but not attached to the OCS facility was not consistent with the statutory definition of OCS source in section 328(a)(4)(C). *See Santa Barbara County*, 31 F.3d at 1180. The *Santa Barbara* Court concluded that "As section 7627 merely mentions vessels 'servicing or associated with' an OCS source to ensure their emissions are included with those of the parent OCS source (when the vessel is within 25 miles of the source, and is en route to or from the source), we find it was reasonable for EPA to conclude that OCS sources did not include vessels that were merely traveling over the OCS." *Id.*

Both the AEWC and the EJ Petitioners state that the marine vessels at issue in the *Santa Barbara* case were not vessels associated with an OCS source engaged in oil and gas exploration, but rather vessels merely traveling over the OCS and within 25 miles of any existing OCS source, even if vessels were in no way associated with the OCS source. AEWC Chukchi Petition at 28; AEWC Beaufort Petition at 28; EJ Petition at 20. In other words, the Petitioners appear to be asserting that the *Santa Barbara* case dealt with whether EPA properly concluded in promulgating the definition of OCS source, that, for

example, a commercial cruise ship or a container ship full of bananas in the vicinity of an OCS source should not be considered an OCS source. There is nothing in the OCS statute or OCS regulations and preamble to suggest that EPA even considered vessels other than those that are, or are associated with, OCS sources. Further, the notion that Santa Barbara County ACPD challenged EPA's regulations because EPA did not attempt to regulate as OCS sources vessels that were not engaged in OCSLA-related activities (e.g. cruise ships) because they traveled within 25 miles of an OCS source is simply absurd. Clearly, the *Santa Barbara* case addressed whether EPA properly concluded that vessels associated with an OCS source and within 25 miles of an OCS source would not be defined and regulated as OCS sources (i.e. stationary sources). Thus, the challenge to the OCS regulations raised by AEWC in this permit proceeding 18 years after promulgation of the OCS regulations was previously timely raised and rejected in a timely challenge to the OCS regulations. And in that case, the D.C. Circuit – the court vested with authority by Congress to hear challenges to nationally applicable rules promulgated by EPA under the Clean Air Act – upheld EPA's regulations on this issue.[12]

[12] Although irrelevant given that EPA's regulatory definition of OCS source has previously been upheld and cannot be challenged in this proceeding, the AEWC Petitioners' statements regarding EPA's understanding of its authority with respect to the regulation of marine vessels are simply incorrect. AEWC states that EPA promulgated the OCS regulations based on the faulty assumption that EPA is prohibited from regulating marine vessels under the Clean Air Act. Then AEWC notes that EPA has promulgated a regulation for marine vessels, 73 Fed. Reg. 37,096, 37,102 (June 30, 2008), indicating that EPA does have authority to regulate marine vessels under the Clean Air Act. AEWC Beaufort Petition at 21-22. In fact, EPA stated in the preamble to the final OCS regulations that EPA did not have authority to regulate marine vessels *under Title I* of the CAA. 57 Fed. Reg. at 40,793. The marine vessel regulation cited by AEWC states that it was promulgated pursuant to Title II of the CAA. 73 Fed. Reg. at 37,102.

In any event, AEWC's direct challenge to the validity of the regulatory definition of OCS source would be improper in this proceeding. This Board has repeatedly stated that permit appeals are not the appropriate fora for challenging agency regulations. *See In re Tondu Energy Co*, 9 E.A.D. 710, 715 (EAB 2001). That is especially true where, as here, the regulation challenged in the permit appeal was properly and timely challenged and was upheld by the court in which Congress expressly vested jurisdiction to hear such challenges. Petitioners cite to *Illinois E.P.A. v. U.S. E.P.A.*, 947 F.2d 283, 288–89 (7th Cir. 1991) and *Bethlehem Steel Corp. v. United States Environmental Protection Agenc*y, 723 F.2d 1303, 1306 (7th Cir. 1983), as examples of cases where courts have allowed challenges to Clean Air Act regulations more than 60 days following promulgation. In fact, these cases stand for the proposition that an EPA Regional Administrator's implementation of a regulation older than 60 days can be judicially reviewed, but they do not provide support for a challenge to a regulation as inconsistent with the authorizing statute more than 60 days after promulgation of the regulation. Rather, this situation is governed by cases such as *Puerto Rican Cement Co. v. United States EPA*, 889 F.2d 292 (1st Cir. 1989), in which the court held that petitioners could not challenge a regulation more than sixty days after it was promulgated when their challenge was based on the argument that the regulation was an impermissible interpretation of statutory authority.[13]

[13] Although the EAB has stated that EPA Regions are not entitled to deference before the EAB for interpretations of statutory or regulatory provisions, *see In re Lazarus Inc*., 7 E.A.D. 318, 351 n. 55 (EAB 1997), the EAB has also held that a Region's interpretations should be considered "strongly persuasive" when its rulings, legal interpretations, and opinions are consistent over long periods of time. *See e.g. In re Howmet Corporation*, RCRA (3008) Appeal No. 05-04, slip op. at 14 (EAB, May 24, 2007), 13 E.A.D. at __ (stating "[EAB] give[s] greater deference to a position when it is supported by Agency rulings, statements, and opinions that have been consistent over time"); *In re Leed Foundry, Inc.*, RCRA (3008) Appeal No. 07-02, slip op. at 19 n. 22 (EAB, Feb 20, 2008).

2. Emissions From Vessels That Are Not an OCS Source Are Not Subject to BACT

The EJ Petitioners acknowledge that the Associated Fleet is not part of the OCS source, but argue that the Associated Fleet is nonetheless subject to all of the same requirements and should be regulated in the same manner as the OCS source. However, it is readily apparent that there would be no need to make a distinction in the OCS statute or OCS regulations between emissions from the OCS source itself and emissions from vessels related to the OCS source if both the OCS source and the associated vessels were subject to the same requirements in all respects. The definition of OCS source would simply include such associated vessels.

The legislative history cited by the EJ Petitioners reflecting Congressional intent that emissions from associated vessels also be "regulated," "controlled," or "offset" does not suggest a contrary result. As discussed above, by including emissions from vessels associated with an OCS source when within 25 miles of the OCS source in the "potential

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13 E.A.D. at __ (stating "where the Agency's position has been consistent over a long period of time, this Board has, in the past, given greater deference to such a position."); *Lazarus, Inc.*, 7 E.A.D. at 353 (holding that a consistently held interpretation is likely to obtain deference from a court, whether the form of the interpretation is an administrative practice or an official opinion letter). As is evident in EPA's position in the response to comments on the OCS regulations when 40 C.F.R. § 55.2 was promulgated, in EPA's position in the *Santa Barbara* case, and in Region 10's issuance of these permits, EPA has consistently interpreted the definition of OCS source in 40 C.F.R. § 55.2 to mean that no marine vessel is an OCS source unless it has been either (1) permanently or temporarily attached to the seabed and erected thereon and used for the purpose of exploring, developing, or producing resources therefrom or (2) physically attached to an OCS facility. *See* Outer Continental Shelf Air Regulations, 40 C.F.R. Part 55, Response to Comments Document, EPA Att. D at 000066, Comment 2-11 (EPA responded to the comment that vessels should be considered OCS sources by stating "vessels do not meet all the specific criteria as necessary to be defined as an OCS source"); Brief for Respondents EPA in Santa Barbara County Air Pollution Control District v. Browner, No. 92-1569, EPA Att. E.000197 (statutory construction of CAA Section 328 precludes a construction of the statute that would provide for direct regulation of such vessels as OCS sources themselves).

emissions" of the OCS source, such associated emissions are required to be regulated, controlled or offset as needed to ensure that the OCS source and the vessels associated with and proximate to the OCS source do not cause or contribute to a violation of any applicable NAAQS or increments.

The crux of the EJ Petitioners' argument is that, once PSD is triggered, BACT is required on all emissions that are considered in the PSD analysis in the case of non-OCS PSD permits. Therefore, in their view, such emissions must also be subject to BACT in the case of a PSD permit for an OCS source. The EJ Petitioners are simply incorrect in their assertion that, in the case of a source on shore, BACT is required on all emissions that are otherwise considered in the PSD analysis. For example, in the case of a major modification to a specific emission unit (unit A) that allows an increase in production and thus an increase in emissions at other parts of the facility (commonly referred to as "debottlenecking"), while unit A would be subject to BACT, emissions from the debottle-necked emission units would only be considered in the air quality analysis, or, if in a nonattainment area, be required to be offset. *Compare* 40 C.F.R. § 52.21(j)(3)(for major modifications, BACT applies to "each proposed emission unit at which a net emissions increase in the pollutant would occur as a result of a physical change or change in the method of operation at the unit) *with* 40 C.F.R. § 52.21(k) (source "shall demonstrate that allowable emissions increases from the proposed source or modification, in conjunction with all other applicable emissions increases or reductions (including secondary emissions), would not cause or contribute to a violation of the NAAQS").[14] In other words, the "potential to emit" of such a modification includes potential emissions

[14] "Allowable emissions" is the "potential to emit" of a source with a permit.

attributable to the modification (emissions from debottlenecked units), not just potential emissions from the modified unit. The potential to emit in such case is used to determine if the modification is a major modification and thus subject to PSD and also for purposes of the air quality analysis, but only emissions from the modified emission units are subject to BACT.[15]

This is similar to what results from application of the definition of OCS source and "potential emissions" under the OCS regulations. Only the OCS source itself is subject to BACT (if significant emission rates for the pollutant at issue are exceeded), but emissions from vessels servicing or associated with an OCS source while at or within 25 miles of the OCS source are considered for purposes of determining whether the OCS source is a "major" PSD source, in the ambient air quality analysis required under 40 C.F.R. § 52.21(k), and, if in a nonattainment area, in the offset calculations required by CAA section 173, 42 U.S.C. § 7503, and 40 C.F.R. § 51.165. Indeed, in these specific permit actions, as acknowledged by the EJ Petitioners, imposing BACT on the OCS source was not sufficient to demonstrate that "potential emissions" from the OCS source, in conjunction with emissions from the Associated Fleet when within 25 miles of the OCS source, would comply with the applicable NAAQS and meet increment. The Chukchi and Beaufort OCS/PSD Permits therefore impose other operating restrictions and control requirements requested by Shell or otherwise imposed by EPA to ensure that these emissions do not cause or contribute to a violation of any applicable NAAQS or increments.

[15] And the modified emission unit is subject to BACT only for those pollutants for which the "potential to emit" exceeds the "significant emission rate" for such pollutant. 40 C.F.R. § 52.21(j).

3. The OCS Statute, OCS Regulations, And Preambles To The Proposed and Final OCS Regulations Make Clear That Vessels That Are Not OCS Sources Are Not To Be Regulated As Stationary Sources

EPA agrees with the EJ Petitioners that section 328 of the Clean Air Act unambiguously directs EPA to ensure that air pollution from OCS sources, including the emissions from associated vessels, comply with the NAAQS and with PSD. *See* CAA section 328(a)(1), 42 U.S.C. § 7627(a)(1). However, Region 10 disagrees with the conclusion EJ Petitioners reach based on this agreement. As stated above, the statute does not require BACT for all emission units associated with the OCS source and EPA regulations do not authorize EPA to require BACT for vessels that are associated with the OCS source but that are not themselves OCS sources. Nothing in the OCS statute or the legislative history cited by the EJ Petitioners indicates otherwise.

The OCS regulations carry forward the distinction in the OCS statute between the OCS source and emissions from associated vessels, which, as discussed above, can only have been intended to result in the different treatment of the two categories of emission units. AEWC and the EJ Petitioners state that nothing in the regulatory definition of OCS source *prohibits* EPA from applying BACT to vessels associated with an OCS source that do not fall within the definition of OCS source, *see* AEWC Beaufort Petition at 20, n. 3, EJ Petition at 22, but neither group of Petitioners is able to point to any specific language indicating that the regulatory definition requires or even authorizes EPA to do so.

The contention of the EJ Petitioners that the preambles to the proposed and final OCS regulations are ambiguous on the issue of whether associated vessel emissions are subject to BACT is simply not correct. While it is true that the preamble does not expressly state that emissions from associated vessels are not subject to BACT, there was no need to state this explicitly because EPA explained in the preambles to the proposed

and final rules the ways in which emissions from associated vessels *would be* considered under the OCS regulations.

EPA first stated its understanding that Congress granted EPA different authorities with respect to the regulation of OCS sources as opposed to the regulation of emissions from other vessels associated with the project. Equipment or activities that met the definition of OCS source were to be regulated as stationary sources, whereas emissions from vessels related to OCS activity that were not themselves OCS sources would be regulated as mobile sources under Title II of the CAA. *See* 328(a)(4)(D) (defining the term "new OCS source" as "an OCS source which is a new source within the meaning of section 7411(a) of this title"); *see also* 57 Fed. Reg. at 40,793-94, AR EPA Ex. B-13 ("only the stationary source activities of vessels at dockside will be regulated under Title I of the Act (which contains NSR and PSD requirements) since EPA is prohibited from directly regulating mobile sources under that title"); *id.* at 40,794 ("Section 328 does not provide authority to EPA to regulate the emissions from engines being used for the propulsion of vessels."); 56 Fed. Reg. at 63,777, AR EPA Ex. B-11 ("regulations adopted by state and federal agencies to directly control vessel emissions will not be incorporated into part 55 because it would exceed EPA's authority"). EPA explained that this distinction was necessary because vessels – as mobile sources – cross local, state, and international lines and thus are better regulated on a broad scale under Title II of the Clean Air Act. *Id.*

But EPA also explained that in accordance with section 328 of the CAA, emissions from associated vessels within 25 miles of the OCS source would still be "accounted for" by including vessel emissions in the "potential to emit" of the OCS

source. *Id.* ("Vessel emissions related to OCS activity are, however, accounted for by including vessel emissions in the "potential to emit;" "The inclusion of vessel emissions in the total emissions of the stationary source is a statutory requirement under section 328(a)(4)(C)."). EPA continued that,

> In this manner, vessel emissions of attainment pollutants will be accounted for when PSD impact analyses are performed and increment consumption is calculated. For nonattainment pollutants the OCS source will have to obtain offsets as required by the [Corresponding Onshore Area], and vessel emissions will be offset.

Id.

Later in the preamble for the proposed OCS regulations, EPA repeated its understanding: that although associated vessels were explicitly not included in the definition of OCS source, the OCS statute "does explicitly include vessel emissions in offset calculations and impact analysis." *Id.* And again, in the preamble to the final OCS regulations, EPA explained how emissions from vessels associated with an OCS source would be considered under the OCS regulations:

> All vessel emissions related to OCS activity will be accounted for by including vessel emissions in the "potential to emit" of an OCS source. Vessel emissions must be included in offset calculations and impact analysis, as required by section 328 and explained in the [Notice of Proposed Rulemaking].

