BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON DC

In re: Shell Offshore Inc. Kulluk Drilling Unit and OCS Permit No. R10OCS-AK-07-01 (Revised)	OCS Appeal Nos. 08-01, 08-02, and 08-03

RESPONSE TO PETITIONS FOR REVIEW

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INTRODUCTION

This case returns to the Environmental Appeals Board ("EAB" or the "Board") following the Board's remand of the subject permit for further proceedings. Last year, the Board rejected all but one challenge to minor air permits for portable drillships that Region 10 of the U.S. Environmental Protection Agency ("Region 10" or "EPA") issued to Shell Offshore Inc. ("SOI") after nearly 16 months of preparatory work. *In re Shell Offshore, Inc., Kulluk Drilling Unit and Frontier Discoverer Drilling Unit ("Shell Offshore Inc.")*, OCS Appeal Nos. 07-01 & 07-02, slip op. at 5, 69 (EAB, Sept. 14, 2007). The Board remanded on one narrow issue: potential aggregation of emissions from separate drill sites. EAB directed Region 10 to "provide an explanation of its rationale, supported by record evidence, for establishing a 500-meter perimeter as defining the 'stationary source.'" *Shell Offshore Inc.*, slip op. at 69.

On remand, EPA exhaustively considered the stationary source issue, compiling an extensive record by soliciting additional information from SOI, reviewing the guidance documents to which the Board referred in its decision, and reviewing relevant prior permitting. On February 20, 2008, EPA issued a draft revised minor air permit to SOI for the *Kulluk* Drilling Unit ("*Kulluk*") and a Supplemental Statement of Basis, which explained at length the proposed changes and EPA's rationale. EPA conducted a fact-intensive examination of whether SOI's planned offshore exploration wells are "proximate" and "interdependent," as required for aggregation of their emissions. EPA found that offshore exploration wells to be drilled by the *Kulluk* are (i) not proximate because they are drilled sequentially, separated by open water, cannot be physically connected, and must be located some distance apart to acquire the unique information SOI seeks, and (ii) not interdependent because the wells do not produce a tangible product, are drilled sequentially, and cannot be physically connected. Thus, EPA concluded that

multiple planned wells do not comport with the "common sense notion of a plant" required for aggregation of emissions from separate stationary sources for purposes of calculating "potential to emit." On June 18, 2008, after receiving and reviewing public comments on the draft revised permit, EPA issued its Response to Public Comments ("2008 Response to Comments"), in which EPA more fully explained its position, and issued a final OCS Permit No. R10OCS-AK-07-01 (Revised) ("Revised Permit").

Separate Petitions for Review of the Revised Permit have been filed by Bill MacClarence (docketed as OCS Appeal No. 08-01), the North Slope Borough, *et al.*[1] ("NSB," docketed as OCS Appeal No. 08-02), and Alaska Wilderness League, *et al.*[2] ("AWL," docketed as OCS Appeal No. 08-03) (collectively "Petitioners"). As this Response will demonstrate, on remand, EPA carefully considered and decided the sole issue on which the Board remanded the *Kulluk* permit. Region 10 has provided a well-reasoned definition of stationary source that is supported by record evidence and is carefully tailored to SOI's exploration activities. None of the Petitions for Review establishes that EPA's rationale for its stationary source determination is clearly erroneous or involved an exercise of discretion calling for EAB review. On the contrary, EPA's revised analysis of when the *Kulluk* is a separate stationary source (and when it is not) is supported by a substantial factual record. Petitioners' arguments amount to little more than unsupported differences of opinion. The Board should therefore deny the Petitions.

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[1] North Slope Borough is joined in its Petition for Review by the Inupiat Community of the Arctic Slope and the Alaska Eskimo Whaling Commission.

[2] Alaska Wilderness League is joined in its Petition for Review by Center for Biological Diversity, Natural Resources Defense Council, Northern Alaska Environmental Center, and Pacific Environment, Resisting Environmental Destruction On Indigenous Lands, a Project of the Indigenous Environmental Network.

FACTUAL AND PROCEDURAL BACKGROUND

On September 14, 2007, EAB denied review of two minor source air permits that Region 10 issued to SOI. The Board rejected all of petitioners' arguments except a challenge to EPA's definition of stationary source for purposes of PSD review. The permits had been issued following nearly 16 months of preparation in which SOI had worked closely with Region 10 to develop the appropriate permitting pathway for SOI's exploration of the Beaufort Sea Outer Continental Shelf ("OCS") by two drilling units, the *Kulluk* and the *Frontier Discoverer* ("*Discoverer*"). SOI planned to use the vessels to drill exploratory wells on its federal oil and gas leases in the Beaufort Sea OCS during the 2007-2009 Arctic open water seasons.

To obtain the original permits, SOI had submitted applications that satisfied the requirements of 18 AAC § 50.300(b) of the Alaska Implementation Plan and 18 AAC § 50.540(c) and (j) of the Alaska Requirements Applicable to OCS Sources[3] and provided additional information in various submissions to EPA between February and May 2007. EPA received numerous written and oral comments from the public on SOI's proposed permits. Region 10 published a response to comments on June 12, 2007 and issued the original permits on the same day.

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[3] Federal regulations governing OCS sources within 25 miles of States' seaward boundaries specifically incorporate the Alaska State Implementation Plan Requirements. 40 C.F.R. § 55.14(a), (d)(2). Although EAB's actions must comply with requirements listed in the Alaska Administrative Code, nothing in the regulations alters or limits EPA's authority to administer or enforce federal requirements under the OCS regulations or the Clean Air Act ("CAA"). 40 C.F.R. § 55.14(c)(3).

As a drillship, the *Kulluk*[4] is a portable oil and gas operation as defined by 18 AAC § 990(124), and SOI was required to obtain a minor source permit for air quality protection for the *Kulluk* pursuant to 18 AAC § 50.502(c)(2)(A). SOI was also required to obtain a minor source permit pursuant to 18 AAC § 50.502(c)(1)(B) because the *Kulluk* has the potential to emit greater than 40 tons per year of NOx. Region 10's original minor source permit authorized SOI to mobilize, operate, and demobilize the *Kulluk* at drill sites authorized by the Minerals Management Service ("MMS") in the Beaufort Sea OCS. The original minor source permit provided that drilling locations separated by less than 500 meters of open water would be considered a single stationary source and their potential emissions would be aggregated for purposes of the 250 tons per year "potential to emit" ("PTE") that makes a source "major" and triggers PSD review.

On July 16, 2007, certain of the Petitioners in the present appeal filed petitions for review of the original minor source permits. Granting SOI's request for expedited review, the Board issued a decision on September 14, 2007, that rejected all but one of the petitioners' challenges to the permits. However, the Board found that Region 10's definition of "stationary source" under the original permits was not adequately supported by the record, so the Board remanded the permits on that issue, instructing Region 10 to "provide an explanation of its rationale, supported by record evidence, for establishing a 500-meter perimeter as defining the 'stationary source.'" *Shell Offshore Inc.*, slip op. at 69. The Board made clear that Region 10 should

[4] SOI originally planned to use two drillships and, in 2007, obtained a separate permit for the *Discoverer*. *See Shell Offshore Inc.*, slip op. at 5. However, during the remand proceedings, SOI asked Region 10 to suspend further proceedings on the permit for the *Discoverer*. *See* Supplemental Statement of Basis, Attachment 2 (Shell Jan. 8, 2008 Letter to Region 10). Accordingly, the Revised Permit covers only the *Kulluk*'s activities.

address issues other than the definition of stationary source only if the Region's determination for stationary source would "have implications for other issues." *Id.* at 5 n.1.