57 Fed. Reg. at 40,794, AR EPA Ex. B-13.

Thus, not only did EPA state in the preamble to the proposed and final OCS regulations that OCS sources and emissions from vessels associated with OCS sources are to be treated differently, EPA also explained on three separate occasions how emissions of associated vessels are to be considered under the OCS regulations: in the ambient impact analysis, including increment consumption, and for any required offset calculations, all of which, under the PSD program, are based on the "potential to emit" of the stationary source. Although for a new source "potential to emit" is used to determine

the *pollutants* for which a BACT analysis is required, 40 C.F.R. § 52.21(j)(2), "potential to emit" is not used to determine the *emission units* subject to BACT.[16]

The EJ and AEWC Petitioners contend that issuance of these OCS/PSD permits raises important policy considerations that warrant review by the Board because of the magnitude of emissions from the Associated Fleet and the fact that more OCS activity is expected in the Arctic. EJ Petition at 4 and 8; AEWC Chukchi Petition at 21 n. 6; AEWC Beaufort Petition at 21 n. 6. But, as discussed above, the policy decisions relating to whether unattached support vessels are OCS sources or subject to the same controls as the OCS source were decided when EPA promulgated the OCS regulations in 1992. Questions relating to when a particular drill rig or drill ship, such as the Discoverer, becomes an OCS source turn on factual issues that will vary depending on the configuration of the particular equipment at issue and therefore also do not raise important policy considerations. Thus, review should be denied because Petitioners have not carried their burden of showing a clear factual or legal error in EPA's decisions or an important policy issue that merits consideration by the Board.

C. The Preconstruction Monitoring Data Supporting the Permits is of Sufficient Duration and Quality to Meet the Requirements of 40 C.F.R. § 52.21(m)

The AEWC Petitioners have not shown clear error in Region 10's determination that both the Chukchi and the Beaufort OCS/PSD Permits are supported by preconstruction monitoring data meeting the requirements of 40 C.F.R. § 52.21(m). As

[16] EPA notes that, in determining the emission units to which BACT applies in these permits, EPA went further than several other commenters would have liked. These commenters argued that the OCS statute and regulations do not give EPA authority to impose BACT on otherwise nonroad engines located on vessels that meet the definition of OCS source. See Chukchi Response to Comments, AR EPA Ex. L-2 at L000086-88.

discussed below, the touchstone of the preconstruction monitoring requirement is whether the data are sufficient to conduct a complete and adequate analysis of air quality in the area that will be affected by the proposed source or modification. The record reflects that the permit applications in this case are supported by data from preconstruction monitoring data were collected pursuant to approved quality assurance project plans. Furthermore, the PM2.5 data supporting the applications are of sufficient duration. The record therefore supports Region 10's conclusion that the data are sufficient to conduct a complete and adequate analysis of air quality in the area that will be affected by the proposed source or modification and that the requirements of 40 C.F.R. § 52.21(m) are met in this case.

1. Preconstruction Monitoring Requirements

The PSD regulations require the permittee to demonstrate that allowable emissions increases from the proposed source or modification, in conjunction with all other applicable emissions increases or reductions (including secondary emissions), would not cause or contribute to a violation of any NAAQS or PSD increment. 40 C.F.R. § 52.21(k). Under EPA regulations and modeling guidelines, background monitoring data are used in conjunction with modeled predictions to determine if this standard is satisfied. *See* 40 C.F.R. §§ 52.21(k) and (m); 40 C.F.R. Part 51, Appendix W.

With respect to preconstruction ambient air monitoring, the PSD regulations provide that a PSD application "shall contain an analysis of ambient air quality in the area that the major stationary source…would affect." 40 C.F.R. § 52.21(m)(1)(i). The regulations further provide that, for NAAQS pollutants, "the analysis shall contain continuous air quality monitoring data gathered for purposes of determining whether emissions of that pollutant would cause or contribute to a violation of the standard or any

maximum allowable increase." 40 C.F.R. § 52.21(1)(iii). Section 52.21(m)(1)(iv) elaborates that *"[i]n general,* the continuous air quality monitoring data that is required shall have been gathered over a period of at least one year and shall represent at least the year preceding receipt of the application, except that, *if the Administrator determines that a complete and adequate analysis* can be accomplished with monitoring data gathered over a period shorter than one year (but not to be less than four months), the data that is required shall have been gathered over at least that shorter period." (emphasis added). The regulations also require that the owner or operator of the source meet the requirements of 40 C.F.R. Part 58, Appendix B (which has since been combined with and relocated to Appendix A) during the operation of monitoring stations for purposes of satisfying paragraph (m) of this section. *See* 40 C.F.R. § 52.21(m)(3).[17]

Section 3.2.5.5 of Appendix A requires that, within a PSD network under a single primary quality assurance organization (PQAO), there be at least one collocated PM2.5 monitor that is a Federal Reference Monitor (FRM) and that the site in the monitoring network with the highest predicted 24-hour concentration must be selected. *See also* 40 C.F.R. part 58, appendix A, section 3.2.5.3. The purpose of collocation sampling for PM2.5 is to help assess data quality by estimating the comparability of two monitors sited next to each other. *See* 40 C.F.R. part 58, appendix A, sections 1.2, 3.2.5.7 and 4.3.1. A collocated FRM has been determined by EPA to be a reference instrument to use for data quality assessments for PM2.5 in air monitoring networks. Section 3.2.5.7 of Appendix A suggests that "about" 25 valid pairs should be used for the precision and bias estimates for which collocation is required.

[17] The substantive requirements of the 40 C.F.R. Part 58 appendix referenced in 40 C.F.R. § 52.21(m)(3) shall hereafter be referred to as "Appendix A."

2. Preconstruction PM2.5 Monitoring Data Supporting the Permits

AECOM, Inc. (AECOM), an environmental consulting company, runs a network of PSD air monitoring stations on the North Slope under contract with Shell and/or Conoco-Phillips Alaska, Inc. (CPAI). For PM2.5, the air monitoring network includes a monitoring station in Wainwright on the Chukchi Sea[18] and monitoring stations in Badami, Nuiqsut, and Deadhorse on the Beaufort Sea. The Wainwright station began collecting PM2.5 data on November 8, 2008, but a problem with instrumentation resulted in the invalidation of the PM2.5 data collected from November 8, 2008 until March 5, 2009 (that problem has since been addressed). The Badami station began collecting PM2.5 data on August 20, 2009, and the Deadhorse station on October 23, 2009. The Deadhorse monitoring site was predicted to have the highest PM2.5 concentrations in the network and was selected as the location for installation of collocated PM2.5 monitors. Chukchi Response to Comments, AR EPA Ex. L-2 at L000176; Beaufort Response to Comments, AR EPA Ex. PP-5 at PP000383. The Deadhorse monitoring site includes two PM2.5 FRM monitors and two Federal Equivalent Method (FEM) monitors of the same model and configuration as the PM2.5 FEM samplers at Wainwright and Badami.[19]

EPA approved a Quality Assurance Project Plan (QAPP) for operation of the Wainwright monitoring site on January 5, 2009, and AECOM submitted an amendment to the QAPP to reflect operation of the Deadhorse PM2.5 monitors as collocated monitors for the AECOM network on November 25, 2009. Email from Tom Damiana, AECOM,

[18] AECOM operates these monitors with primary oversight from either Shell or CPAI. For some monitors, such as Wainwright and Deadhorse, Shell and CPAI share the monitoring results.

[19] A Federal Equivalent Method (FEM) is an air sampling collection and analysis method that does not follow the reference procedures in 40 C.F.R. Part 50, but has been certified and designated by the EPA as obtaining "equivalent" results.

to Chris Hall, EPA, dated November 25, 2009, re: Revision to the Wainwright QAPP and attached QAPP (Wainwright QAPP), AR EPA Ex. No. C-351 at C003676, C003738, C003748-49. Shell submitted a QAPP for the Badami site on February 22, 2009, and EPA approved the Badami QAPP on February 17, 2010, with minor revisions to correct typos and to reflect operation of the Deadhorse PM2.5 monitors. Email from Chris Hall, EPA, to Tom Damiana, AECOM, dated February 17, 2010, re: Badami QAPP (February 2010 Badami QAPP), AR EPA Ex. No. CC-152 at CC004260; Email from Thomas Damiana, AECOM, to Christopher Hall, EPA, Re: Badami QAPP, AR EPA Ex. 149. EPA approved the QAPP for the Deadhorse PM2.5 monitors on December 16, 2009. Email from Chris Hall, EPA, to Tom Damiana, AECOM, dated December 18, 2009, re: EPA Approval for the Deadhorse QAPP (Deadhorse QAPP), AR EPA Ex. C-390 at C005760.

3. The Collection of Preconstruction Monitoring Data at the Wainwright and Badami Sites Was of Sufficient Duration to Ensure a Complete and Adequate Analysis

As discussed above, 40 C.F.R. § 52.21(m)(1)(iv) states that *"[i]n general*, the continuous air quality monitoring data that is required shall have been gathered over a period of at least one year." (emphasis added). In addition, that section provides that data gathered over as little as a four month period is sufficient if the permitting authority can determine that "a complete and adequate analysis" can be accomplished with monitoring data gathered over such shorter period. In this case, the record for each permit contains at least four months of PM2.5 monitoring data and a determination by Region 10 that a complete and adequate analysis can be accomplished with less than one year of data.

The January 2010 Chukchi Proposed Permit was supported by PM2.5 data collected at the Wainwright monitoring site from March 6, 2009 to October 31, 2009.

Chukchi January 2010 Statement of Basis, AR EPA Ex. J-2 at J000162. The final Chukchi OCS/PSD Permit was supported by PM2.5 data collected at the Wainwright monitoring site through December 7, 2009. Chukchi Response to Comments, AR EPA Ex. L-2 at L000165. Thus, the final Chukchi OCS/PSD Permit was supported by nine months of PM2.5 monitoring data, and covered all but 24 days (December 7 through 31) of the drilling season authorized by the permit. Thus, the total amount of PM2.5 data collected at the Wainwright monitoring site was gathered over a period of at least four months. Furthermore, Region 10 documented and substantiated its determination that a complete and adequate analysis of air quality in the vicinity of Shell's Chukchi operations can be accomplished with monitoring data gathered over a period of less than one year. Chukchi Statement of Basis, AR EPA Ex. J-2 at J000163; Chukchi Response to Comments, AR EPA Ex. L-2, L000168-170 and L000175-178.

The Beaufort February 2010 Proposed Permit was supported by PM2.5 data collected at the Badami monitoring site from August 20, 2009 to December 15, 2009, a four month period during which there was more than 90% data recovery.[20] Beaufort Response to Comments, AR EPA Ex. PP-5 at P000375. The Ambient Air Monitoring Guidelines for PSD recommend a data recovery of at least 80% for PSD monitors. *See* U.S. EPA Ambient Monitoring Guidelines for Prevention of Significant Deterioration, AR EPA Ex. B-7 at B000365. Recognizing that monitoring data were collected at the Badami site over only a four month period and did not cover portions of the drilling

[20] The Badami monitoring site began operation on August 15, 2009, but the first full day of PM2.5 data collection was August 20, 2009. The 90% data recovery was determined based on data collection from August 15, 2009 through December 15, 2009, a four month period.

season to be authorized by the permit and during which higher PM2.5 values might be expected (namely, July and the first half of August), Region 10 conducted additional analyses, looking at other available PM2.5 data for the North Slope. *See* Beaufort Response to Comments, AR EPA Ex. PP-5 at PP000375-377. Based on that analysis, Region 10 concluded that a conservative background value offshore in the vicinity of operations under the Beaufort PSD/OCS Permit would likely be less than the 11.4 ug/m^3 measured at the Wainwright monitoring site. *Id.* at PP000376; Memo from Chris Hall, EPA, to Mary Portanova, EPA, dated April 8, 2010, re: Badami PM2.5 Data Review – August 19 through December 15, 2009, AR EPA Ex. BB-21 at BB000376.

Region 10 also evaluated other available data on fine particle concentrations in the Arctic, which showed long term 98th percentile PM2.5 concentrations for the 2006 through 2008 period ranging from 3.5 ug/m3 to 9.5.[21] *See* Beaufort Response to Comments, AR EPA Ex. PP-5 at PP000375-376. Region 10 acknowledged that these additional data were not collected with FRM or FEM monitors for measuring PM2.5 and thus were not alone suitable for use in a NAAQS demonstration under the PSD regulations. But while recognizing that the information from these other Arctic PM2.5 and PM10 monitoring sites did not help address the missing period of operation at the Badami site (July 1 through August 19), Region 10 concluded that these data do show that PM2.5 background concentrations at remote sites in the Arctic are likely to be around 7 ug/m^3 or less. *Id.* at PP000376.

[21] This includes long-term PM10 collected data from Barrow, for which it was assumed that all PM10 was PM2.5, a conservative assumption (PM2.5 is a subset of PM10 so the PM2.5 value could be no greater than the PM10 value recorded). *See* Beaufort Response to Comments, AR EPA Ex. PP-5 at PP000376.

Based on the data collected at the Badami site from August 20 through December 15, 2009 and Region 10's analysis of additional background air quality data, Region 10 concluded that the highest measured concentration collected at the Badami site of 7.1 ug/m^3 was a reasonable value to represent background concentrations at Shell's Beaufort offshore project locations in connection with the ambient air quality analysis required by 40 C.F.R. § 52.21(k). Beaufort Response to Comments, PP-5 at P000377. Region 10 also concluded that, even using in the ambient air quality analysis for the Beaufort OCS/PSD Permit the higher value of 11.4 ug/m^3 from the Wainwright monitoring site (and deemed to be a conservative representation of background concentrations for issuance of the Chukchi OCS/PSD Permit), the ambient air quality analysis for the Badami OCS/PSD Permit demonstrated that the PM2.5 NAAQS was expected to be met at the point of maximum impact. *Id.* Therefore, Region 10 concluded that a complete and adequate analysis of PM2.5 air quality in the area that would be affected by Shell's proposed operations in the Beaufort Sea could be conducted with the four months of monitoring data collected at the Badami monitoring site and that the duration requirement of 40 C.F.R. § 52.21(m)(1)(iv) was satisfied. *Id* at P000375. The AEWC Petitioners have not shown clear error in this determination.

4. The Quality Assurance and Quality Control Procedures Were Sufficient to Ensure a Complete and Adequate Analysis of Existing PM2.5 Air Quality in the Vicinity of Shell's Proposed Operations

The AEWC Petitioners argue that the data collected at the monitoring sites relied on in these permit actions do not meet the quality assurance and quality control procedures in 40 C.F.R. Part 58, Appendix A, and that Shell has therefore not met the requirements of 40 C.F.R. § 52.21(m)(3), which require that "the owner or operator of the source meet the requirements of 40 C.F.R. Part 58 [Appendix A] during the operation of

monitoring stations for purposes of satisfying paragraph (m) of this section." AEWC Chukchi Petition at 32; AEWC Beaufort Petition at 32. Importantly, AWEC did not raise the contention that it makes in its petitions—that the data were not collected pursuant to an EPA-approved QAPP that was in place prior to the commencement of the data collection—during the public comment periods on these permit. As discussed in section III above, issues and arguments raised by a petitioner that are not raised during the public comment period will not be considered preserved for review without a demonstration that they were not reasonably ascertainable at the time. *See BP Cherry Point*, 12 E.A.D. at 230; *AES Puerto Rico, L.P.*, 8 E.A.D. at 335. Although this issue was not preserved for review, as discussed below, the record shows that the monitoring stations relied on in these permit actions did meet the requirements of Appendix A during some portions of the data collection period and Region 10 took additional steps to verify the quality of the entire data set consistent with the purpose of the collocation monitoring provisions. Based on its determination that all of the PM2.5 data for the relevant periods were quality data and the fact that these data met the minimum duration requirement, Region 10 reasonably determined that the preconstruction monitoring data for each permit, as a whole, are sufficient to conduct a "complete and adequate analysis" of PM2.5 air quality in the area that would be affected by Shell's proposed operations, thus meeting the requirements of 40 C.F.R. § 52.21(m).

a. The Duration of the Collocated Data Collection was Sufficient to Meet the Preconstruction Monitoring Requirements of 40 C.F.R. § 52.21(m)

There is no dispute that the collocated PM2.5 monitors at Deadhorse were not operating during the entire PM2.5 data collection period that Shell relied on in its permit applications: beginning March 6, 2009 for Wainwright and August 20, 2009 for Badami.

The Deadhorse collocated PM2.5 monitors did not begin operation until October 23, 2009. After that, the Deadhorse PM2.5 collocated monitors operated daily in order to obtain as many collocated sample results as possible to analyze for precision and bias. At the time Region 10 issued the Chukchi and Beaufort OCS/PSD Permits, approximately 52 valid pairs had been analyzed for precision and bias. Memo from Chris Hall, EPA, to Herman Wong, EPA, dated January 7, 2010 re: Deadhorse Air Monitoring Data Review, (Deadhorse Data Review), AR EPA Ex. B-104 at B005680. This is approximately twice the goal of approximately 25 valid pairs set forth in Appendix A to be collected over the course of a year. *See* 40 C.F.R. part 58, appendix A, section 3.2.5.7.

The touchstone of the preconstruction monitoring requirements of 40 C.F.R. § 52.21(m) is whether the data supporting the permit action are sufficient for a complete and adequate analysis of air quality in the area that would be affected by the proposed source or modification. *See* 40 § C.F.R. 52.21(m)(1)(i) (stating that the purpose of the data collection is to determine whether emissions of the pollutant in question would cause or contribute to a violation of a NAAQS or any allowable increase); 40 C.F.R. § 52.21(m)(1)(ii) (with respect to any pollutant for which no NAAQS exists, the analysis shall contain such air quality monitoring data as the Administrator determines are necessary to assess ambient air quality for that pollutant in any area that the emissions of that pollutant would affect); 40 C.F.R. § 52.21(m)(1)(iv) (less than one year of data are acceptable if EPA determines a complete and adequate analysis can be accomplished with data gathered over a shorter period of not less than four months).

Section 52.21(m)(3) does require the owner or operator of a PSD source to meet the quality assurance and quality control requirements of Appendix A during the

operation of monitoring stations for purposes of satisfying the preconstruction monitoring requirements of 40 C.F.R. § 52.21(m), but that provision does not explicitly require that Appendix A requirements be met for the entire data collection period. While EPA may interpret section 52.21(m) and Appendix A to collectively call for the preconstruction monitoring data to be supported by a minimum of four months of data from collocated monitors (and the Agency may in fact prefer to apply this interpretation in many circumstances), this reading of the regulations is not compelled by their terms. In the particular circumstance here, where a permitting authority has found the requirements of Appendix A are met for part of the data collection period and otherwise demonstrated the quality of the entire data set (which includes more than the minimum four month duration), it is not clearly erroneous to interpret the duration provision in 40 C.F.R. § 52.21(m)(1)(iv) to be satisfied. The record here shows that a "complete and adequate analysis" can be conducted with the available data.

Here, there were two months of PM2.5 data at the Wainwright monitor and the Badami monitor during which the collocated PM2.5 monitors at Deadhorse were collecting data for subsequent evaluation for precision and bias. Approximately twice the recommended 25 valid pairs were analyzed for this time period. In addition, as discussed in the record for the permits, other information and quality control data indicated that the PM2.5 data collected at Wainwright from March 6 through December 7, 2009 and at Badami from August 20, 2009 through December 15, 2009 were valid and reliable, including initial calibration, subsequent quarterly calibrations, daily flow checks, quarterly independent flow check audits, log reports showing biweekly on-site inspections of the instrumentation and site, and documentation of the traceability of

maintenance and calibration in sufficient detail to allow reconstruction of instrument history. *See, e.g.*, Chukchi Response to Comments, AR EPA Ex. L-2 at L000177-178; Memo from Chris Hall, EPA, to Herman Wong, EPA, dated January 7, 2010, re: Wainwright Air Monitoring Data Review –July 1 through October 31, 2009 (Wainwright Third Quarter Data Review), AR EPA Ex. B-105 at B005687-5688; Memo from Chris Hall, EPA, to Herman Wong, EPA, dated March 31, 2010, re: Wainwright Air Monitoring Data Review –November 1 through December 7, 2009 (Wainwright Fourth Quarter Data Review), AR EPA Ex. B-121 at B005862; Memo from Chris Hall, EPA, to Mary Portanova, EPA, re: Badami Air Monitoring Data Review –August 15 through December 15, 2009, dated April 8, 2010 (Badami Data Review), AR EPA Ex. BB-20 at BB000374; Deadhorse Data Review, AR EPA Ex. B-104 at B005680. Based on the totality of available information regarding precision and bias for the PM2.5 monitoring data collected at the Wainwright and Badami monitors, Region 10 reasonably concluded that a complete and adequate analysis of the impact the Discoverer and the Associated Fleet will have on the air quality in the areas expected to be impacted by their operation can be conducted with the available preconstruction monitoring data relied on in issuing the permits.[22] Thus, the requirements of 40 C.F.R. § 52.21(m), including the requirement that monitors be operated in accordance with Appendix A, have been met. The AEWC Petitioners have not carried their burden of showing a clear factual or legal error in EPA's determination

[22] As discussed above, when a petitioner seeks review based on issues that are fundamentally technical in nature, the Board assigns a particularly heavy burden to the petitioner. *See 2007 Shell Minor Source Decision* at 57. *See 2007 Shell Minor Source Decision*, slip op. at. 47.

b. The Preconstruction Monitoring Was Conducted Pursuant to QAPPs

AEWC contends in its petitions that the preconstruction monitoring data supporting the permits were not collected pursuant to EPA-approved QAPPs in effect prior to the beginning of the data collection period and that the preconstruction monitoring requirements of 40 C.F.R. § 52.21(m) were therefore not met. EPA-approved QAPPs for each of the monitoring stations relied on in issuing these permits were in effect for each proposed permit at the time EPA proposed the permits for public comment. Wainwright QAPP, AR EPA Ex. C-351 at C003676; February 2010 Badami QAPP, AR EPA Ex. CC-152 at CC004260; Deadhorse QAPP, AR EPA Ex. C-390 at C005760. In addition, at AEWC's request, Region 10 provided AEWC with permit record documents supporting the proposed permits that included the EPA approved QAPPs for each monitoring station and showing the date of approval of each QAPP. Letter from EPA to Jonathan Jemming and Tanya Sanerib dated January 29, 2010, re: Resending Permit Application Materials in CD, AR EPA Ex. D-67; Email from Suzanne Skadowski, EPA, to Jonathan Jemming, NSB, dated March 3, 2010 re: FW: Camden Bay Proposed Air Permit Request, EPA Ex. DD-38. In commenting on the permits, AEWC raised concerns regarding the collocated monitoring for PM2.5 and specifically noted the Deadhorse QAPP in its comments. *See* Letter from AEWC, ICAS, and North Slope Borough (NSB) to Pat Nair, EPA, dated February 17, 2010, re: Shell Gulf of Mexico/Shell Offshore Inc.'s Application for Chukchi Sea Clean Air Act Permit (AEWC Chukchi Comments), AR EPA Ex. K-16 at K000252 (commenting that Shell had not been operating a collocated PM2.5 sampler, noting that the quality assurance requirements should be spelled out in a QAPP, and discussing the requirements of the existing QAPP for the Deadhorse monitor); Email from Tanya Sanerib, Crag Law Center,

to Region 10, dated March 22, 2010, re: AEWC, ICAS, and North Slope Borough Comments on Shell Beaufort Permit (AEWC Beaufort Comments), AR EPA Ex. OO-21 at OO000207 (same). But neither AEWC nor any other commenter commented that the preconstruction monitoring data supporting the permit actions was legally insufficient because it was collected prior to EPA approval of the QAPP for a given site. *See* AEWC Chukchi Comments, AR EPA Ex. K-16 at K000252; AEWC Beaufort Comments, AR EPA Ex. OO-21 at OO000207; Email from Erik Grafe to EPA Region 10 dated October 20, 2009 transmitting comments from Alaska Wilderness Coalition et al re: Proposed OCS/PSD Permit Number R10OCS/PSD-AK-09-01, AR EPA Ex. I-66 at I000295 (incorporated by reference into comments submitted by Alaska Wilderness League et al to EPA Region 10 on the Chukchi January 2010 Proposed OCS/PSD Permit, AR EPA Ex. K-12) ("There are also serious questions about the quality of the PM2.5 data Shell has collected. EPA's regulations require co-located Federal Reference Method and Federal Equivalent Method PM2.5 samplers at one of the PSD network monitoring sites").

Because no commenter raised during the public comment periods on the permits the specific issue that the QAPPs had not been approved by EPA at the time of the data collection, Region 10 did not address this issue in the Response to Comments for either permit. In addition, AEWC has failed to carry its burden to show that the issue was not reasonably ascertainable at the time AEWC commented on the permits. Nor could AEWC make this showing because it is clear from their comments that, prior to commenting on the permits, AEWC had reviewed the QAPPs and thus was aware of the

date that that the QAPPs were approved by EPA. Accordingly, this issue is not preserved for the Board's review.

In any event, the QAPP governing the collection of data at the Wainwright monitor and the operation of the equipment at the Wainwright monitoring site was approved by EPA on January 5, 2009 and thus in effect for the entire period of PM2.5 data collection. Wainwright QAPP, AR EPA Ex. C-351 at C003676. With respect to the Badami monitoring site, the data were collected pursuant to a QAPP that had been submitted by AECOM to EPA in February 2009 and contained the same substantive quality assurance and quality control procedures and standard operating procedures as the EPA-approved Wainwright QAPP.

It is true that the QAPP for the Deadhorse collocated PM2.5 monitoring site was not approved by EPA until December 18, 2009, after collection of the data relied on in these permit actions. It is also true that the corresponding amendments to the QAPPs for Wainwright and Badami to reference Deadhorse as the collocated PM2.5 monitoring site were not submitted to or approved by EPA until November 25, 2009 and February 17, 2010, respectively. The reason for the delay in the finalization of the Deadhorse QAPP and the related amendments to the Wainwright and Badami QAPPs is that the PM2.5 values collected at the stations on the North Slope in the AECOM PSD monitoring network were, in general, so low (averaging approximately 3 ug/m3 over 24 hours at the Wainwright site) that it was not possible to use the standard metrics discussed in Appendix A for evaluating the precision and bias of the Deadhorse PM2.5 monitors. *See* 40 C.F.R. part 58, appendix A, section 2.3.1.1; *see also* Chukchi Response to Comments, AR EPA Ex. L.2 at L000177; Beaufort Response to Comments, AR EPA Ex. PP-5 at

PP000384. It was therefore necessary for AECOM to develop and EPA to approve as part of the Deadhorse QAPP objectives and associated metrics that recognize and address the limited utility of the standard statistical equations prescribed and provided for in Appendix A for State and Local Ambient Monitoring Stations for PM2.5. This delay resulted in a delay in the finalization of the Deadhorse QAPP and the related amendments to the Wainwright and Badami QAPPs, but that delay did not bar Region 10 from relying on the data collected at those sites.

It is also important to note how the data collected at the monitoring site with the collocated monitors are used with respect to other PM2.5 monitors in the network. After the collocated monitoring data are collected, the data are analyzed (generally on a quarterly basis) to determine how well the values from the collocated monitors correspond to each other. *See* 40 C.F.R. part 58, appendix A, sections 3.2.5.7 and 4.3.1. The data analysis, and any resulting investigation and follow up adjustments indicated by the precision and bias results, is necessarily performed after collection of the monitoring data, both at the collocated monitors, and at other PM2.5 monitors in the network. Thus, the delay in the finalization of the QAPPs relating to the collocated monitoring at Deadhorse had no effect on the manner in which the equipment at the Wainwright and Badami monitoring stations was maintained or the data from those monitoring stations collected, and QAPPs covering equipment maintenance and data collection at those sites were in place and followed by AECOM during the entire data collection period relied on in these permit actions.

Section 2.1 of appendix A states that monitoring organizations must develop QAPPs that describe how the organization intends to control measurement uncertainty to

an appropriate level in order to achieve the objectives for which the data are collected. Section 2.1.2 states that the quality assurance policy of EPA requires every environmental data collection operation to have a written and approved QAPP prior to the start of the operation. Thus, while Appendix A requires that the operator of a monitoring site develop a QAPP, it does not require that a QAPP governing data collection and analysis be in place prior to the start of the data collection period – Appendix A, section 2.1.2, states that this is a policy.

Here, the PM2.5 data collected at the Wainwright monitoring site were collected pursuant to a QAPP that had been approved by Region 10 during the entire data collection period. The PM2.5 data collected at the Badami monitoring site were collected pursuant to a QAPP that had been submitted by AECOM to EPA, that contained the same quality assurance/quality control procedures as in the Wainwright QAPP that had been approved by Region 10, and that was ultimately approved by Region 10 without substantive change as to the Badami collection site. Region 10 and AECOM were in close consultation regarding developing and documenting precision and bias metrics for the Deadhorse collocated PM2.5 monitors for which most PM2.5 values were too low to analyze using the standard precision and bias metrics in Appendix A. Region 10 therefore determined, and continues to believe, it was appropriate to deviate from the general policy that a QAPP be in place before the start of the data collection period. Notably, the AEWC Petitioners do not contend that the quality assurance and quality control practices followed in this case were not consistent with the QAPPs that were in effect at the time each permit was proposed or finalized, nor do they assert that the precision and bias objectives and metrics developed by AECOM for evaluating PM2.5

values from the collocated monitors at the Deadhorse monitoring site are not an appropriate means of evaluating precision and bias in the AECOM network. For all of these reasons, AEWC has failed to carry its burden of demonstrating clear error in EPA's determination that the preconstruction monitoring requirements were met or that an important policy consideration is involved in the preconstruction data collection for these permits.[23]

D. The Record Adequately Demonstrates that the Proposed Source Will Not Cause or Contribute to a Violation of the PM2.5 NAAQS Due to Secondary Formation of PM2.5

Petitioners have not demonstrated clear error in the manner in which Shell and Region 10 accounted for secondary formation of PM2.5 in the ambient air quality impact analysis for this pollutant. Under the circumstances present here, where the proposed source would not be expected to contribute significantly to sulfate and nitrate concentrations in the ambient air, Region 10 reasonably determined that a conservative modeling assessment of direct PM2.5 emitted from the proposed OCS source was

[23] AEWC points to an email between AECOM and Region 10 which AEWC interprets as evidence that Region 10 had concerns about instruments at the Deadhorse site not being in agreement. AEWC Chukchi Petition at 38 and Ex. 18; AEWC Beaufort Petition at 38 and Ex. 21; Email from Chris Hall, EPA, to Tom Damiana, AECOM, dated December 9, 2009, re: Deadhorse Precision and Bias Goals (12/9/09 Precision and Bias Email), AR EPA Ex. C-368 at C005315. In fact, the email in question involved a discussion of data from a contrived data set and was being discussed to make Region 10's point that the precision and bias goals should be tighter than those initially proposed by AECOM. *See* 12/9/09 Precision and Bias Email, AR EPA Ex. C-368 at C005315 (discussion of "test" worksheet); Email from Tom Damiana, AECOM, to Chris Hall, EPA, dated December 8, 2009, AR EPA Ex. C-367 at C005313 ("Therefore I created a test worksheet where I changed the audit FRM values to maximize precision and bias values.") In fact, tighter precision and bias goals were adopted in the final QAPP. Compare Email from Tom Damiana, AECOM, to Chris Hall, dated December 8, 2009, re: Deadhorse Precision and Bias Goals, AR EPA Ex. C-367 at C005313 (referring to AECOM's "proposed goals of precision=4 and bias=6" ug/m3) *with* Deadhorse Data Analysis, AR EPA Ex. B-104 at B005681-5682.

sufficient to account for potential secondary formation of PM2.5 attributed to the permitted emissions. Furthermore, consistent with EPA guidance, Region 10 determined that secondary formation of PM2.5 from other sources was adequately reflected in the monitored background concentrations of PM2.5. Region 10 thus reasonably determined that additional analysis was not necessary to demonstrate that the source would not cause or contribute to a violation of the PM2.5 NAAQS or increments. The PSD regulations do not require that specific modeling for PM2.5 precursors be conducted and, as Petitioners acknowledge, there is not an approved model to assess secondary PM2.5 formation.