On remand, Region 10 solicited extensive additional information from SOI to comprehensively analyze the proposed exploration activities.[5] SOI submitted additional air modeling information indicating that a more conservative separation of 1,000 meters between the *Kulluk*'s well sites would be appropriate to ensure that the National Ambient Air Quality Standards ("NAAQS") would not be violated, and therefore requested that this limitation be included in the Revised Permit. Supplemental Statement of Basis Attachment 2 (Shell Jan. 8, 2008 Letter to Region 10). Region 10 conducted a technical review and concurred. *See generally* Supplemental Statement of Basis Attachment 26 (Staff Ambient Air Quality Impact Analysis Report (Feb. 13, 2008)).

Region 10 began its decision-making process by reviewing the regulations governing stationary source determinations. Supplemental Statement of Basis at 4-5. EPA then looked at the unique facts relating to petroleum exploration and how SOI will choose well sites for its exploration activities. *Id.* at 5-8. To provide additional context, Region 10 considered various methods of petroleum exploration in the Beaufort Sea OCS and the distances between wells previously drilled offshore in the Beaufort Sea OCS, paying particular attention to wells drilled within a single prospect by a single company. *Id.* at 8-9. When considering whether potential emissions from multiple Planned Wells[6] should be aggregated for purposes of the 250 tons per

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[5] *See, e.g.*, Supplemental Statement of Basis Attachment 2 (Shell January 8, 2008 Letter to EPA Region 10); Attachment 7 (Shell November 15, 2007 Letter to EPA Region 10); Attachment 12 (EPA Region 10 January 18, 2008 Phone Record of Communication with Shell); Attachment 13 (Shell February 6, 2008 Letter to EPA Region 10); Attachment 25 (Patton Boggs February 7, 2008 Memorandum to EPA Region 10); Attachment 27 (Shell January 17, 2008 Description of Kulluk Thrustmaster HPU Control System).

[6] The Revised Permit defines a "Planned Well" as "a well selected in advance of the drilling season that is drilled to collect discrete information." Revised Permit at 4.

year "major" source classification that triggers PSD review, EPA studied the guidance materials EAB cited in its remand decision, and requested SOI's response to four questions Region 8 has used in making stationary source determinations, to develop facts specific to SOI's exploration activities that would inform EPA's decision. *Id.* at 13-14, referencing Letter from Richard Long, Director Air Program, EPA Region 8, to Lynn Menlove, Utah Division of Air Quality (May 21, 1998) ("Four Questions Guidance"). EPA also carefully considered the January 12, 2007, memorandum issued by EPA Headquarters entitled, "Source Determinations for Oil and Gas Industries," drafted by Acting Assistant Administrator William L. Wehrum, ("Source Determinations Memorandum"), which was intended to "provide guidance to assist permitting authorities in making major stationary source determinations for the oil and gas industry." Source Determinations Memorandum at 1.

In the proposed revised *Kulluk* permit, Region 10 adopted a refined definition of stationary source, introducing the concept of an Exploratory Operation, which the permit defined as "the collection of all OCS Source Activities undertaken to construct a single Planned Well and any of its associated Relief Well(s) and Replacement Well(s)."[7] Region 10 determined that all wells within an Exploratory Operation should be aggregated because they would be both proximate and interdependent. By contrast, as explained below, Region 10 properly declined to aggregate multiple Exploratory Operations into a single stationary source because it concluded

[7] "OCS Source Activities" are defined to include the emissions of the *Kulluk* while it is operating a Drill Site and air pollutant-emitting activities undertaken by support vessels when physically attached to the *Kulluk* and the *Kulluk* is occupying a Drill Site. Revised Permit at 4. A "Relief Well" is a "well drilled near and deflected into a Planned Well that is out of control, making it possible to bring the wild well under control." *Id.* A "Replacement Well" is a "well drilled near a Planned Well that has been plugged and abandoned without being drilled to its intended depth. The Replacement Well is intended to collect, from an alternate location, the same discrete information originally sought from drilling of the Planned Well." *Id.* A "Drill Site" is defined as a location on the surface of the water occupied by the *Kulluk* when it is temporarily or permanently attached to the seafloor. The *Kulluk* is considered attached when at least one anchor is attached. *Id.*

that Planned Wells in separate Exploratory Operations would be neither proximate to nor dependent on each other. This refined definition did not include a minimum-distance standard (though, as EPA noted, Planned Wells will necessarily be located more than 1000 meters apart to meet the NAAQS).

EPA received several written comments on its proposed revised permit; it also received oral comments at hearings held in three different North Slope communities on March 25-27, 2008. EPA's Response to Comments comprehensively responds to comments on the stationary source issue, further explaining the rationale for its position that each Exploratory Operation constitutes a single stationary source. On June 18, 2008, EPA issued the Revised Permit with this refined definition of stationary source as a single Exploratory Operation.

As discussed below, Petitioners cannot demonstrate that EPA's determination that each Exploratory Operation constitutes a separate stationary source is based on a clearly erroneous finding of fact or conclusion of law, or involved an exercise of discretion calling for EAB review. Accordingly, these petitions should be denied.

LAW OF THE CASE

In 2007 the Board resolved issues of first impression and made several rulings pertaining to the original permit that limit the scope of the current appeal. *See Shell Offshore Inc.*, slip op. at 69 ("Any appeal shall be limited to the issue being remanded and issues arising as a result of any modification the Region makes to its permitting decisions on remand.").

Presented with an issue of first impression, the Board concluded that Region 10 had properly defined the *Kulluk* as an OCS source only when it is attached to the seabed, and approved Region 10's decision to consider each re-attachment a new OCS source. The Board rejected the petitioners' attempt to conflate the definition of OCS source and stationary source

for purposes of PSD review, concluding that the determination of stationary source is a separate inquiry that must be made after it has been established that a source is an OCS source and subject to the OCS regulations.

Proceeding to the stationary source analysis, the Board rejected the petitioners' argument that OCS lease blocks should be considered "contiguous or adjacent properties" as defined in the PSD regulations, and held that applying such an interpretation to activities separated by hundreds of miles of open ocean "would distort the ordinary meaning of 'building, structure, facility, or installation.'" *Shell Offshore Inc.*, slip op. at 39. Nevertheless, the Board concluded that the Region had failed to adequately support its determination that wells separated by more than 500 meters would not be "proximate" for purposes of potential aggregation of emissions. On this single issue the Board remanded the permit.

Before returning the case to Region 10, the Board made several additional rulings that further limit the scope of the current appeal. It found that the Region properly calculated the *Kulluk*'s Potential to Emit ("PTE") by calculating its maximum capacity to emit, taking into account any federally enforceable physical or operational limits, including Owner Requested Limits ("ORLs"). *Id.* at 50. The Board declined to consider petitioners' argument that certain of the permit's ORLs were unenforceable because they allegedly lacked adequate monitoring requirements, finding this argument had not been adequately preserved for appeal. *Id.* at 52-53. Abiding by long-standing precedent, the Board deferred to the Region's technical conclusions, including those based on modeling of air quality impacts, finding that the petitioners did not establish clear error in background data used or in the Region's statement that emissions from emergency or upset conditions are not generally considered in air quality analysis. *Id.* at 58-60.