Secondarily formed particles of PM2.5 may result from the chemical reaction between emissions of oxides of nitrogen (NOx) and oxides of sulfur (SOx) and other compounds. These secondary PM2.5 emissions can contribute to the total ambient levels of PM2.5. EPA has recognized that, in most cases, representative background monitoring data for PM2.5 should be adequate to account for the secondary contribution from background sources. However, if a facility emits significant quantities of secondary PM2.5 precursors, some assessment of their cumulative impact as secondary PM2.5 may be necessary. Memorandum from Stephen D. Page, Director, Office of Air Quality Planning and Standards, March 23, 2010, Re: Modeling Procedures for Demonstrating Compliance with PM2.5 NAAQS at 9 (March 3, 2010 Page PM2.5 Memo), AR EPA Ex. B-118 at B005843. Furthermore, as explained in 40 C.F.R. part 51, appendix W, section 5.2.2.1.a, "[t]reating secondary components of PM2.5, 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." (internal citations omitted).

The EAB should defer to Region 10's expertise in the very technical determination regarding the suitability of the modeling approach used for these permit applications. *See 2007 Shell Minor Source Decision*, slip op. at. 47 (deferring to the Region's choice of model). When a petitioner seeks review based on issues that are fundamentally technical in nature, the Board assigns a particularly heavy burden to the petitioner. *Id*. In that decision, the Board further explained that when presented with conflicting expert opinions over technical issues,

> we look to determine 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.

Id. (citing *D.C. MS4*, 10 E.A.D. 323, 348 (EAB 2002); accord *NE Hub Partners*, 7 E.A.D. at 568.)

As the Board has noted,

> Where a permitting authority has responded to public comments demonstrating that it, in fact, considered technical issues raised in the public comments, we will normally not substitute our judgment for the technical expertise of the permitting authority, particularly where the petition demonstrates only disagreement among experts.

In re Cardinal FG Co., PSD Appeal No. 04-04, slip op. at 19-20 (EAB Mar. 22, 2005), 12 E.A.D. __ ; *see also 2007 Shell Minor Source Decision*, slip op. at 58-59. Here, the Region considered the Petitioners' comment that the secondary PM2.5 emissions should be modeled and explained in its response the process it was using to account for those emissions. Chukchi Response to Comments, AR EPA Ex. L-2 at L000188-189; Beaufort Response to Comments, AR EPA Ex.

PP-5 at PP000393-394. The Board should defer to Region 10's determination on this technical issue.

The technical challenges in assessing secondary formation of PM2.5 in a permitting context that are described above are similar to the challenges that EPA has faced for many years concerning ozone. The Board has previously accorded broad deference to the technical judgment of permitting authorities on assessing potential ozone formation and transport. *See Prairie State Generating Co.*, slip. op. at 133. In that case, the Board found no error in an analysis for ozone that was conducted in accordance with EPA guidelines. *Id.* at 130. Furthermore, the Board recognized that the Administrator has previously denied review in cases where the alleged error was a failure to perform a modeling analysis for which there was no method approved by the Agency. *Id.* (citing *In re Old Dominion Elec. Coop.*, 3 E.A.D. 779, 792 (Adm'r 1992).

1. Region 10's PM2.5 Air Quality Analysis Adequately Accounted for Possible Secondary PM2.5 Formation

The ambient air quality analysis for PM2.5 conducted by Region 10 in this case was rational in light of the information in the record. Region 10 considered the emissions from the proposed source and the conservative nature of the analysis of direct PM2.5 emissions. Furthermore, consistent with EPA guidance, Region 10 considered the secondary formation of PM2.5 emissions from background sources reflected in monitored concentrations of PM2.5. Finally, as discussed further below, Region 10 considered the limitations of applying regional-scale modeling techniques in single source permitting applications.

In this case, there are very little SO2 emissions from the proposed source given the requirement to use ultra-low sulfur diesel fuel (less than two tons per year as

compared to the significant emission rate of 40 tons per year), so there is likely very little contribution to ambient sulfate levels, and the NOx emissions from the project are low enough that it is unlikely to have significant nitrate contributions on shore. *See* Table 2-1 in Chukchi January 2010 Statement of Basis, AR EPA Ex. J-2 at J000081; Table 2-1 Beaufort February 2010 Statement of Basis, AR EPA Ex. NN-10 at NN000145.[24] Even if it were possible to meaningfully model the secondary PM2.5 precursor contribution at the edge of the hull where maximum PM2.5 impacts occur, the SOx and NOx contribution to PM2.5 concentrations likely would be near zero since there would be no time for the formation of secondary particulates. Therefore, the relative amount of secondary PM2.5 precursors is not significant in this instance.

Furthermore, the record includes a conservative modeling analysis for direct PM2.5 emissions. The Response to Comment documents for these permits describes a number of factors that built conservatism into the modeling assumptions for direct PM2.5 emissions. The conservatism included, for example, the use of screening meteorology to predict emission impacts from the different operating scenarios rather than using hourly meteorological data and the use of worst case maximum emission rates in the ambient impact analysis. Chukchi Response to Comments, AR EPA Ex. L-2 at L000154-155. In addition, the modeled PM2.5 emission rates for most of the Discoverer drill ship combustion sources were estimated to equal the PM10 emission rates from such sources. Because PM2.5 emissions are a subset of PM10 emissions, this is another level of

[24] The total NO2 concentrations on shore from the proposed source are less than 1.8 ug/m3 for the Chukchi project and 8.2 ug/m3 for the Beaufort project. *See* Table 5-13 in Chukchi January 2010 Statement of Basis, AR EPA Ex. J-2 at J000081; Tables 5-25, 5-26 and 5-27 in Beaufort February 2010 Statement of Basis, AR EPA Ex. N-10 at NN000145.

conservatism that impacted the modeling of PM2.5 emissions. Chukchi Response to Comments, AR EPA. Ex. L-2 at L000188.

Thus, in Region 10's technical judgment, conservatism built into these modeling assumptions mitigated against the possibility that PM2.5 emissions would cause or contribute to a violation of the NAAQS. Beaufort Response to Comments, AR EPA Ex. PP-5 at PP000393. Consequently, Region 10 reasonably concluded that the cumulative effect of the conservative assumptions had adequately accounted for the possibility of secondary formation of PM2.5 attributable to emissions from the proposed operations.

In addition, this conservative modeling accounted for secondary formation of PM2.5 from background sources through use of ambient background monitoring data. Such an approach is consistent with EPA guidance. March 23, 2010, Page PM2.5 Memo, AR EPA Ex. B-118 at B005843. Petitioners have not pointed to anything in the record that demonstrates that other sources in the area emit secondary PM2.5 precursors in quantities that would make assessment of their cumulative impact as secondary PM2.5 necessary. For the reasons discussed and addressed above in Section IV.C. regarding the PM2.5 background data, EPA determined that the PM2.5 data were sufficient to conduct a complete and adequate PM2.5 analysis.

2. Current Air Quality Assessment Models Do Not Provide Meaningful Secondary PM2.5 Formation Information for this Type of Source-Specific Permit Action

Contrary to Petitioners' assertion, air quality models are not available to meaningfully assess secondary PM2.5 emissions in this situation. In their comments, Petitioners pointed to several models that have been used to address secondary PM2.5 formation and discussed the fact that EPA's Support Center for Regulatory Atmospheric

Modeling (SCRAM) provides resources for modeling secondary PM2.5.[25] AEWC Petitioners Comments, AR EPA Ex. OO-21 at 000209-210. Petitioners also explained that the Bureau of Land Management has modeled secondary PM2.5 formation. AECW Beaufort Petition at 45; Chukchi Petition at 44. Contrary to Petitioners' claim, however, there are limitations in the tools and models currently available to address secondary PM2.5 emissions. As, explained below, it is a challenge to model secondarily formed pollutants and it is particularly challenging to model a single source contribution for pollution that is regional in nature. *See* March 3, 2010 Page PM2.5 Memo, AR EPA Ex. B-118; Beaufort Response to Comments, AR EPA Ex. PP-5 at PP000393; Chukchi Response to Comments, AR EPA Ex. L-2 at L000188. Petitioners argue that the March 23, 2010 Page PM2.5 Memo fails to support EPA's statement that there are limitations on the tools currently available to address secondary PM2.5 emissions, since it presents a way forward for addressing these emissions. AEWC Beaufort Petition at 44. The memo explicitly states, however, that "[t]he current preferred dispersion model for near-field PM 2.5 modeling, AERMOD, does not account for secondary PM2.5 formation," and the current recommendations on modeling emission inventories contained in section 8.1 of Appendix W "only address modeling of primary PM2.5 emissions." March 23, 2010 Page PM2.5 Memo, AR EPA Ex. B-118 at B005843 (emphasis added).

In short, there is not a model approved for use in individual site-specific permitting to analyze secondary PM2.5 formation. Referencing their public comments on the proposed OSC/PSD Permit, Petitioners assert that several models are available or

[25] *See* EPA's Support Center for Regulatory Atmospheric Modeling (SCRAM)- provides information regarding resources for modeling impacts of secondary PM2.5 http://www.epa.gov/ttn/scram/

have been used by other agencies to model secondary PM2.5 emissions. Petitioners AEWC Beaufort Petition at 43; AEWC Chukchi Petition at 46. However, the models that the AEWC Petitioners mention, specifically, Community Multi-scale Air Quality (CMAQ) model, Comprehensive Air Quality Model with extensions (CAMx), and Regional Modeling System for Aerosols and Deposition (REMSAD), are all regional based models. They were not designed for and have not been approved for use to support single source site-specific permitting actions such as these. As described in Region 10's Response to Comments, EPA has not yet developed and promulgated any air quality models for permitting purposes that address the secondary formation of PM2.5. Chukchi Response to Comments, AR EPA Ex. L-2 at L000189. As Region 10 further explained, the EPA-preferred air quality models for permit modeling are identified in Appendix W of 40 C.F.R. Part 51 and can be downloaded from the SCRAM website. The six models listed in Appendix W are used to determine concentration impacts from inert or nonreactive air pollutants. None of the models was designed and evaluated to explicitly estimate secondary formation of PM2.5 concentration impacts for permitting purposes. The models identified by Petitioners – CAMx, CMAQ, and REMSAD – are not included in Appendix W and are, therefore, not recommended for air permit modeling without acceptable testing and evaluation.

Petitioner AEWC alleges that the response provided in the Response to Comment is insufficient because EPA has the discretion under Appendix W, section 3.3(a) to select appropriate models for a given situation and to approve the use of non-guideline models. Petitioners further contend that because EPA used the non-guideline model ISC3-PRIME to support other parts of the air quality analysis, it is arbitrary for Region 10 to refuse to

model the secondary PM2.5 emissions by saying that only a non-guideline model is available. AEWC Petition at 46, n. 9. Petitioners point out that EPA had the authority to propose use of one of the models recommended by Petitioners as a non-guideline model.

Region 10 agrees that it does have the authority to approve non-guideline models in appropriate circumstances and recognizes that alternative models and methods could be approved for secondary PM2.5 modeling analysis and could be considered on a case-by-case basis. *See* March 23, 2010 Page 2.5 Memo, AR EPA Ex. B-118 at B005839. In this instance, however, despite Petitioner's arguments to the contrary, an air quality model is simply not currently available to meaningfully assess secondary PM2.5 emissions in this situation, as explained above. The Region therefore acted reasonably in declining to exercise its discretion to approve or use one of the models suggested by Petitioner AEWC. Models that assess secondary PM2.5 formation are designed to simulate the real world chemical formation of fine particulate that results from the chemical reaction between pollutants such as SOx, NOx, ammonia and VOC. The simulated reaction conversion rate depends on a host of factors including regional meteorological conditions, solar radiation and the specific contributions and chemical makeup of other sources influencing the airshed. Thus, a specific regional inventory and individual airshed information are required in a reactive model to simulate the particle formation. These models were developed for airshed assessment and planning purposes-not single source permitting. Because the models are designed to calculate secondary particulate matter formation based on a regional airshed, the current models generally are not sensitive enough to detect the specific secondary PM2.5 contribution from a single source of the size at issue in these permits. In addition, the application of such a model

would need to be tested and approved for use for this purpose to determine whether it could provide accurate, reliable and meaningful information for a single-source permitting action.

Petitioner does not demonstrate that the Region's determination in this regard was clearly erroneous. They simply repeat the claim made in their comments that the emissions should have been modeled. Petitioners also fail to identify an instance where the models were used for a single source permitting action. It is well established that to sustain its burden, "petitioners must include specific information in support of their allegations. It is not sufficient simply to repeat objections made during the comment period; instead, a petitioner 'must demonstrate why the [permit issuer's] response to those objections * * * is clearly erroneous or otherwise warrants review.'" *2007 Shell Minor Source Decision,* slip op. at 59 (quoting from *Steel Dynamics, Inc*., 9 E.A.D. at 710, 744 (2001)). In this case, the Petitioners have not met their burden.

Finally, the Petitioner points to prior correspondence between EPA and Shell in which EPA stated that "All PSD applications needed to fully comply with all requirements for PM2.5 direct emissions and PM2.5 precursors (SO2 and NOx)" to imply that specific modeling for secondary PM2.5 is required. AEWC Beaufort Petition at 43 (citing to the August 20, 2009, Letter from EPA Region 10 Regional Administrator, to Peter Slaiby, Shell, AR EPA Ex. C-293). Petitioners are mischaracterizing the statement in the letter. Contrary to Petitioner's characterization, the letter does not indicate that specific modeling for secondary PM2.5 emissions is required but rather it reminds Shell that it must comply with all PSD requirements including PM2.5 requirements.

For the reasons explained above, the Region properly determined that the secondary formation of PM2.5 is adequately considered in the ambient analysis conducted for these permits and that it was not necessary to model or calculate the specific amount of secondary PM2.5 formation in order for Shell to demonstrate that the PM 2.5 NAAQS was not exceeded.[26] Petitioners have not shown clear error in EPA's determination. Accordingly, review of this issue should be denied.

E. Region 10 Did Not Err in its BACT Analysis for PM2.5 and PM10

Contrary to arguments presented by the AEWC Petitioners, Region 10 did not err in its BACT analysis for PM2.5 and PM10. As Petitioners correctly note, the CAA requires a BACT limit for each pollutant subject to regulation. *See* AEWC Beaufort Petition at 46 (citing 42 U.S.C. §7475(a)(4); 40 C.F.R. § 52.21(j)(2)); AEWC Chukchi Petition at 48 (same). Region 10 has clearly complied with that requirement in this case – both the Chukchi and Beaufort permits contain BACT limits for PM 2.5 and PM 10 individually. *See, e.g.,* Chukchi OSC/PSD Permit, AR EPA Ex. L-1 at L000018 (Condition 3.4 and 3.5) (PM10 and PM2.5 BACT limits, respectively, for the Discoverer Generator Engines) and at L000019 (Condition 6.3) (requiring stack tests for both PM2.5

[26] Additionally, post construction monitoring requirements for these permits provide adequate protection to local communities and address concerns that secondary PM 2.5 emission may cause unacceptable impact. For example, the final permit includes a post-construction requirement to install and operate a FRM sampler in addition to the FEM continuous sampler required in the proposed permit. An FRM is a manual sampler that pulls air through a filter for 24 hours (midnight to midnight). The filter is then weighed in a lab and a $PM_{2.5}$ concentration is calculated based on the mass increase of the filter and the volume of air drawn through it. Use of a manual sampler will allow the filter to be analyzed for the chemical speciation of $PM_{2.5}$ constituents such as sulfates, nitrates, organics, sea salt and metals. With this data, EPA, Shell and the public will be better able to evaluate the significance of secondary formation of $PM_{2.5}$ from sources in the area. Beaufort Response to Comments, AR EPA Ex. PP-5, PP000392-393; Chukchi Response to Comments, AR EPA Ex. L-2 at L000188-189.

and PM10 emissions); *see also* Beaufort OSC/PSD Permit, AR EPA Ex. PP-2 at PP000194 and PP000196 (Conditions 3.4, 3.5 and 6.3) (same). AEWC Petitioners argue that Region 10 erred in analyzing these pollutant emissions together when conducting the BACT analysis, but EPA Region 10 is not aware of any prohibition against conducting the analysis in this way and Petitioners have not identified one. Moreover, Petitioners have not attempted to show how the particular control technologies considered for these permits would have resulted in substantially differing PM2.5 and PM10 emission levels that would have necessitated Region 10 selecting a different technology as BACT for the two pollutants. Such comparisons are at the heart of the BACT analysis, and thus are required by Petitioners alleging a deficiency in the analysis. *See Old Dominion Electric Coop.*, 3 E.A.D. at 793 (finding no error based on petitioner's lack of "specificity and clarity" because they provided "no specific comparison" of differences between the various technologies considered in the BACT analysis); *see also Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 553 (U.S. 1978) (explaining that comments regarding an Agency's BACT analysis "cannot merely state that a particular mistake was made, …[but] must show why the mistake was of possible significance in the results").

As Region 10 explained in responding to comments regarding the BACT analysis for PM2.5 and PM10,

> Particulate control devices designed to reduce PM2.5 emissions from engines are also effective on particulate matter in the larger size ranges. For example, a CDPF 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 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 Response to Comments, AR EPA Ex. L-2 at L000096. The AEWC Petitioners fail to identify any particular error in this response or the Region's BACT analysis. While they allege that Region 10's failure to "break down" its BACT analysis between PM10 and PM2.5 does not assure that "the NAAQS (and soon the PSD increments) will not be exceeded," such a statement does not allege the BACT limits themselves were selected in error. AEWC Beaufort Petition at 47; AEWC Chukchi Petition at 49.[27] As explained above, Region 10 has complied with the requirements to set BACT limits for these two pollutants, which were set after conducting an analysis of various control options. Moreover, Region 10 conducted the required air quality analysis for these pollutants and found that the operations, as permitted, would not exceed the NAAQS. *See* Chukchi Statement of Basis at 110-111; Beaufort Statement of Basis at 115-125. Petitioners have failed to identify any clear error in the PM2.5 and PM10 BACT limits that Region 10 included in these permits, and thus remand on this issue is not appropriate.

AEWC Petitioners further argue that the response to their comments regarding this issue for the Beaufort Sea OCS/PSD permit was inadequate because Region 10 referred to the response provided in the Response to Comments for the Chukchi Sea OCS/PSD permit. AEWC Beaufort Petition at 47. However, there is no prohibition against Region 10 responding in such a manner. EPA's regulations require that in

[27] To the extent the AEWC Petitioners are arguing that Region 10's analysis should have considered PM2.5 increments that are "anticipated" to be finalized this summer, *see* AEWC Beaufort Petition at 47, we simply note that Region 10's analysis complied with the standards in place at the time the permit was issued, *see* discussion *infra* at Section G and cases cited therein (discussing inapplicability of the new NAAQS for nitrogen dioxide to these permits).

responding to comments received in a PSD permit proceeding, the Region must "[b]riefly describe and respond to all significant comments." 40 C.F.R. § 124.17(a)(2). In this case, Region 10 has adhered to this requirement.

The Board has recognized that § 124.17(a)(2) "does not require a Region to respond to each comment in an individualized manner." *In re Dominion Energy Brayton Point*, 12 E.A.D. 490, 578 (EAB 2006). As Region 10 explained at the beginning of the Beaufort Response to Comments,

> Many of the commenters submitted comments on the proposed Beaufort permit that repeated the comments they previously made on the proposed Chukchi permit. In some cases the commenters specifically incorporated their prior comments on the Chukchi permit. Therefore, for consistency purposes and to reduce repetition and duplication, the Chukchi Response to Comments is incorporated by reference into this response to comments document. Generally if the same comment was made for both permits, the comment and response to it is not repeated in this document. Therefore, to the extent similar comments were also submitted on the proposed Chukchi permit the commenter should also refer to the Chukchi permit Response to Comments for the agency response to the comments and where the Chukchi Response references the Chukchi Statement of Basis the comparable section in the Beaufort Statement of Basis may be referred to.

Beaufort Response to Comments, PP-5, PP00349. Where the public submitted comments on the Beaufort permit that are significantly different from those submitted for the Chukchi permit, Region 10 did provide direct responses to those unique comments in the Beaufort Response to Comments document. *See, e.g.*, Beaufort Response to Comments, AR EPA Ex. PP-5 at PP000352 (referring to the Chukchi Response to Comments for a more detailed response to issues raised in the Beaufort comments, but also providing an additional response to specific comments regarding general opposition to the Beaufort OCS/PSD permit). While AEWC Petitioners appear to argue that Region 10 failed to lay out the specific concerns of the public comments on the Beaufort Sea permit regarding

consideration of the PM2.5 and PM10 BACT limits, they have not pointed to any particular comments regarding this issue that were raised for the Beaufort Sea permit comments that were not also raised in the Chukchi Sea permit comment. AEWC Beaufort Petition at 47. Accordingly, there is no clear error in Region 10 relying on and referring to the response to similar comments previously given in the Chukchi Response to Comments. *Cf. NE Hub Partners*, 7 E.A.D. at 583 (finding that an EPA Region was efficient, and not unresponsive, in grouping related comments together and providing one unified response).

F. Region 10 Is Not Required to Include a BACT Limit for CO2 in these Permits

Contrary to the assertions of Petitioners AEWC and CBD, Region 10 was not required to include BACT limits for CO2 in the Beaufort and Chukchi OCS/PSD permits. In issuing these permits, Region 10 applied the interpretation of "regulated NSR pollutant" that had been established by the EPA Administrator following a notice and comment process. *See* 75 Fed. Reg. 17,004 (April 2, 2010), AR EPA Ex. B-122 (noting that the interpretation contained in the final action was applicable as of March 29, 2010). Under that interpretation, a pollutant is not a "regulated NSR pollutant" for the purposes of PSD permitting requirements until such time as a provision in the CAA or a regulation adopted by EPA under the CAA that requires actual control of emissions of that pollutant takes effect. *Id.* The Administrator concluded that for GHG emissions, including CO2, PSD program requirements would apply when the GHG standards for light-duty vehicles take effect on January 2, 2011. *Id.* at 17007. Because Region 10 committed no clear error in applying the Agency's interpretation of the PSD requirements when finalizing these OCS/PSD permits, which were issued well in advance of January 2, 2011, the EAB

should not grant review of this issue. Review is also not warranted in light of "important policy considerations." 40 C.F.R. § 124.19(a)(2). While the interpretation of the regulations that determine which pollutants are subject to regulation for the purposes of the PSD program involves important policy consideration, these are not policy considerations that the EAB "should, in its discretion, review" (40 C.F.R. § 124.19(a)(2)) because the Administrator has already reviewed these policy considerations in an action of nationwide scope.

1. Region 10 Properly Relied on the EPA Administrator's Final Interpretation

The EAB is familiar with the issues relating to CO2 emissions limits in PSD permits, having heard a number of petitions challenging permits issued without such limits. *See, e.g., In re Deseret Power Electric Cooperative*, PSD Appeal No. 07-03, slip op. (EAB Nov. 13, 2008), 14 E.A.D. __; *In re Desert Rock Energy Company*, PSD Appeal Nos. 08-03, 08-04,08-05 & 08-06, slip op. (EAB Sept. 24, 2009), 14 E.A.D. __; *In re Christian County Generating, LLC*, PSD Appeal No. 07-01, slip op. (AB Jan. 28, 2008), E.A.D. __. In the key decision on the issue, the Board remanded the Deseret PSD permit and directed EPA Region 8 (the permitting authority) to "reconsider whether or not to impose a CO_2 BACT limit in the Permit" and "develop an adequate record for its decision, including reopening the record for public comment." *Id*. at 64. In so doing, the Board also said that Region 8 should consider whether interested persons and EPA would "be better served by the Agency addressing the interpretation of the phrase 'subject to regulation in an action of nationwide scope, rather than through this specific permit proceeding." *Id.* That is just what the Administrator has done in finalizing an

interpretation of when a pollutant becomes subject to regulation under the PSD program, and Region 10 relied on that interpretation in issuing these permits.

As Region 10 explained in addressing comments regarding the absence of CO2 BACT limits in the proposed permits,

> EPA has just finalized its reconsideration of when a pollutant becomes "subject to regulation" for the purposes of the PSD program. See Final Action on Reconsideration of Interpretation: Reconsideration of Interpretation of Regulations that Determine Pollutants Covered by CAA Permitting Programs, 75 Fed. Reg. 17004 (April 2, 2010). As explained in that action, EPA will continue applying the Agency's existing interpretation of the regulation that determines the scope of pollutants subject to the federal PSD program under the CAA. In a December 18, 2008 memorandum, EPA established an interpretation clarifying the scope of the phrase "subject to regulation" found within the definition of the term "regulated new source review ("NSR") pollutant." On February 17, 2009, EPA granted a Petition for Reconsideration of the December 18, 2008 memo and later issued a public notice seeking comment on alternate interpretations of the scope of this phrase. After considering the comments received in that reconsideration action, which included comments similar to those presented in the comments above, EPA decided to continue to interpret the phrase "subject to regulation" to include each pollutant subject to either a provision in the CAA or regulation adopted by EPA under the CAA that requires actual control of emissions of that pollutant. As explained in the final action on reconsideration, EPA will continue following the interpretation in the December 18, 2008 memorandum with one exception – EPA is refining its interpretation to establish that the PSD permitting requirements will not apply to a newly regulated pollutant until a regulatory requirement to control emissions of that pollutant "takes effect."

Beaufort Response to Comments, AR EPA Ex. PP-5 at PP000399-400 (citing the docket for the complete final action on reconsideration at http://www.regulations.gov, Docket ID No. EPA-HQ-OAR-2009-0597); *see also* Chukchi Response to Comments, AR EPA Ex. L-2 at L000198-199 (same). Region 10 also described how "EPA's final action on reconsideration explains that in applying this interpretation of 'regulated NSR pollutant,'

PSD permitting requirements will not apply to these emissions until at least January 2, 2011" and confirmed that date based on EPA's April 1 finalization of the light-duty vehicle rule, which included GHG emissions standards for a variety of vehicles in model years 2012 through 2016. Beaufort Response to Comments, AR EPA Ex. PP-5 at PP000400; *see also* Chukchi Response to Comments, AR EPA Ex. L-2 at L000199 (discussing anticipated finalization of the proposed light-duty vehicle rule). Region 10 then applied the Administrator's final interpretation to conclude that "since CO_2 and other GHGs are not currently a 'regulated NSR pollutant' for the purposes of PSD permitting requirements and will not be so until at least January 2, 2011, EPA does not have a legal basis to include BACT limits for CO_2 and other GHGs in the final Shell permit." Beaufort Response to Comments, AR EPA Ex. PP-5 at PP000400; Chukchi Response to Comments, AR EPA Ex. L-2 at L000199. As EPA Region 10 was only required to apply the PSD requirements in effect at the time of permit issuance, and not requirements that might come into effect once a permit has been issued, AEWC and CBD Petitioners wrongly assert that Region 10 was required to include BACT limits for CO2 emissions in the Chukchi and Beaufort OCS/PSD permits. *See* discussion *infra* at section G and cases cited therein (discussing inapplicability of the new NAAQS for nitrogen dioxide to these permits).

In finalizing the reconsideration of the PSD Interpretative Memo, the Administrator specifically stated that "the interpretation reflected in this notice (that a pollutant subject to actual control becomes subject to regulation at the time such controls take effect) is an interpretation of the language in 40 C.F.R. § 52.21(b)(50) of EPA's regulations [that] EPA <u>will</u> apply…when implementing the Federal permitting program

under 40 C.F.R. § 52.21." 75 Fed. Reg. at 17,022, AR EPA Ex. B-122 (emphasis added). In issuing these permits, Region 10 explained that it was applying the PSD air quality regulations at 40 C.F.R. § 52.21. Chukchi OCS/PSD permit at 3; Beaufort OCS/PSD permit at 10. Thus, in determining the pollutants for which BACT limits were required, Region 10 was bound by the interpretation of "regulated NSR pollutant" finalized by the Administrator on March 29, 2010, which stated that PSD permits were not required to include BACT limits for GHGs, including CO2, until January 2, 2011. 75 Fed. Reg. at 17,019, AR EPA Ex. B-122. Region 10 relied on this final interpretation when responding to comments on the issue of CO2 BACT limits, and the final permits were issued in accordance with the strategy provided in the Administrator's final action. *See* Chukchi Response to Comments, AR EPA Ex. L-2 at L000198-199; Beaufort Response to Comments, AR EPA Ex. PP-5 at PP000399-401. Thus, Region 10 committed no clear error in issuing these permits without CO2 BACT limits.