Finally, the Board determined that the Region had provided for adequate public participation and had fully and properly considered environmental justice issues.[8] *Id.* at 62-63, 66.

STANDARD OF REVIEW

EAB must deny these Petitions For Review unless the Petitioners can demonstrate that the permitting authority's decision to issue the permit involved (1) a "finding of fact or conclusion of law which is clearly erroneous," or (2) an "exercise of discretion or an important policy consideration which the Environmental Appeals Board should, in its discretion, review." 40 C.F.R. §§ 124.19(a)(1) and (a)(2); *see In re Teck Cominco Alaska Inc.*, 11 E.A.D. 457, 472 (EAB 2004); *In re Peabody Western Coal Company*, 12 E.A.D. 22, 32 (EAB 2005).

The history of the regulations governing review makes clear that the Board should exercise its powers of review "only sparingly," and that "most permit conditions should be finally determined at the Regional level." 45 Fed. Reg. 33,290, 33,412 (May 19, 1980) (preamble to rulemaking that established 40 C.F.R. Part 124); *Peabody*, 12 E.A.D. at 33. The Board itself has repeatedly held that agency policy favors final adjudication of most permits at the Regional level. *Peabody*, 12 E.A.D. at 33; *Teck Cominco*, 11 E.A.D. at 472; *In re Gov't of*

[8] Despite the Board's thorough analysis of these issues, Petitioner AWL claims in its petition to "preserve" the entirety of the arguments it made in *Shell Offshore Inc.* It is well-established that a permitting authority must be given the opportunity to respond to comments in the first instance. *See Shell Offshore Inc.*, slip op. at 52-53 n.55; *In re New England Plating Co.*, 9 E.A.D. 726, 732 (EAB 2001). Assuming *arguendo* that AWL's "preserved" arguments were not foreclosed by the Board's prior resolution of those arguments and its limited remand, AWL did not provide that chance to Region 10. AWL provided comments on the Revised Permit, but nowhere in its ten-page filing did it purport revive the arguments it made in front of the Board in 2007. The arguments AWL made in *Shell Offshore Inc.* were certainly "reasonably ascertainable" during the public comment period on remand this year (indeed, the Board addressed, decided, and disposed of them in its prior decision). Because AWL failed to re-articulate them to Region 10 or identify which arguments it believed were appropriate to challenge the Revised Permit, AWL failed to preserve the arguments it made in its prior petition for review and may not raise them for the first time in these proceedings in its current petition.

D.C., Mun. Separate Storm Sewer Sys., 10 E.A.D. 323, 332-33 (EAB 2002); *In re Rohm & Hass Co.*, 9 E.A.D. 499, 504 (EAB 2000).

In addition, a petitioner fails to meet its burden by merely repeating the objections 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 objections . . . is clearly erroneous or otherwise warrants review." *In re Kawaihae Cogeneration Project*, 7 E.A.D. 107, 114 (EAB 1997); *see also Shell Offshore Inc.*, slip op. at 17 ("The burden of demonstrating that review is warranted rests with the petitioner challenging the permit decision.").

Issues and arguments raised by a petitioner that are not raised during the public comment period are not preserved for review without a demonstration that they were not reasonably ascertainable at the time. *See Shell Offshore Inc.*, slip op. at 52-54; *In re BP Cherry Point*, 12 E.A.D. 209, 216 (EAB 2005); *In re AES Puerto Rico, L.P.*, 8 E.A.D. 324, 335 (EAB 1999); *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). 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; *see also BP Cherry Point*, 12 E.A.D. at 216. If an issue was not properly preserved for review, the EAB will deny review of the issue. *Shell Offshore Inc.*, slip op. at 53 n.55.

Finally, the EAB "assigns a heavy burden to petitioners seeking review of issues that are essentially technical in nature." *D.C. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. at 334; *In re City of Moscow, Idaho*, 10 E.A.D. 135, 142 (EAB 2001); *In re Town of Ashland Wastewater*

Treatment Facility, 9 E.A.D. 661, 667 (EAB 2001); *In re NE Hub Partners, L.P.*, 7 E.A.D. 561, 567 (EAB 1998), *petition for review denied sub nom. Penn Fuel Gas, Inc. v. EPA*, 185 F.3d 862 (3d Cir. 1999). 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 if the approach ultimately selected by the Region is rational in light of all the information in the record." *Peabody*, 12 E.A.D. at 34 (citing *NE Hub Partners, L.P.*, 7 E.A.D. at 567-68). 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.*; *City of Moscow*, 10 E.A.D. at 142.

ARGUMENT

I. THE REVISED PERMIT IS RIPE FOR REVIEW.

The Board issued an order dated August 19, 2008, instructing the parties to brief the issue of whether the Revised Permit is ripe for review in light of permit Condition 28. That Condition states that the permit is not effective until EPA completes consultation under the Endangered Species Act ("ESA") and makes any amendments to the permit necessary to address alternatives, conservation measures, and reasonable or prudent measures found to be advisable as a result of consultation. Section 7 of the ESA requires federal agencies to consult with the Fish and Wildlife Service[9] ("FWS") prior to undertaking an action that will make an irretrievable commitment of resources that may affect a threatened or endangered species. 16 U.S.C. § 1536(a); *see also* 50 C.F.R. § 402.14. Federally issued permits are considered "actions" for purposes of the Endangered Species Act. 50 C.F.R. § 402.02; *see In re Indeck-Elwood, LLC*,

[9] Consultation duties are split between FWS and the National Marine Fisheries Service. FWS is responsible for protecting the polar bear within the area of SOI's proposed activities.

PSD Appeal No. 03-04, slip op. at 94 (EAB Sept. 27, 2006). The Board observed that the current permit terms could change as a result of Condition 28, thus rendering these appeals premature.

Region 10 formally advised the parties on October 3, 2008, that "the Region has determined that issuance of the Shell permit is fully compliant with the ESA compliance process established by the U.S. Fish and Wildlife Service, that no changes to the existing permit terms are called for, and thus the Shell OCS permit is ripe for review." E-mail dated Oct. 3, 2008, from Kristi Smith, EPA to All Lead Counsel in OCS Appeal Nos. 08-01, 08-02, and 08-03. attached as Appendix A.

II. EPA PROPERLY DETERMINED THAT A SINGLE EXPLORATORY OPERATION CONSTITUTES ONE STATIONARY SOURCE.

During the course of the remand proceedings, EPA carefully reviewed SOI's proposed exploration activities, ultimately defining each Exploratory Operation as one stationary source.[10] EPA concluded that wells drilled within one Exploratory Operation would be both proximate and interdependent but that wells drilled in different Exploratory Operations would be neither. By defining each Exploratory Operation as a separate stationary source, EPA attempted to faithfully apply a "common sense notion of a plant" to a sequential, exploratory drilling program conducted on the open sea. Petitioners argue that EPA inappropriately changed its rationale during the remand proceedings, and made incorrect determinations on both interdependence and proximity. But Petitioners do not demonstrate why EPA's conclusions are clearly erroneous or otherwise warrant review, which it is their burden to do. EAB should therefore deny review.

[10] Note that EPA occasionally uses the terms "Planned Well" and "Exploratory Operation" interchangeably when discussing whether multiple Exploratory Operations should be aggregated. In the context of that analysis, there is no difference between the terms because each Exploratory Operation, by definition, includes only one Planned Well. Thus, a decision to aggregate or disaggregate multiple Planned Wells necessarily applies to Exploratory Operations.