Moreover, under the framework laid out by the Board in the *Deseret* decision, it is thus completely reasonable that Region 10 would rely on the final outcome of that Agency interpretation process in issuing these OCS/PSD permits. In that decision, the EAB remanded a PSD permit to the Region 8 permitting authority because "the Region did not identify in its response to comments any Agency document expressly stating that 'subject to regulation under this Act' means 'subject to a statutory or regulatory provision that requires actual control of emissions of that pollutant.'" *Deseret*, slip op. at 35. In issuing the Chukcki and Beaufort permits, Region 10 identified the final reconsideration action as setting forth such an interpretation. In addition, the Board in the *Deseret* decision directed that Region 8 "consider whether development of a factual record to

support its conclusions may be more efficiently accomplished through an action of nationwide scope, rather than through this as well as subsequent permitting proceedings." *Deseret,* slip op. at 64. In this case, Region 10's record clearly identified its reliance on a final interpretation on this precise issue that was adopted by the Administrator and developed through a nationwide notice and comment process. Chukchi Response to Comments, AR EPA Ex. L-2 at L000198-199; Beaufort Response to Comments, AR EPA Ex. PP-5 at PP000399-400. Because the record for the permits issued by Region 10 does not suffer from the same deficiencies identified in the Board's *Deseret* decision, the Board should deny review of the issue.

AEWC also argues that the permit should be remanded because Region 10 did not provide a basis for its decision not to regulate CO2 in the Statements of Basis issued with the proposed permits, *see* AEWC Chukchi Petition at 54 and AEWC Beaufort Petition at 53, but this argument also fails to provide a basis for the Board to remand these permits to Region 10. As a general matter, EPA's permitting regulations only require that the statement of basis "describe the derivation of conditions of the draft permit and the reasons for them" – they do not require a permitting authority to explain all the conditions it is <u>not</u> including in the permit and the basis for that decision. 40 C.F.R. § 124.7. To the extent issues regarding conditions not included in the permit are raised at public comment, a permitting authority is required to address those issues – as the Region did here – but there is no requirement to explain such a position at the draft permit stage. *See* 40 C.F.R. §124.17 (specifically noting that new points may be raised during the

public comment period and that "EPA may document its response to those matters by adding new materials to the administrative record").[28]

Furthermore, since the end of 2008, the Petitioners have had actual notice of the interpretation applied by EPA regarding which pollutants are subject to regulation for purposes of the PSD program. The Administrator issued the PSD Interpretive Memorandum on December 18, 2008, which set forth the interpretation applied in this permitting action, and published notification of that interpretation on December 31, 2008. 73 Fed. Reg. 80,300, AR EPA Ex. B-54. While the Agency was reconsidering this interpretation during the time Region 10 was undertaking these permitting actions, the Administrator made it clear that the existing interpretation was not stayed pending reconsideration. Letter from Lisa P. Jackson, EPA Administrator to David Bookbinder, Sierra Club, dated February 17, 2009, AR EPA Ex. No. B-60 at B004261**;** *see also* 74 Fed. Reg. 18,886, 18,905 n. 29 (Apr. 24, 2009), AR EPA Ex. B-68. When EPA

[28] AEWC Petitioners also claim that Region 10 failed to address their comment that another PSD permit had been issued which contained a CO2 BACT analysis. AEWC Beaufort Petition at 57-58. While it is true that AEWC's comments referenced such a permit, *see* AEWC Chukchi Comments at 8 and AEWC Beaufort Comments at 9 (citing to the CO2 BACT Analysis conducted for the Hyperion Energy Center), AEWC failed to recognize that the referenced CO2 BACT analysis was voluntarily undertaken by the permit applicant and did not result in any CO2 BACT limit in the resulting permit. *See* AEWC Chukchi Petition, Ex. 35 (Hyperion Energy Center: Best Available Control Technology (BACT) Analysis for Emissions of Carbon Dioxide (March 2009)) at 2 (noting that current BACT regulations did not apply to CO2 but the analysis "assumes, *arguendo*" that they are) and 15 (concluding that no CO2 BACT limit was appropriate because "no control option more effective than the baseline has been identified as BACT for CO2 emissions" from the facility). Accordingly, that analysis did not set any precedent for consideration of CO2 BACT in these permitting actions, and the permit should not be remanded to consider this issue, especially in light of the Region's thorough explanation its decision not to include CO2 BACT limits based on the Agency's final reconsideration action. *See Dominion Energy Brayton Point*, 12 E.A.D. at 578 (noting that 40 C.F.R. § 124.17 does not require responses in each comment an individualized manner); *NE Hub Partners*, 7 E.A.D. at 583 (finding that a Region was not unresponsive in grouping related comments together and providing one unified response).

published notice of the reconsideration action, it clearly stated that "the interpretation remain[ed] in effect for the federal PSD program pending completion of this reconsideration action." 74 Fed. Reg. 51,535, 51,535 (Oct. 7, 2009), AR EPA Ex. B-85. Region 10 issued the proposal packages for the final permits at issue in this case for public comment after the October 7, 2009 notice was published and clearly stated that it was relying on the authority provided in the Federal PSD program regulations in issuing the draft Chukchi and Beaufort permit, *see* Chukchi Proposed Permit at 3; Beaufort Proposed Permit at 9, so the basis for the decision not to include CO2 limits in the proposed permit could be easily determined. In fact, the administrative records for these permits clearly demonstrate that the public, including AEWC, was aware of the Agency's position regarding PSD requirements for CO2 during the pendency of these permitting decisions. *See* AEWC Chukchi Comments, AR EPA Ex. K-16 K000211, n. 31; AEWC Beaufort Comments, AR EPA Ex. OO-21 at OO000160, n. 45; CBD Chukchi Comments, AR EPA Ex. K-14 K000200; and CBD Beaufort Comments, AR EPA Ex. OO-19 at OO000127 (all citing the Federal Register notice of the proposed reconsideration action). In fact, CBD submitted extensive comments on the issue and provided arguments as to why Region 10 should not rely upon the interpretation and those arguments are similar to the arguments raised in its present petition. *See* CBD Chukchi Comments, AR EPA Ex. K-14 at K000200 (referencing CBD's October 2009 comment letter (AR EPA Ex. I-64), which put forth those arguments in detail) and CBD Beaufort Comments, AR EPA Ex. OO-19 at OO000126-128 (setting forth similar arguments and also referencing the October 2009 comment letter). Finally, since the Administrator's final decision at the conclusion of the reconsideration action was "to continue applying the Agency's existing

interpretation of a regulation that determines the scope of pollutants subject to the Federal [PSD]," 75 Fed. Reg. at 17,004, AR EPA Ex. B-122, the Region was consistent in its application of the Agency's interpretation with regard to CO2 limits throughout the process for issuing these permits. Accordingly, there is no basis to remand the final Chukchi and Beaufort OCS/PSD permits for alleged deficiencies in its reliance on the Agency's final interpretation in issuing these permits without BACT limits for CO2 emissions.

2. The Present Challenges to the Region 10 Permits Are Not the Proper Forum for Challenging the EPA Administrator's Final Interpretation

The CBD Petition argues that this permit proceeding should be remanded because the interpretation of "regulated NSR pollutant" upon which Region 10 relied "represents a conclusion of law which is clearly erroneous," but CBD misapplies the relevant standard. CBD Petition at 14 (citing 40 C.F.R. §124.19(a)); *see also* AEWC Beaufort Petition at 52. Petitioners fail to recognize that the interpretation applied in this permitting action was not a conclusion of law made by Region 10's, but rather it was an interpretation of the EPA Administrator. As explained above, the Response to Comments for both permits explained that Region 10 was applying the interpretation contained in the Administrator's final action on reconsideration and application of that interpretation was not clearly erroneous. To the extent Petitioners are seeking to challenge the Administrator's final interpretation, this permit appeal is the "wrong forum" for such an action. *Old Dominion Electric Coop.*, 3 E.A.D. at 796 (finding a petition of a PSD permit that applied the Agency's stated strategy for implementation of a PSD program requirement did not provide a basis for attempting to challenge that strategy as a general matter). In fact, in issuing the final interpretation, the Administrator clearly stated that

any challenges to that interpretation "must be brought to the United Stated Court of Appeals for the District of Columbia Circuit," 75 Fed. Reg. at 17,023, AR EPA Ex. B-122, which the Center for Biological Diversity has done, *see Center for Biological Diversity v. EPA*, Case No. 10-1115, filed May 28, 2010 (D.C. Cir.), attached as EPA Att. F. The issue now before the Board is whether it was "clearly erroneous" for Region 10 to rely on that interpretation and the record shows that it was not.

The CBD Petition also tries to argue that "important policy considerations" warrant EAB review of this issue, *id*. at 14, but such considerations do not exist in this permit challenge. A simple examination of the CBD Petition illustrates the point – CBD's arguments focus on perceived errors and inadequacies of the final interpretation action and not the Shell permit record. *See id.* at 15-36 (citing to and disputing arguments made in the final reconsideration action, but not including one citation to the permit records at issue here). *See also* AEWC Chukchi Petition at 53-58 (containing no citations to the permit record aside from arguments already addressed in section F.1. and n. 24 of this Response, *supra*); AEWC Beaufort Petition at 53-57 (same). Accordingly, these petition arguments amount to a challenge of the Administrator's final interpretation, rather than a challenge to the adequacy of the record or the application of that interpretation under the specific circumstances here.

The EAB has consistently "refused to review final Agency regulations that are attacked based on their substantive content or alleged invalidity, both in the exercise of the Board's permit review authority and in the enforcement context." *In re Woodkiln Inc.*,7 EAD 254, 269 (EAB 1997) and cases cited therein. While the Administrator's interpretation that CBD seeks to challenge is not a substantive rule and did not result in

new regulatory text or a change to existing text, the same considerations apply in the context of this interpretation of the regulations. The interpretation provides the Agency's final view of how the existing provision in 40 C.F.R. § 52.21 should be applied and was finalized in an action of nationwide scope following the same process that was used in developing final regulations. Accordingly, the Board should decline to review that interpretation here. *See In re Lazarus*, 7 EAD 318, 352 (EAB 1997) and cases cited therein (stating that "interpretations announced through a notice and comment process are entitled to a high degree of deference").

Declining review of Petitioners' substantive challenges to the final interpretation action is consistent with the EAB's approach in the related context of final regulations. The Board has found that administrative challenges to CAA rulemakings are generally presumed to be non-reviewable and stated that entertaining "such challenges is at best discretionary, and review of a regulation will not be granted absent the most compelling circumstances." *In re Echevarria*, 5 E.A.D. 626, 634 (EAB 1994) (internal citations and quotations omitted). The Board stated that such review should be overcome only in "an exceptional case" and explained that such a case might be found when there was "an extremely compelling argument [] made as to a rule's invalidity" and provided an example of a challenged regulation that has been effectively invalidated by a court but has yet to be formally repealed by the Agency. *Id*. at 635 and n.13. The situation presented here does not rise to such an "exceptional case." The Agency's final interpretation has not been invalidated by the court, and Petitioners have an opportunity to challenge the validity of that final interpretation in Federal Court – not before the EAB. As the Administrator stated in finalizing the interpretation, it was "a nationally

applicable final action under section 307(b) of the [CAA]" and as a result "any legal challenges to this action must be brought to the United States Court of Appeals for the District of Columbia Circuit by June 1, 2010." *See* 75 Fed. Reg. 17,023, AR EPA Ex. B-122 (emphasis added); Indeed, CBD has done precisely that by filing a Petition for Review in the D.C. Circuit on May 28, 2009. *Center for Biological Diversity v. EPA*, Case No. 10-1115, filed May 28, 2010 (D.C. Cir.). *See* EPA Att. F.

While the Board need not reach the merits of Petitioners' claims regarding the proper interpretation of when regulated NSR pollutants are subject to regulation in the PSD program in order to find that Region 10 did not err in issuing the Chukchi and Beaufort OCS/PSD permits, remand to Region 10 is also unnecessary because the Agency has already addressed most of the arguments made in the Petitions during the final reconsideration action. Specifically, the following portions of the Federal Register notice (75 Fed. Reg. 17,004 (April 2, 2010), AR EPA Ex. B-122) and Response to Comments (Reconsideration of Interpretation of Regulations that Determine Pollutants Covered by Clean Air Act Permitting Programs, EPA's Response to Comments, March 29, 2010, EPA Att. G (Reconsideration Response to Comments) address the interpretative arguments raised in the Petitions:

Petitioners' Argument	**Federal Register Notice**	**Reconsideration Response to Comments**
Ambiguity of the Phrase "Subject to Regulation" (CBD Petition at 16, AEWC Beaufort Petition at 55)	75 Fed. Reg. at 17,007	Pgs. 24-41, especially 31-32 (bate stamp 000252-264, especially 000259-260)
CO2 is "Subject To Regulation" Based on Monitoring and Reporting Regulations (CBD Petition at 19, AEWC Beaufort Petition at 58)	75 Fed. Reg. at 17,009-17,011	Pgs. 56-71 (bate stamp 000284-299)

CO2 is "Subject To Regulation" Based on State Implementation Plan Regulating CO2 (CBD Petition at 28)	75 Fed. Reg. at 17,011-17,012	Pgs. 72-81 (bate stamp 000300-309)
CO2 is "Subject To Regulation" Based on the Finding that Its Emissions Endanger Public Health and Safety (CBD Petition at 30, AEWC Beaufort Petition at 58)	75 Fed. Reg. at 17,012-17,013	Pgs. 82-87(bate stamp 000310-315)
CO2 is "Subject To Regulation" Based on the EPA's Grant of a Section 209 Waiver to California (AEWC Beaufort Petition at 57)	75 Fed. Reg. at 17,013-17,014	Pgs. 88-94 (bate stamp 000316-322)
Adequacy of Policy Rationales for Final Interpretation (AEWC Beaufort Petition at 56)	75 Fed. Reg. at 17,008-17,009	Pgs. 44-55 (bate stamp 000272-283)

The CBD Petition also makes an additional interpretative argument that was not addressed in the Agency's final reconsideration, but which can easily be disposed of here. CBD argues that even under the Agency's final interpretation of regulated NSR pollutant, CO2 was "subject to regulation" when Region 10 issued these OCS/PSD permits because EPA had promulgated a Final Renewable Fuel Standards (RFS) Rule that institutes "actual control" of CO2 emissions. CBD Petition at 26. However, Congress has already specified that the issuance of a RFS Rule under section 211(o) of the CAA shall not "affect or be construed to affect the regulatory status of carbon dioxide or any other greenhouse gas…for purposes of other provisions (including section 165) of this Act." 42 U.S.C. § 211(o)(12). Accordingly, EPA's finalization of an RFS Rule that addressed fuels' lifecycle GHG emissions did not trigger PSD permitting requirements for CO2 emissions.