A. EPA Applied to the *Kulluk* Permit a Well-Settled Framework for Analyzing Whether Multiple Sites Should Be Aggregated into a Single Stationary Source.

Regulations and over twenty years of Agency practice limit EPA's authority to aggregate multiple sites into a single stationary source. These appeals implicate just one element of the framework that EPA has established to consider aggregation: the concept of contiguous and adjacent properties. Stationary source analysis begins with EPA's PSD regulations, which the Agency carefully drafted to meet the requirements established in *Alabama Power Co. v. Costle*, 636 F.2d 323 (D.C. Cir. 1979). EPA understood the court in that case to limit EPA's discretion to aggregate different stationary sources to those situations in which (1) aggregation will reasonably carry out the purposes of PSD, (2) the multiple sources together approximate a common sense notion of a plant, and (3) the multiple sources fit within the ordinary meaning of "building," "structure," "facility," or "installation." 45 Fed. Reg. 52,676, 52,694-95 (Aug. 7, 1980). EPA drafted its PSD regulations accordingly, and they have never been substantially changed in any respect.[11] *Id.*

As the Board noted in *Shell Offshore Inc.*, the regulatory definition of "stationary source" governing SOI's exploration activities is "any building, structure, facility, or installation which emits or may emit a regulated NSR [New Source Review] pollutant." Slip op. at 34 (quoting 40 C.F.R. § 51.166(b)).[12] The phrase "building, structure, facility, or installation" has been

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[11] In November 1986, EPA promulgated a final rule restructuring and consolidating the regulations for the development of State Implementation Plans. 51 Fed. Reg. 40,656 (November 7, 1986). As part of the restructuring, EPA re-designated 40 C.F.R. § 51.24 as 40 C.F.R. § 51.166, but did not otherwise change the regulatory language. *Id.* at 40,659. Thus, the preamble to the final rulemaking for 40 C.F.R. § 51.24, and case law interpreting this regulatory provision, are applicable to the language of 40 C.F.R. § 51.166 at issue in this case.

[12] The Outer Continental Lands Act requires that OCS sources within 25 miles of a state's seaward boundary comply with the same requirements that apply to sources located in the "corresponding onshore area." 42 U.S.C. § 7627(a)(1). In this case, the corresponding onshore area is Alaska, so operators must

further defined to mean "all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control) except the activities of any vessel." 40 C.F.R. § 51.166(b)(6). It is undisputed in this case that SOI's exploration activities all belong to the same industrial grouping and are under common control. Therefore, as in *Shell Offshore Inc.*, the only issue in dispute is whether different Exploratory Operations "are located on one or more contiguous or adjacent properties."

Over time, the Agency has identified two interrelated factors to consider when determining whether sites are contiguous or adjacent: proximity and interdependence. As Region 10 acknowledged, both factors must be present to support aggregating separate stationary sources for purposes of calculating a source's Potential to Emit.

1. EPA Considers Proximity When Determining Stationary Source.

Both the *Alabama Power* opinion and the preamble to EPA's PSD regulations specifically state that proximity should be taken into account when determining whether properties are "contiguous or adjacent." *See Alabama Power*, 636 F.2d at 397 ("EPA should . . . provide for the aggregation, where appropriate, of industrial activities according to considerations such as proximity and ownership."); 45 Fed. Reg. at 52,695. The regulations do not specify precise distances, but, rather, give EPA the discretion to determine, on a case-by-case basis, when emissions from separate activities should be aggregated: "EPA is unable to say precisely at this point how far apart activities must be in order to be treated separately. The

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comply with the Alaska PSD program. The Alaska program has incorporated this definition by reference to the federal regulations. *See* ALASKA STAT. § 46.14.990(27) (2008).

Agency can answer that question only through case-by-case determinations." 45 Fed. Reg. at 52,695.[13]

The Agency has issued many guidance documents bearing on proximity in relation to interdependence,[14] but the most relevant for SOI's exploratory activities is the Source Determinations Memorandum because it is the only one to directly address how aggregation decisions should be made with respect to the unique circumstances of the oil and gas industry. EPA Headquarters intended the Source Determinations Memorandum "to provide guidance to assist permitting authorities in making major stationary source determinations for the oil and gas industry," and explicitly stated that offshore operations were included in its analysis. Source Determinations Memorandum at 1; *id.* at 1 n.1. The Memorandum discusses facts specific to the oil and gas industry, noting that even when activities are under common control and share an industry group number, "the unique geographical attributes of the oil and gas industry necessitate a detailed evaluation of whether the activities are contiguous and adjacent." *Id.* at 2. The

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[13] The preamble to the regulations continued: "One commenter asked, however, whether EPA would treat a surface coal mine and an electrical generator separated by 20 miles and linked by a railroad as one 'source,' if the mine, the generator and the railroad were all under common control. EPA confirms that it would not." 45 Fed. Reg. at 52,695.

[14] *See, e.g.*, Letter from Winston A. Smith, Director, Air, Pesticides & Toxics Management Division, Region 4, to Randy C. Poole, Mecklenburg County Department of Environmental Protection (May 19, 1999) ("Williams Energy Guidance") (bulk gasoline terminals less than a mile apart are nevertheless not aggregated because they lack interdependence); Letter from JoAnn Heiman, Region 7 Chief Air Permitting and Compliance Branch to James Pray (Dec. 6, 2004) ("Grain Elevators Guidance") (aggregation decisions are made based on proximity and interdependence and may take into account a physical connection between the sites); Letter from Richard Long, Director Air Program, Region 7, to Denise Myers, Colorado Division of Public Health and Environment (Apr. 20, 1999) ("American Soda Guidance") (a mine and its processing plant 35-40 miles apart should nevertheless be aggregated because they were connected by a 44-mile pipeline that transfers material between the sites and showed strong interdependence between the sites); and Letter from Cheryl Newton, Chief Air Permits and Grants Section, Region 5, to Donald Sutton, Illinois Environmental Protection Agency (Mar. 13, 1998) ("Acme Guidance") (two steel facilities separated by 3.7 miles, encompassing a lake, river, two landfills, and a interstate highway, should be aggregated because they operate as the functional equivalent of a single steel mill). For ease of reference, all EPA Guidance documents cited in this pleading are summarized in Appendix B.

Memorandum notes that well sites can be separated from processing plants by hundreds of miles and operators often do not control access to the land between drill sites.

The Memorandum posits that "proximity can be the most informative factor in determining whether two activities are contiguous and adjacent," stating:

> We do not believe that it is reasonable to aggregate well site activities, and other production field activities that occur over large geographic distances . . . into a single major stationary source. Aggregation of such geographically-dispersed activities defies the concept of contiguous and adjacent. While the land mass may be "contiguous and adjacent" when viewed as a whole, the limited portion of the properties physically associated with the pollutant-emitting activity are not necessarily nearby, connected, or in any way proximate to each other.

Id. at 3-4.

Elaborating, the Memorandum states that a permitting authority can consider two surface sites to be in "close proximity" if they are physically adjacent or separated by no more than a short distance, such as a highway or a city block. *Id.* at 4-5. Some states, the Memorandum notes, apply a rule that emissions from activities separated by more than ¼-mile per se should not be aggregated. *Id.* at 5 n.16.

The Memorandum concludes, consistent with prior EPA guidance, that sources may properly be aggregated only where (a) they are in close proximity *and* (b) consideration of other factors, i.e., operational dependence, supports aggregation. *Id.* at 5. Thus, the Memorandum provides an invaluable starting place for EPA decision-makers' case-by-case consideration of whether disparate oil and gas facilities should properly be aggregated.

2. EPA Considers Interdependence When Determining Stationary Source Aggregation.

EPA's guidance documents also instruct permitting authorities to look at the degree to which sites are interdependent when making stationary source determinations. Region 10 began its analysis of interdependence with four groups of questions drafted by Region 8 to develop

facts relevant to the analysis. *See* Supplemental Statement of Basis at 13-15, applying the Four Questions Guidance. The questions, which other EPA Regions also have used,[15] probe various facets of interdependence, asking whether the sites of the facilities were chosen to enable the operation of the two facilities to be integrated, whether materials will be routinely transferred between facilities, whether managers or workers will frequently shuttle between facilities, and whether the production process will be split between the facilities. Only when the answers to these questions indicate that two or more facilities have are interdependent should the permitting authority consider aggregation.

Other guidance documents emphasize the importance of determining whether one facility is to finish a product begun by the other. Most dramatically, the two steel facilities discussed in the Acme Guidance, *see* note 14, *supra*, functioned as a single integrated steel mill, with the coke ovens and blast furnace in one facility and the basic oxygen furnace, casting, and hot strip mill at the second facility. Similarly, EPA has generally concluded that sites are interdependent when the tangible product—e.g., processed minerals or steel—from one site must be finished at the second site.[16] EPA has also aggregated sites where one site is a support facility for the other in the manufacture of a tangible product.[17]

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[15] *See, e.g.*, Williams Energy Guidance at 5; Letter from Douglas E. Hardesty, Region 10, to John Kuterbach, Alaska Department of Environmental Quality (Aug. 21, 2001) at 5 ("Forest Oil Guidance").

[16] *See* American Soda Guidance, *supra* note 14 (product from the mine treated at a processing plant which was connected to the mine by a pipeline); Letter from Joan Cabreza, Office of Air Quality, Region 10, to Andy Ginsberg, Oregon Department of Environmental Quality (Aug. 7, 1997) (two plants make metal castings, but the castings from both plants must be finished only at one of the plants) ("Metal Castings Guidance").

[17] *See* Letter from Robert Kellem, Acting Director, Information Transfer & Program Integration Division, OAQPS, to Richard Long, Region 7 (Aug. 27, 1996) (brewery and the landfarm where its wastewater is disposed are aggregated because the disposal of wastewater is an integral part of brewery operations) ("Anheuser-Busch Guidance").

EPA's task on remand was to provide record support for its definition of stationary source for SOI's exploratory activities and its determination that these sources should not be aggregated for calculation of PTE. The guidance documents discussed above properly outlined the parameters of Region 10's analysis.

B. EPA's Proximity Analysis Supports Its Conclusion that Each "Exploratory Operation" Constitutes a Separate Stationary Source.

EPA must show that multiple sources are *both* proximate *and* interdependent to support a decision to aggregate them. In this case EPA reasonably determined that individual Planned Well sites are not proximate by relying on at least three factors "unique to this situation." 2008 Response to Comments at 59. First, SOI "does not control the open waters between the exploratory drilling sites." *Id.* Second, there are no "physical connections" bridging the distance between drill sites.[18] *Id.* Third, the site locations are chosen "such that the distance is far enough apart to have distinct information gathering value." *Id.* In addition to these findings, which are sufficient to support EPA's decision, the Agency properly considered the impact of permit condition 16.1, which requires a 1000-meter separation between Exploratory Operations to protect air quality. Revised Permit Condition 16.1; 2008 Response to Comments at 59. Finally, Region 10 relied on the only EPA guidance that specifically addresses proximity determinations in the oil and gas industry, the Source Determinations Memorandum. This analysis provides ample support for EPA's determination that Exploratory Operations are not proximate.

Attacking EPA's proximity analysis in both the Supplemental Statement of Basis and the 2008 Response to Comments, NSB claims that EPA used only two factors to reach its conclusion that there was a lack of proximity between drill sites: the required 1000-meter separation and the

[18] Region 10 included the lack of a physical connection in the analysis of both proximity and interdependence.

inherent distance between exploratory drill sites. NSB Petition at 23-26. This claim is not consistent with the record.

1. EPA Properly Relied on the 1,000-Meter Separation Requirement.

EPA used the 1,000-meter separation as one component of its case-by-case, fact-specific inquiry, but it did not rely solely on this distance in making its proximity determination. NSB erroneously alleges that EPA (1) merely offers the same rationale to justify the 1000-meter separation as that offered to the Board last year; (2) uses an amorphous "practical constraint" rationale; and (3) bases its proximity determination on air quality concerns. NSB Petition at 24-26.

EPA's consideration of proximity and the required distance between Exploratory Operations, and the record compiled in support of its source determination, is not the same as that which was before the Board previously. As EPA noted in the Supplemental Statement of Basis, permit condition 16.1 prohibits SOI from locating Planned Wells within 1,000 meters of each other, serving as a "practical constraint" to begin the proximity inquiry. Supplemental Statement of Basis at 15 n.13. This limit is an appropriate consideration because it is an enforceable permit condition that is supported by the record and necessary to comply with the NAAQS.

The fact that a 1,000-meter separation is required for SOI's NAAQS compliance demonstration does not render this required separation irrelevant to evaluating proximity. It is true that air quality considerations have not traditionally been included in the factors to which the Agency has looked when making source determinations. However, regardless of the basis for the requirement, the 1,000-meter separation establishes a clear, enforceable proximity limit that serves as an obvious consideration in analyzing this issue because it represents the minimum

distance between two sequential Exploratory Operations under the permit. EPA evaluated all of the facts relevant to proximity, including this one, to determine that individual Planned Wells will not be proximate, certainly not when separated by this distance, under the definition set forth in the Source Determinations Memorandum.

2. The Three Facts Cited by Region 10 Support the Conclusion that Exploratory Operations are not Proximate.

EPA's conclusion that individual Exploratory Operations are not proximate was properly based on three findings. This analysis aptly considered the specific facts of SOI's exploratory operations. NSB's critique mischaracterizes the nature of EPA's fact-specific, case-by-case determination and should be rejected.

a. Open Water

Each Exploratory Operation will stand alone in the Beaufort Sea, surrounded on all sides by open water. In its necessarily fact-specific aggregation analysis, Region 10 reasonably identified the open Arctic water between temporary drilling sites as an important factor distinguishing SOI's exploratory activities from cases involving onshore sources. 2008 Response to Comments at 59-60.

Moreover, it is undisputed that SOI does not control the open water between the drilling sites, which will be at least 1,000 meters (approximately 0.6 miles). As Judge Stein stated during oral argument on the original permit, "these leases don't preclude . . . vessels from crossing into the sea . . . [T]hey can sail on the open water in the same area where Shell is drilling." Hearing Proceedings, OCS Appeal Nos. 07-01 and 07-02 ("Transcript") at 44. Also important is the fact that the 1,000-meter separation is not "between" sites *per se* because the Planned Wells will be drilled sequentially, not simultaneously: no two Exploratory Operations will exist at the same time. Thus, the separation between sites will be both physical and temporal.

b. Lack of a Physical Connection

EPA's past practice has consistently treated the lack of a physical connection between sources as a critical factor in determining whether they are contiguous or adjacent. *See, e.g.*, Guidance cited in note 14, *supra*. A physical connection is a road, pipeline, or similar structure linking two sources. Williams Energy Guidance at 2. Here, the record supports EPA's conclusion that there is no physical connection between the Exploratory Operations at issue here. Given that only the *Kulluk* will be used in this exploratory program, such a physical connection between different drill sites is logically impossible.