While the CBD Petition also makes arguments regarding EPA's "arbitrary and capricious" choice of a "takes effect" date for the timing of PSD regulation, CBD Petition at 32, these arguments do not provide the grounds for review of the OCS/PSD permits

issued by Region 10. In issuing the final interpretation of when pollutants become subject to the PSD permitting requirements, the Agency addressed public comments similar to arguments now being raised by CBD, *see* Reconsideration Response to Comments, EPA Att. G at 000323-341, and the Administrator thoroughly explained her rationale for refining the Agency's interpretation with regard to timing, *see* 75 Fed. Reg. at 17,015, AR EPA Ex. B-122. Such considerations are "hallmarks" of an Agency interpretation that the Board has stated is entitled to deference. *Deseret*, slip op. at 39. Accordingly, it was reasonable, and not in clear error, for Region 10 to apply the "takes effect" timing element of that interpretation in issuing these permits. To the extent that CBD wishes to challenge this aspect of the Agency's final interpretation, a petition to the EAB is not the proper forum, as explained above.

For the reasons explained above, Region 10 did not commit clear error in issuing the Chukchi and Beaufort OCS/PSD permits without BACT limits for CO2. Moreover, while the Administrator's final interpretation of the pollutants subject to regulation for the purposes of the PSD program involves important policy consideration, the Region's reliance on that interpretation in these permits does not. Accordingly, the Board should deny review with respect to this issue.

G. The New NO2 NAAQS Does Not Apply to Issuance of these Permits

The AEWC Petitioners contend that Region 10 committed clear legal error in issuing the permits without addressing the new hourly NAAQS for NO2 that became effective on April 12, 2010 and that Region 10 failed to provide an adequate justification for this decision. AEWC Chukchi Petition at 59-61; AEWC Beaufort Petition at 58-61. The AEWC Petitioners cite to no legal authority to support this position. Because EPA

issued the permits prior to the effective date of the new NO2 NAAQS, the NO2 NAAQS does not apply to the permit actions before the Board in these petitions.

As a general matter, permitting and licensing decisions of regulatory agencies must reflect the law in effect at the time the agency makes a final determination on a pending application. *See Ziffrin v. United States,* 318 U.S. 73, 78 (1943); *Alabama v. EPA,* 557 F.2d 1101, 1110 (5th Cir. 1977); *Dominion Energy Brayton Point, LLC,* 12 E.A.D. at 614-16; *In re Phelps Dodge Corp.*, 10 E.A.D. 460, 478 n. 10 (EAB 2002). In accordance with such interpretations, EPA has consistently interpreted the Clean Air Act and EPA's PSD regulations to generally require that each final PSD permit decision reflect consideration of any NAAQS in effect at the time the agency issues a final permit. *See* Memorandum from Stephen D. Page, Director, Office of Air Quality Planning and Standards, Re: "Applicability of the Federal Prevention of Significant Deterioration Permit Requirements to New and Revised National Ambient Air Quality Standards," dated April 1, 2010 (Page NAAQS Memo), AR EPA Ex.BB-19 at BB000368-69. The exception to this has been where, in promulgating a new NAAQS standard, EPA has "grandfathered" or exempted proposed sources or modifications meeting certain transition requirements from new PSD requirements that would otherwise have applied to them. *Id.* at BB000370; *see also* 40 C.F.R. §§ 52.21(i)(1)(x) and 52.21(i)(9)-(10).

In this case, the new NO2 NAAQS was promulgated on February 9, 2010, and became effective on April 12, 2010. *See* 75 Fed. Reg. 6474. Region 10 issued the Chukchi OCS/PSD Permit on March 31, 2010 and the Beaufort OCS/PSD Permit on April 9, 2010. Chukchi OCS/PSD Permit L-1 at L000001; Beaufort OCS/PSD Permit, PP-2 at P000156. Thus, both permits were issued prior to the effective date of the new

NO2 NAAQS. The AEWC Petitioners make much of the fact that Region 10 did not announce to the public until the following Monday (April 12) that the Beaufort OCS/PSD Permit had been issued on Friday, April 9, 2010. The final announcement and final Beaufort OCS/PSD Permit were in fact posted on Region 10's website on Saturday, April 10, 2010. In addition, the AEWC Petitioners have provided no support for its assertion that the date Region 10 announces issuance of a permit to the public is in any way legally relevant to the issue of the requirements to which the permit is subject.

The Petitioners' assertion that Region 10 did not provide an adequate justification for issuing the permits without ensuring the new NO2 NAAQS would be met is equally without merit. Region 10 explained in the response to comments for each permit that "[t]his permit, when finalized, will meet all applicable requirements in effect at the time of permit issuance. There is no requirement that a PSD permit ensure compliance with requirements that come into effect after the PSD permit has been issued." Chukchi Response to Comments, AR EPA Ex. L-2 at 135; Beaufort Response to Comments, AR EPA Ex. PP-5 at PP000404.

Finally, the Petitioners' statement that "there is precedent for sources complying with regulatory requirements prior to final agency action" (*see, e.g.*, AEWC Beaufort Petition at 60, n. 13) is not legally relevant. The BACT analysis referred to by AEWC was performed voluntarily, without a legal mandate to do so. The record states plainly that no BACT analysis was required in that case but that the source performed the analysis on its own initiative because it recognized that the political, regulatory, and legal framework "may be changing." Hyperon Energy Center Best Available Control Technology (BACT) Analysis for Emissions of Carbon Dioxide, March 2009, AEWC

Beaufort Petition Ex. 35 at 2. Here, Shell was not legally required to demonstrate compliance with the new NO2 NAAQS and did not choose to do so voluntarily. In short, the AEWC Petitioners have not demonstrated clear legal or factual error in Region 10's decision to follow a long-standing agency interpretation of the Clean Air Act under which a PSD permit is required to meet the requirements that are in effect at the time of permit issuance.[29]

As Region 10 also discussed in its response to comments on the permits, the Discoverer is considered a "temporary source" under Title V.[30] As such, Shell will be required to demonstrate compliance with the new hourly NO2 NAAQS and any applicable new NO2 increment, as well as any other newly promulgated NAAQS or increment that is then in effect, when Shell applies for a Title V operating permit for the Discoverer. This is in contrast to what would be the case if these were PSD permits authorizing construction and operation for an unlimited duration[31] of a source that was not considered a "temporary source" under Title V. Section 504(e) of the CAA requires that a Title V permit issued to a Title V "temporary source" include conditions that will assure compliance with all the requirements of the CAA at all authorized locations, "including, but not limited to, ambient standards and compliance with any applicable increment or visibility requirements under part C of title I" of the CAA. *See* 42 U.S.C. §

[29] As discussed above, EPA's interpretations should be considered "strongly persuasive" when its rulings, legal interpretations, and opinions are consistent over long periods of time. *See e.g. In re Howmet Corporation,* RCRA Appeal No. 05-04, slip op. at 14 (EAB May 24, 2007), 13 E.A.D. at ___.

[30] Any source that will move more than once during a five year period is considered a "temporary source" under Title V. *See* Memorandum to Docket A-90-33: Docketing of Detailed Responses to Comments on the Part 70 Operating Permit Regulations, AR EPA Ex. B-12 at B000823.

7611c(e). The Title V implementing regulations at 40 C.F.R. Part 70 include in the definition of "applicable requirement" for Title V temporary sources "any national ambient air quality standard or increment or visibility requirement under part C of title I of the Act but only as it would apply to temporary sources permitted pursuant to section 504(e) of the Act." 40 C.F.R. § 71.2 (definition of applicable requirement); 40 C.F.R. § 71.6(e). Because the Discoverer will be moving from location to location during the life of its Title V operating permit, Shell will be required to certify in its Title V application that it is in compliance with all applicable requirements in effect at the time it submits its application, including the new hourly NO2 NAAQS. *See* 40 C.F.R. § 71.5(c)(9). Shell is required to submit a Title V application for the Discoverer within 12 months of when the Discoverer "commences operation," 40 C.F.R. § 70.5(a), which in this case will be when the Discoverer first becomes an "OCS source."

Because the AEWC Petitioners have not shown a clear factual or legal error in Region 10's determination that the new NO2 NAAQS does not apply to these permits, review of this issue should be denied.

H. Based on the Record Before It and the Agency's Past Interpretation and Practice, Region 10's Approach to the Question of Whether to Include Emissions from Emergency Oil Spill Responses in the Potential to Emit Calculation was Reasonable

1. Region 10's Approach to Potential Emissions from Oil Spill Responses was Consistent with Past Agency Practice and Interpretation

Petitioners claim that the calculation of Shell's potential emissions is in error because it fails to include the emissions that would result from the clean-up of an oil spill pursuant to Shell's oil spill response plans, including the other vessels that Shell claims will normally remain more than 25 miles away from the drill ship (such as the oil tanker,

the barge, and the shallow water landing craft) and use of the drill ship's propulsion engine**.** Therefore, in Petitioners' view, the air quality modeling analysis fails to account for the maximum capacity of Shell's operations, in violation of clear legal requirements. AEWC Beaufort Petition at 62; AEWC Chukchi Petition at 62. However, in issuing the final permits, Region 10 explained that the calculation of these emissions is not required or even possible at this time.

The AEWC Petitioners' claim that emergency response emissions should be included in the potential to emit calculation for these permits is contrary to precedent regarding which emissions must be considered in the air quality modeling analysis. Petitioners AEWC assert that because responding to an oil spill is a necessary component of Shell's exploration plan and the clean up plans are documented and rehearsed, the emissions are within the meaning of "potential to emit" as defined in 40 C.F.R. § 52.21(b)(4). AEWC Beaufort Petition at 65; AEWC Chukchi Petition at 65. Petitioners also cite the additional language in the OCS regulation at 40 C.F.R. § 55.2, which states "[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 en route 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." AEWC Beaufort Petition at 62; AEWC Chukchi Petition at 62. Thus, Petitioners argue that the potential to emit calculation must include the emissions from the entire oil spill response fleet[32] and the

[32] The entire oil spill response fleet for the Beaufort Sea operations consists of three 34-foot work boats, one 47-foot Rozema skimmer, and either the Arctic Endeavor Barge or Point Barrow Tug,. AR EPA Ex. AA-1 at AA000041 (Beaufort Jan. 18, 2010 Application); s*ee also* AR EPA J-2 at J000104-105 (Chukchi Statement of Basis) for description of the oil spill response fleet for the Chukchi Sea operations.

Discoverer's propulsion engine(s)[33] that might occur from an oil spill response. As Petitioners describe, the response activities include moving the oil spill response fleet to the drill site, cleaning up the oil, and conducting other response activities, including in situ burning, all of which could increase air emissions. AEWC Beaufort Petition at 64-65; AEWC Chukchi Petition at 64-65. However, Petitioners' claims fail to address well established interpretations of the PSD regulations positing that speculative emissions that could be associated with possible emergency response situations are not included as allowable emissions in the required analysis for PSD permits.

In its Response to Comments, Region 10 explained that the potential emissions from oil spill response activities are properly excluded from the allowable emissions calculation in the air quality modeling analysis for the OCS source. Region 10's response pointed to existing EPA regulations which indicate that emissions from emergency or upset conditions are not considered in determining the allowable emissions for purposes of conducting the air quality analysis for PSD permits. *See* Chukchi Response to Comments AR EPA Ex. L-1 at L000159, *citing* 40 C.F.R. part 51 appendix W, section 8.12 fn. a. Similarly, since emergency response emissions from onshore facilities are not included in emission inventories for onshore permitting actions, such emissions have not been required for consideration in air quality analyses for these OCS permits. *See* 42 U.S.C. § 7627(a)(1) (requiring OCS sources to comply with the permitting requirements applicable to onshore sources); 40 C.F.R. § 55.1 (same). Moreover, 40 C.F.R. § 52.21(k) requires an ambient impact analysis to include only those

[33] To the extent Petitioners are arguing that propulsion engine emissions in general should be included in the potential to emit, see Section IV.A.3. above explaining that the propulsion engines will not be operating when the Discoverer is an OCS source and thus are not part of the OCS source.

emissions from construction and operation of the source and any secondary emissions associated with the source.

Interpreting potential to emit to exclude unpredictable and unquantifiable theoretical emissions is consistent with even the earliest decisions regarding the potential to emit provisions in the PSD regulations. In *U.S. v. Louisiana-Pacific Corp.*, 682 F. Supp. 1142 (D.Colo. 1988), the court summarized the holding in *Alabama Power Co. v. Costle*, 636 F.2d 323 (D.C. Cir. 1979), and stated:

> 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.

682 F. Supp. at 1158. Notably, the Board has previously considered whether it was necessary to include emissions associated with oil spill responses, specifically the emissions from drilling a relief well, in the potential to emit calculation to determine PSD applicability, and adhered to the view that such emissions were properly not included in the potential to emit for that permit. *2007 Shell Minor Source Decision*, slip op. at 51 (owner-requested potential to emit limit did not need to include potential emissions from relief wells).

In developing these permits, Region 10 reasonably excluded from consideration in the allowable emissions calculation for the air quality modeling analysis the theoretical emissions from pollutant-emitting activities arising from an emergency response. *See* Chukchi Response to Comments, AR EPA Ex. L-2 at L000158. As noted, the Agency's past practice and interpretation has been not to consider emissions from an emergency or

a response to an emergency as emissions from the source or support vessels, or even secondary emissions as that term is defined. EPA Region 10's decision comported with this precedent. *See* Chukchi Response to Comments, AR EPA Ex. L-1 at L000159.

Region 10's exclusion of these emissions in the air quality analysis for these permits is further supported by that fact that the exploration plan requires Shell to have a response fleet on standby *not* because an oil spill or well failure is likely, but because, for over water operations, the potential environmental consequences of a spill are significant and it is incumbent to have resources and equipment on hand to respond quickly and efficiently to such an emergency. *See* 2010 Outer Continental Shelf Lease Exploration Plan Camden Bay, Appendix H Environmental Impact Analysis, Section 4.1, p. 201 (Camden Bay Exploration Plan), AR EPA Ex. EE-1 ("The probability of a liquid hydrocarbon spill, such as diesel fuel or crude oil, is sufficiently small to conclude it would not occur during the proposed drilling program. Prudent planning and state and federal regulatory requirements nevertheless require that Shell have comprehensive spill prevention and response plans and capabilities in place."). Since the duration or extent of oil spill response activities is unknown, it is impossible to quantify in advance the potential emissions that would result from such activities.[34] Any such calculation of emissions would be purely speculative. The Board has consistently held that it "will not overturn a permit provision based on speculative arguments." *Three Mountain Power,*

[34] Furthermore, even recognizing that a small spill (of up to 48 barrels) might be reasonably probable, *see* AR EPA Ex. EE-6 (Environmental Assessment Shell Offshore Inc. 2010 Outer Continental Shelf Lease Exploration Plan Camden Bay, Alaska Beaufort Leases OCS-Y-1805-194, Appendix A Analysis of Accidental Oil Spills at A-1) (indicating a small spill during fuel transfer is possible and is reasonably foreseeable), it is still not possible to accurately estimate in advance what the resulting air emissions from clean up for such a spill would be.

LLC, 10 E.A.D. at 58; *see In re Hudson Power 14—Buena Vista*, 4 E.A.D. 258, 275 (EAB 1992); *see In re Colmac Energy, Inc.*, 2 E.A.D. 687, 689 (Adm'r 1988). Accordingly, review of this issue is not warranted at this time.

This said, the circumstances regarding the recent moratorium and DOI's review of the safety and emergency planning considerations for offshore drilling activities make it impossible to know whether or not any new requirements regarding oil spill response activities will be imposed in the future. *See* discussion at beginning of Section IV, *supra*, and EPA Region 10's Motion to Hold Matters in Abeyance. If additional measures are required, those measures may result in additional emissions that would need to be addressed in these PSD permitting actions in light of CAA permitting requirements. However, until such measures are known, it is impossible to predict whether or not any emissions associated with those new requirements would be appropriate for consideration in the air quality modeling analysis for these permits, given the requirements of the CAA and EPA's implementing regulations described above. Accordingly, Region 10's arguments above are based on the record before Region 10 when it issued these permits, with the acknowledgement that current events and future actions by the Administration could necessitate a change in this response, consistent with the views expressed in Region 10's Motion to Hold Matters in Abeyance.

2. Possible Emissions from Oil Spill Response Activities Are Not Exempt from Regulation under these Permits

The AEWC Petitioners state that these permits provide Shell with an automatic exemption for excess emissions, which is contrary to EPA's longstanding policy under the PSD program that the CAA does not allow automatic exemptions for malfunctions. AEWC Beaufort Petition at 65; AEWC Chukchi Petition at 63. Petitioners further claim

that EPA failed to address this policy when it responded to comments regarding the need to model emissions from responding to an oil spill pursuant to Shell's oil spill response plans. AEWC Beaufort Petition p. 65-66, AEWC Chukchi Petition at 64. However, Petitioners' arguments are misplaced. As a general matter, emissions associated with an oil spill response, including emissions from the ancillary oil spill response vessels or propulsion engines, are considered emissions from emergency events, not malfunctions, as explained above. Moreover, while those emissions were not included in the potential to emit calculations in the air quality modeling analysis for these permits, the emissions are not exempt from regulation under these permits.

For example, the Associated Fleet, which includes specific oil spill response vessels, is prohibited from combusting liquid fuel with a sulfur content greater than 0.0015 percent by weight. Beaufort Permit (Condition B.5), AR EPA Ex. PP-2. *See also* Beaufort Permit Condition R. (conditions relating to the Oil Spill Response Fleet regarding e.g. control equipment, annual NOx emission limits, fuel usage, operating distance from or attachment to the Discoverer, stack testing, and recordkeeping and reporting). Additionally, as these permits set out the requirements for routine operation of Shell's exploratory activities, they include conditions to ensure that the tanker, barge, and shallow water landing craft do not come within 25 miles of the Discoverer while the Discoverer is an OCS source. *See* Chukchi OCS/PSD Permit (Condition B. 8), AR EPA Ex. L-1, and Beaufort OCS/PSD Permit (Condition B-21), AR EPA Ex PP-2. Furthermore, vessels associated with the operation that are not authorized in specified tables in the permits are prohibited from approaching within 25 miles of the Discoverer,

while the Discoverer is an OCS source. *See, e.g.*, Chukchi Permit (Condition B 8.5), AR EPA Ex. L-1.

To the extent any of these (or any other) vessels must come within 25 miles of the Discover while it is an OCS source in response to emergency conditions, EPA will evaluate any such operation in accordance with EPA's excess emissions policies.[35] Chukchi Response to Comments, AR EPA Ex. L-2 at L000161. Additionally, as explained in the Response to Comments on this issue, any emissions resulting from an oil spill emergency or any response to it will also be evaluated and responded to in accord with EPA's excess emission policies. Chukchi Response to Comments, AR EPA Ex. Ex L-2 at L000131-132. *See also* Shell Beaufort Jan. 18, 2010 Application, AR EPA Ex. AA-1 at AA000045 (acknowledging that if the drilling operations during an emergency were to cause a violation, EPA would have the discretion to take enforcement under the excess emission policy).

Finally, as also explained in the Response to Comments, if an emergency oil spill does occur, section 303 of the CAA authorizes EPA to take immediate action to abate

[35] *See e.g.*, AR EPA Ex. B-5 (Memorandum from Kathleen M. Bennett, Assistant Administrator for Air, Noise and Radiation, to Regional Administrators, Regions I-X, Re: Policy on Excess Emissions During Start-up, Shutdown, Maintenance, and Malfunctions, dated September 28, 1982); AR EPA Ex. B-15 (Memorandum from John B. Rasnic, Director, Stationary Source Compliance Division Office of Air Quality Planning and Standards to Linda M. Murphy, Director, Air, Pesticides and Toxics Management Division Region 1, Re: Automatic or Blanket Exemptions for Excess Emissions During Start-up, and Shutdowns Under PSD, dated January 28, 1993); AR EPA Ex.B-23 (Memorandum from Eric Schaeffer, Director, Office of Regulatory Enforcement, to Addressees, Re: Guidance on the Appropriate 6/12/08 Meyer Memo); AR EPA Ex. B-24 (Memorandum from Steven A. Herman, Assistant Administrator for Enforcement and Compliance Assurance; Robert Perciasepe, Assistant administrator for Air and Radiation to Regional Administrators, Regions I-X, Re: State Implementation Plans: Policy Regarding Excess Emissions During Malfunctions, Start-up, and Shutdown, dated September 20, 1999).

imminent and substantial endangerments to public health, welfare, or the environment caused by the emissions of air pollutants. This “gap-filling" authority allows EPA to obtain relief in a wide range of endangerment scenarios, regardless of a pollution source's compliance or noncompliance with any provision of the Clean Air Act, and EPA can rely on that authority to the extent it is necessary to respond to the emissions generated from the response to an emergency oil spill event . Chukchi Response to Comments, AR EPA Ex. L-2 at L00163.

For the reasons explained, Region 10’s exclusion of unpredictable and unquantifiable air emissions associated with an oil spill, including emissions from the ancillary oil spill response vessels or propulsion engines, from Shell’s potential to emit calculation in the air quality modeling analysis was not, based on the record before it, and in view of relevant precedent, clearly erroneous. Review of this issue should be denied.

I. Region 10 Performed an Adequate Environmental Justice Analysis Under Executive Order 12898

The AEWC Petitioners assert that Region 10 failed to perform an adequate environmental justice analysis under Executive Order 12898, entitled “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” and that this was clear legal error. AEWC Chukchi Petition at 67; AEWC Beaufort Petition at 67.

Section 1-101 of Executive Order No. 12898, 59 Fed. Reg. 7629 (Feb. 16, 1994) (EO 12898), AR EPA Ex. F-1, instructs federal agencies to identify and address, as appropriate, “disproportionately high and adverse human health and environmental effects of [their] programs, policies, and activities on minority populations and low-

income populations . . . ." 59 Fed. Reg. 7629; s*ee also Prairie State Generating Co.*, slip op. at 164 (describing the general policy directive in EO 12898 and the EAB's implementation of it). According to AEWC, "North Slope communities have markedly higher rates of pulmonary disease, have different genetic predispositions to disease, and are substantially more vulnerable to morbidity and mortality from air pollution than the general population of the U.S." making them more susceptible to adverse health effects from PM2.5 and NOx. AEWC Chukchi Petition at 67; AEWC Beaufort Petition at 67. AEWC notes that Region 10 did not require any modeling or calculation of secondary PM2.5 before issuing the Chukchi or the Beaufort OCS/PSD permit, any demonstration of compliance with the new PM2.5 increments, or compliance with the new NO2 NAAQS; therefore, according to AEWC, "it was critical that Region 10 at the very least analyze these issues in an environmental justice analysis." AEWC Chukchi Petition at 70; AEWC Beaufort Petition at 70.

To evaluate possible effects on minority or low-income communities, EPA consults affected communities throughout the permitting process. For these permits, Region 10 engaged in extensive outreach, starting early on in the permitting process, to obtain public input, as described in the Chukchi Statement of Basis:

> EPA has recently developed the "Region 10 North Slope Communications Protocol" to support the meaningful involvement of the North Slope communities in EPA decision-making (NSCP 5/09). The development of the public participation process for this permit was guided by the NSCP and will inform the communities of the North Slope about the OCS permitting program and this proposed OCS/PSD permit. In an effort to engage the potentially affected communities early in the process, managers of EPA Region 10's air and water programs conducted early outreach on air and water permitting in May 2009 in Kotzebue and Barrow (EPA 7/27/09 Outreach Memo). EPA has held meetings and conference calls to specifically solicit input on environmental justice concerns related to this permitting action, as well as other potential OCS air permitting

> actions on the Chukchi and Beaufort Seas (ICAS 7/23/09; NSB 6/26/09 Transcript). EPA held public hearings and community meetings on the initial August 2009 proposal and has also scheduled a public hearing on this new modified permit.

Chukchi Statement of Basis, AR EPA Ex. J-2 at J000176-177; *see also* Beaufort Statement of Basis, AR EPA Ex. NN-10 at NN000251. Thus, the affected communities had extensive opportunities to raise issues of concern and, as described below, Region 10 considered this input in its evaluation of expected air emissions and possible effects on minority or low-income communities under EO 12898.

Specifically, the record shows that Region 10 carefully reviewed and documented the environmental effects of its permitting decisions by analyzing the potential air emissions associated with the exploratory drilling activity to be conducted under the permits. *See* Chukchi January 2010 Statement of Basis, AR EPA Ex. J-2 at J000133-173; Beaufort Statement of Basis, AR EPA Ex. NN-10 at NN000213-245. Region 10 analyzed expected air emissions from operation of the Discoverer and the Associated Fleet under the terms and conditions in the final permits to determine whether they would cause or contribute to a NAAQS violation. NAAQS standards are established at a level such that their attainment and maintenance will "protect the public health" "allowing an adequate margin of safety." *See* Clean Air Act § 109(b), 42 U.S.C. § 7409(b). Primary NAAQS set limits to protect public health, including the health of "sensitive" populations such as asthmatics, children, and the elderly. The D.C. Circuit recently reiterated that EPA considers sensitive populations when promulgating NAAQS. *See Coalition of Battery Recyclers Ass'n v. EPA*, 2010, No. 09-1011, U.S. App. LEXIS 9870, at *9 (D.C. Cir. May 14, 2010) ("And so this court has held that 'NAAQS must protect not only average healthy individuals, but also 'sensitive citizens' such as children, and '[i]f a

pollutant adversely affects the health of these sensitive individuals, EPA must strengthen the entire national standard.'") (quoting *Am. Lung Ass'n v. EPA*, 134 F.3d 388, 389 (D.C. Cir. 1998)).

EPA's analysis of the effects of these permits on air quality considered the maximum projected air quality impacts of the proposed projects combined with background air quality, Chukchi January 2010 Statement of Basis, AR EPA Ex. J-2 at J000167-168; Beaufort Statement of Basis, AR EPA Ex. NN-10 at NN000233-243, and determined that operation of the Discoverer and the Associated Fleet is not expected to cause or contribute to a violation of the NAAQS for any pollutant. In fact, Region 10's analysis shows that the actual predicted levels for each pollutant are well below NAAQS levels. For instance, at Point Lay and Wainwright, the villages nearest to Shell's leases in the Chukchi Sea, the total predicted impacts for SO2, NOx, and CO are less than 10% of their respective NAAQS, and the total predicted impacts for PM10 and PM2.5 are less than 78% of their respective NAAQS. Chukchi January 2010 Statement of Basis, AR EPA Ex. J-2 at J000167-168. Likewise, at Kaktovik, Badami, and Nuiqsut, onshore communities near Shell's leases in the Beaufort Sea, the total predicted impacts for SO2, NOx, and CO are less than 20% of their respective NAAQS and the total predicted impacts for PM10 and PM2.5 are less than 84% of their respective NAAQS. Beaufort Statement of Basis, AR EPA Ex. NN-10 at NN000241-243. The fact that operation of the Discoverer and the Associated Fleet will not cause or contribute to a NAAQS violation (and will actually result in levels below the NAAQS) means that it will not have a significant adverse impact, much less a disproportionately high and adverse human health or environmental effect, on minority or low-income populations. *See* Chukchi

Response to Comments, AR EPA Ex. L-2 at L000204; Beaufort Response to Comments, AR EPA Ex. PP-5 at PP000405. As further explained in the Chukchi Response to Comments, which was incorporated into the Beaufort Response to Comments:

> Numerous health studies and comments from experts and the public are used in determining the NAAQS level that will be protective of public health. After the level of a NAAQS is set, compliance with the NAAQS is used to assess health impacts. A modeled impact less than the NAAQS indicates that public health is protected, at least for the particular pollutant addressed by the NAAQS. Objections to the NAAQS themselves must be addressed during the NAAQS review process, which occurs every few years.

Chukchi Response to Comments, AR EPA Ex. L-2 at L000204.[36]

As the EAB ruled in *2007 Shell Minor Source Decision*, slip op. at 68, because EO 12898 concerns itself with effects that are "adverse," and because the Region has determined that no such adverse effects will result from the issuance of the permits in this case, the EAB need not address the AEWC Petitioners' argument regarding the sufficiency of Region 10's environmental justice analysis, citing *In re Knauf Fiber Glass, GmbH*, 9 E.A.D. 1, 16-17 (EAB 2000) (holding that, given EPA's finding of no adverse impact based on the conclusion that additional pollutants will not result in exceedance of NAAQS or PSD increment, the Board need not address numerous objections to the Region's environmental justice analysis), and *In re Ash Grove Cement Co.*, 7 E.A.D. 387, 414 (EAB 1997) (holding that, in light of the Region's determination that minority and

[36] AEWC argues that because EPA has promulgated a new hourly NO2 NAAQS since Region 10 issued these permits, that compliance with the NAAQS at the time of permit issuance is not protective. AEWC makes a similar argument with respect to EPA's proposal to establish increments for PM2.5. However, as discussed in Section IV.G above, the permits assure compliance with all NAAQS in effect at the time of permit issuance and Shell will be required to demonstrate compliance with any newly promulgated NAAQS or increments when it submits its Title V applications for these operations, which is required within one year of commencing operation.

low-income populations are outside the area principally impacted by emissions, it was not unreasonable for the Region to abstain from conducting additional analyses).

In conclusion, Region 10 has complied with the provisions of EO 12898, and its findings are not based on either a clearly erroneous finding of fact or conclusion of law, nor do the Petitioners raise an important matter of policy or exercise of discretion that warrants review. Environmental justice analysis review is warranted only when a petition demonstrates that the agency analysis is either factually or legally "clearly erroneous." *See Prairie State Generating Co.*, slip op. at 165–66; *see also AES Puerto Rico, L.P.*, 8 E.A.D. at 352 (denying review based in part on failure to show that "Region committed clear error on issues of environmental justice"). Therefore, the EAB should deny AEWC's request for review of this issue.

V. CONCLUSION

Petitioners have failed to demonstrate that EPA committed clear error and have failed to raise any important policy considerations on any of the grounds raised in the Petitions for Review. Accordingly, for the foregoing reasons, EPA respectfully requests

the EAB to deny the Petitions for Review and uphold the Chukchi and the Beaufort OCS/PSD Permits in their entirety.

Dated this 7th day of June, 2010.

Respectfully submitted,

__/s/_____
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CERTIFICATE OF SERVICE

I hereby certify that I caused a copy of the above EPA Region 10's Response to Petitions for Review, with accompanying attachments, to be served by electronic mail upon the counsel listed below.

__6/7/10_____
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