In some past permitting decisions, stationary source determinations have hinged upon whether such a connection existed. The Williams Energy Guidance provided by Region 4 offers the most factually analogous situation. There, two terminals located less than a mile from each other were considered separate sources because, among other reasons, "they are not physically connected by a structure such as a pipeline dedicated to the transfer of material or energy between the two terminals." *Id.* at 6. By contrast, separate sources have been aggregated when such a physical connection is present. A pipeline connecting a brewery and landfarm served as the basis for Region 8 to aggregate facilities in 1998. Anheuser-Busch Guidance. In the American Soda Guidance, EPA expressly identified a dedicated rail link between a mine and a processing plant as critical to proximity. Finally, in yet another permitting context, Region 6 noted that natural gas from one facility was physically transported for processing at a second facility, supporting the notion that they were one source. Letter from William B. Hathaway, Director, Air, Pesticides and Toxics Division, Region 6, to Allen Eli Bell, Texas Air Control Board (Nov. 3, 1986).

c. Inherent Distance Between Planned Wells

The costs associated with Arctic exploration, in combination with the short drilling season, make it critical that SOI avoid duplicative drilling—each well must seek distinct information. NSB acknowledges that EPA considered the fact that SOI "chooses the site locations such that the distance is far enough apart to have distinct information gathering value." 2008 Response to Comments at 59. As stated in the Supplement Statement of Basis, wells "must be located sufficiently far enough apart so as to collect different pieces of discrete information about the prospect." Supplemental Statement of Basis at 12. However, NSB ignores information in the record and makes unsubstantiated claims that Planned Wells will, in fact, be separated by short distances, even claiming that there is "no minimum distance" between wells. NSB Petition at 27. Beyond the obvious fact that the permit requires that sequential Exploratory Operations to be separated by 1,000 meters (0.6 miles), the record supports EPA's conclusion that Exploratory Operations would in any event be located sufficiently far apart during a given drilling season to acquire unique information.

The operational constraints of drilling in the Beaufort Sea indisputably require SOI to avoid duplicative drilling. Record evidence supports the fact that "[i]n exploration drilling, you want to be far enough away from a previous drill site so as to produce information about the reservoir that is distinguishable from existing data." Supplemental Statement of Basis Attachment 12 (Record of Phone Conversation, Jan. 18, 2008). Further, EPA found, based on exhaustive information provided by SOI, that the Beaufort Sea's short, weather-dependent drilling season demands that SOI choose well sites that provide truly unique information. Supplemental Statement of Basis at 8. SOI explained that "[g]iven the high operating costs and the large area of leases to evaluate, each exploration well drilled in a given season will typically

target a unique potential hydrocarbon accumulation."[19] In fact, "[t]he only motivation for drilling a well nearby an existing well is on the occasion of requiring either a relief well or a replacement well." Supplemental Statement of Basis Attachment 12 (Record of Phone Conversation, Jan. 18, 2008). (Under the terms of the current permit, a Relief or Replacement Well, if drilled, would of course be aggregated with the original Planned Well.)

To augment information from SOI, EPA also examined previous drilling in the Beaufort Sea, noting that the distance between well sites has been much larger than the 1,000-meter limit included in the permit. The historical evidence shows significant separation between well sites in the Beaufort Sea, including wells drilled by the same company in a single prospect having a minimum separation of 0.8 miles, providing further justification for EPA's conclusion that SOI's exploration wells would not properly be considered proximate for purposes of emissions aggregation. Supplemental Statement of Basis at 9.

EPA's consideration of these factors is reasonable and well-supported, requiring rejection of the Petitions.

3. EPA Properly Followed the Source Determinations Memorandum.

EPA explicitly relied, in part, on the Source Determinations Memorandum in reaching its conclusion that Exploratory Operations are not proximate. Such reliance was proper because, as noted by EPA, the Memorandum provides aggregation guidance for "oil and gas operations on land, in state waters, and on the federal Outer Continental Shelf (OCS)." Source Determinations Memorandum at 1; *see also* 2008 Response to Comments at 60. Although NSB superficially attacks the Memorandum for its "sweeping generalization," NSB Petition at 28, this is the only

[19] "SOI's Response to EPA's Request for Additional Information Regarding Shell Offshore Inc.'s Proposed Exploratory Drilling Operation in the Beaufort Sea," submitted to EPA Region 10, November 15, 2007 ("SOI Response"), at 7.

guidance document published by EPA specifically addressing the oil and gas industry, and it contains a clear and well-supported basis for determining proximity. Consequently, EPA properly considered the Memorandum when making its fact-specific determination that multiple Exploratory Operations to be conducted by the *Kulluk* are not proximate.

Pursuant to the Memorandum, each individual surface site[20] should be considered a source for oil and gas operations on the OCS absent a finding of close proximity. EPA's decision to consider the Exploratory Operations as separate sources is reasonable in light of the Source Determinations Memorandum's definition of "close proximity." The Memorandum suggests that surface sites are not in close proximity if they are separated by more than "a short distance, [such as] across a highway [or] separated by a city block." Source Determinations Memorandum at 4. SOI's Exploratory Operations, i.e., the *Kulluk* drill sites, will be at least 1,000 meters apart, which is clearly not a "short distance" within the meaning of the guidance. Further, the Memorandum discusses a standard applied in some Southern states under which sources are not aggregated unless they are located less than ¼-mile apart. *Id.* at 5 n.16. Under this standard, of course, separate exploration sites under the *Kulluk* permit should not be aggregated, as the distance between the sites will be, at minimum, more than double this ¼-mile threshold.

EPA's determination that, under all the facts and circumstances, individual Exploratory Operations are not proximate is fully supported in the record and not clearly erroneous.

[20]A "surface site" is defined as "any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed." 40 C.F.R. § 63.761. In this case, the surface site is the drill site, i.e., the area on the water surface occupied by the *Kulluk* at an individual Planned Well site.

C. EPA's Interdependence Analysis Supports Its Conclusion that Each Exploratory Source Constitutes One Stationary Source.

EPA concluded that *neither* its proximity analysis *nor* its interdependence analysis supported aggregation of multiple Exploratory Operations. EPA concluded that each Exploratory Operation is independent, rather than operationally dependent on other sites, and should not be aggregated. "Operational dependence is found when each activity relies on the other for its operation – i.e., the activities at one facility are required to support the operation at the other." 2008 Response to Comments at 61; *see also* Source Determinations Memorandum at 3. Using this definition to guide its determination, EPA identified three important features that distinguish SOI's operations from other situations in which aggregation was appropriate. First, the wells will not produce a tangible product such that one well would produce a product and another well would further process it. 2008 Response to Comments at 62. Second, the planned drilling sites will be sequential; no two wells will be in existence at any given time. *Id.* Finally, there is no possibility of a physical connection between Exploratory Operations that could support an interdependent relationship between multiple sites. *Id.* As discussed below, the facts clearly distinguish SOI's operations from prior operations in which EPA has found that operations are interdependent.

Rather than attacking these persuasive distinguishing features directly,[21] NSB attacks other elements of EPA's decision, alleging that: (1) the wells are "intimately interrelated," NSB Petition at 31; (2) past permitting decisions weigh in favor of aggregation, *id.* at 36; (3) EPA changed its understanding of the "product" to be produced from the wells in a way that

[21] NSB alleges that these are "new criteria" that EPA added late to the process; however, as discussed in section II.D.2., *infra*, EPA has consistently identified these features of SOI's activities as ones that set it apart and supported the conclusion that SOI's activities do not comport with a common sense notion of a plant.

predetermined the issue, *id.* at 35; (4) the sharing of equipment and crew is dispositive and supports the "common sense notion of a plant," *id.* at 34; and (5) the permit "has placed no limits on the number or type of planned wells SOI can drill under the permit," *id.* at 31.[22] None of these claims successfully rebuts EPA's reasonable determination that individual Exploratory Operations are not interdependent because they do not produce tangible product, they will be drilled sequentially, and they cannot be physically connected. EPA's determination that each Exploratory Operation is operationally independent is fully supported in the record and not clearly erroneous.

1. Individual Exploratory Operations Operate Independently.

The record supports EPA's conclusion that each exploration well that SOI proposes to drill with the *Kulluk* is necessarily an independent, self-sufficient operation with a distinct purpose. First, the information generated at each well is truly unique. EPA found, based on information provided by SOI, that the Beaufort Sea's short, weather-dependent drilling season demands that SOI choose well sites that provide truly unique information about the prospect. Supplemental Statement of Basis at 8. "In exploration drilling, you want to be far enough away from a previous drill site so as to produce information about the reservoir that is distinguishable from existing data." *See, e.g.,* Supplemental Statement of Basis, Attachment 12 (Record of Phone Conversation).

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[22] AWL separately argues that SOI's "exploration project is an enterprise designed not only to discover reservoirs of oil, but also to determine whether and how to produce oil from discovered reservoirs." AWL Petition at 31. Thus, they claim, the *Kulluk* "in its various locations" comports with the "notion of a 'plant.'" *Id.* at 34. AWL's logic is strained. The "notion of a 'plant'" with which all aggregation decisions must comport is a *common sense* notion of a plant. *See Alabama Power*, 636 F.2d 323. It defies common sense to equate a source that materializes at two to three sequential locations during only one season a year, obtaining information that at some future point might aid in developing a company's long-term strategy but that produces no tangible product, with a "plant" of the sort referenced by the D.C. Circuit when it limited EPA's authority to aggregate sources under the Clean Air Act.

Second, each well is independently reviewed and funded; that is, "Authorizations for Expenditure ("AFEs") are generated on a well-by-well basis." Supplemental Statement of Basis, Attachment 7 (Shell Nov. 15, 2007 Letter to Region 10) at 8. This means that if one well is denied funding, the other wells can still proceed.

Third, the record supports EPA's conclusion that information is not shared between wells during the same drilling season.[23] Although not explicitly offering an opinion to the contrary, an affidavit submitted on behalf of NSB by Susan Harvey, a petroleum engineer with no involvement in the planning of SOI's exploratory program or the communications between Region 10 and SOI, concluded that information will be shared to "inform short-term decisions." *See* NSB Comment dated June 6, 2008, Declaration of Susan Harvey (June 6, 2008) ("Harvey Dec."), Appx 1. By contrast, SOI made the following representation in a formal response to questions from Region 10: "drilling information from a particular well or wells drilled within a given season ordinarily would not and could not be used to alter subsequent drill site locations within that season." Supplemental Statement of Basis, Attachment 7 at 7-8. SOI's specific

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[23] The documents that NSB identified in its September 4, 2008 revision to its Petition for Review do nothing to refute this conclusion. Those documents related to SOI's request that certain information relating to the seismic data SOI has gathered in the Beaufort Sea be treated as confidential business information. NSB argues that the language in the documents shows that Exploratory Operations are operationally dependent and that EPA, in granting the request for confidential business treatment, agreed that the Exploratory Operations were operationally dependent. EPA's decision to grant confidential business treatment, however, is based solely on the fact that the information to be protected is both valuable and extremely expensive to produce.

Moreover, NSB's argument that common seismic information underlying the decision to drill individual wells establishes operational interdependence between exploration wells only serves to emphasize how elastic NSB's notion of interdependence really is. By NSB's reasoning, any common information shared between unrelated wells, such as common drilling technology, could be used as the basis for aggregation. NSB has not proffered an example of shared information that would *not* form the basis of aggregation. Given *Alabama Power*'s unambiguous limitations on aggregation, NSB's proposed theory of potentially unlimited aggregation, based on the nebulous concept of shared information, is untenable. EPA properly developed a definition of stationary source that placed a rational and identifiable limit on the extent to which stationary sources will be aggregated under this permit.

representation provides ample support for Region 10's conclusion when compared with Ms. Harvey's general opinions.

Ms. Harvey's remarks rely on generalizations regarding one process by which exploratory wells may be planned and funded, which generalizations are contradicted in the record, particularly with respect to SOI's funding mechanism for exploratory wells. *See* Harvey Dec., Appx 1, A. Additionally, Ms. Harvey's assertions do not address the uncertainties inherent in exploratory activity, instead treating it like a smooth and predictable process. For example, she says, "If each of these wells were not necessary to delineate the prospect and develop a useable model of the hydrocarbon accumulation, it is doubtful that Shell would invest millions of dollars to drill them." NSB Comment dated April 1, 2008, Affidavit of Susan Harvey (March 31, 2008) ("Harvey Aff."), Appx.1 at 4. Ms. Harvey's statement fails to take into account the high rate of dry holes and the fact that the purpose of the exploration wells, as supported by record evidence, is precisely to develop *unique* information—not duplicative or redundant information—about the prospect at every Planned Well site. Her statements incorrectly assume that the Exploratory Operations will "delineate" a "hydrocarbon accumulation" which will then be produced. In fact, at this time, there is no way for SOI, EPA, or anyone to identify any production from any prospect, and Ms. Harvey's explanation of the purpose of these wells rests on mere speculation.

Fourth, even if information were shared during the same season, that fact would not establish operational dependence requiring aggregation. "[E]ach individual well site can still be drilled regardless of whether it receives information shared from another site." 2008 Response to Comments at 62. Such sharing of information "occurs in the course of normal operations for

almost any business venture serving or operating in multiple locations." *Id.* EPA concluded that the possibility of information-sharing did not establish operational dependence:

> The mere existence of some relationship between sites is not unequivocal evidence that the sites must be one stationary source. Given the specific facts of this permitting action – the individual well sites will collect discrete exploratory information, the collection of which is not operationally dependent on the collection of information at other [s]ites – it was reasonable for EPA to determine that the sites should not be aggregated into a single source.

2008 Response to Comments at 63. Thus, EPA provided substantial support for its reasonable conclusion that each individual Exploratory Operation operates independently.

2. Previous Permitting Decisions and EPA Guidance Support Region 10's Conclusion that Exploratory Operations are Independent.

Although EPA is required to base its decision as to whether to aggregate multiple stationary sources on the particular facts before it, previous permitting decisions and guidance offered by EPA serve as useful analytical tools. The Board, in fact, directed EPA to carefully consider this guidance on remand. These guidance documents heavily favor EPA's conclusion that Exploratory Operations are operationally independent. As discussed above, EPA made the following findings in support of its determination that Exploratory Operations are independent: (1) there is no physical connection between the Exploratory Operations; (2) the wells will exist sequentially, not simultaneously; and (3) the wells do not combine efforts to create a tangible product.

In attacking EPA's decision, NSB has selectively cited some of the guidance documents and ignored the guidance document that presents the most closely analogous facts. And it dismisses without basis the one guidance document intended expressly to address this industry—the Source Determinations Memorandum.

Finally, the four questions posed by Region 8, which the Board explicitly referenced in its remand order, provide yet another layer of support for EPA's conclusion that the Exploratory Operations are independent.

a. Guidance Relied Upon By EPA

Following the Board's instruction, EPA looked to previous permitting decisions to help determine whether individual Exploratory Operations should be considered operationally dependent. From the analysis of these previous decisions, EPA found that three factors were present in other, operationally dependent situations that were not present in the case of SOI's exploratory program: (i) physical connection between sites, (ii) simultaneous emissions, and (iii) creation of a tangible product. In particular, the situation examined by Region 4 in the Williams Energy Guidance demonstrates that SOI's Exploratory Operations are independent sources. Consequently, EPA concluded that SOI's exploration Exploratory Operations were independent.

First, as discussed above, there is no physical connection between the Exploratory Operations. 2008 Response to Comments at 62; *see also supra* at II.B.2.b. Second, "the planned drill sites are sequential – there are no simultaneous or integrated operations between the locations as one location does not exist at the same time of operation of another." *Id.* In all of EPA's past guidance, the Agency was deciding whether to aggregate simultaneous emissions from onshore operations in existence at the same time, and thus was addressing conditions that potentially could approximate the common sense notion of a plant. In contrast, SOI's proposed operations consist of one vessel drilling in the open ocean at one drill site before then moving elsewhere to drill. This in no sense resembles an industrial plant. Indeed, the *Kulluk* permit is for a portable source, which clearly does not resemble a plant. None of EPA's prior guidance suggests that sources that do not exist at the same time should be aggregated.

Third, exploratory wells, unlike the sources in previous permitting decisions that found operational dependence, do not produce a "tangible product."[24] *Id.* at 61. To the extent there is a "product" from each well, it is information, which is not the sort of tangible product that a "plant" produces. While EPA guidance has recognized that the manufacture of products as diverse as beer, steel, and minerals in linked facilities may support aggregation of their emissions, EPA has never recognized intangibles such as information or services as a "product" for purposes of applying the "common sense notion of a plant" test. Moreover, even if the information obtained from a Planned Well were deemed a "product," as discussed above, this information is not shared between wells within the same drilling season, and, in any event, EPA determined that "sharing information between wells is not an operational dependence because each individual well can still be drilled regardless of whether it receives information shared from another site." *Id.* at 62.

The Williams Energy Guidance offers the most factually analogous situation (albeit in a context of a true product). In that case, two bulk gasoline terminals were separated by 9/10 of a mile. The only operating relationship between the two terminals was that some employees had responsibilities at both terminals and both terminals were served by common delivery pipelines. However, no pipelines connected the two facilities, and neither terminal functioned as a support facility for the other. The land between the terminals was occupied by other terminals not controlled by Williams Energy. EPA based its determination that these facilities should not be aggregated on two factors, both of which are present in this case: (1) independent operations,

[24] NSB claims that EPA changed its analysis in the Response to Comments with respect to the "product" produced by the exploratory wells. But EPA consistently referred to the information "produced" by each well. *See, e.g.*, Supplemental Statement of Basis Attachment 25 (Patton Boggs February 7, 2008 Memorandum to EPA Region 10). In this instance, EPA was merely distinguishing this case from previous decisions. In all such past decisions where operational dependency was found, a "tangible" product was produced.

and (2) lack of a physical connection. Williams Energy Guidance at 6. Like the bulk gasoline terminals, each SOI Exploratory Operation is capable of operating, and will operate, independently and cannot be connected to another site. EPA reached the only rational conclusion possible, i.e., that the Exploratory Operations will not be support facilities for each other.

b. Guidance Relied Upon By NSB

NSB cites three previous guidance decisions that, it argues, stand for the proposition that "interdependence exists when separate drill sites produce information used together to develop a possible production scenario[.]" NSB Petition at 36. However, these previous determinations do not support NSB's point.[25] Instead, they provide further support for the notion that a physical connection is necessary and that operational dependence is found when facilities work together to produce a single, physical end-product.

In the first guidance document, Region 3 addressed whether to aggregate two facilities that were part of a single cohesive industrial operation, in which solution would be used to mine a salt formation to create gas storage caverns.[26] Once the mined salt was extracted from this solution, it would be processed separately, and the process water would be re-used in the solution-mining operation in a repetitive loop. Region 3 deemed the two sites operationally dependent because the salt producer needed the brine from the solution mining and gas storage operation, in order to have a "viable operation." Salt Mine Guidance at 3. This is not similar to

[25] As noted above, NSB's premise is incorrect. At this point, there is no unified production scenario and there may never be.

[26] Letter from Judith Katz, Director, Air Protection Division, Region 3, to James Salvaggio, Director of Air Quality, Pennsylvania Department of Environmental Protection (undated) ("Salt Mine Guidance").

SOI's exploration plan, where there is no physical connection from one Planned Well site to the next, no materials exchanged between wells, and no integrated manufacturing operation.

In the Forest Oil Guidance, Region 10 determined that an off-shore production platform and an on-shore processing facility should be aggregated. In so doing, it focused on the end product, "marketable oil and gas," in a joint enterprise at multiple locations, as well as the physical connection between two facilities. NSB appears to rely on this example because it involves the oil and gas industry; however, it simply demonstrates the differences between exploration and production, and the prerequisite for a tangible product from an integrated operation. In exploration, each well provides only information, and that information stands alone and may or may not ever lead to production. However, in the production phase, as was at issue in the Forest Oil Guidance, multiple facilities often do work together to produce a tangible product, i.e., processed pipeline-quality oil or gas.

Finally, in the American Soda Guidance, Region 8 determined that a mine and a processing plant serving the mine, which were connected by a dedicated rail link, should be aggregated because of their "integral connectedness" in the production of an end product. Region 8 found the physical connection between the facilities and the fact that one facility produced an intermediate product for processing at the other facility persuasive in its analysis. Again, there is no such connectedness and no such end product in this case. As discussed above, at least three critical factors demonstrate that each Exploratory Operation will operate as an independent exploratory activity. Thus, the three guidance documents that NSB cites do not support a finding of operational dependence in this case because none of the factors that led to aggregation in any of those instances is present here. On the contrary, they— along with other

EPA guidance—support Region 10's decision not to aggregate emissions from the *Kulluk's* Exploratory Operations.[27]

c. Region 8's "Four Questions" Provide Further Support for the Finding of Independence.

In the Supplemental Statement of Basis, EPA provided detailed support for its determination that wells are not operationally dependent. Of particular relevance, EPA analyzed SOI's exploratory program using the Four Questions Guidance. *See* Supplemental Statement of Basis 13-15. EPA provided significant record support for its determination that the answers to these questions militated in favor of treating SOI's individual exploration drill sites as separate sources. NSB objects to EPA's analysis of two of the four questions, the first being:[28]

> 1. Was the location of the new facility chosen primarily because of its proximity to the existing facility, to enable the operation of the two facilities to be integrated? In other words, if the two facilities were sited much further apart, would that significantly affect the degree to which they may be dependent on each other?

EPA relied on information provided by SOI to find that each well is an independent activity that provides only information, and only information unique to each location. *See* Supplemental Statement of Basis at 13; *see also supra* II.B.2.c. NSB claims that "EPA ignores in its answer that drill sites intended to delineate a discovery are chosen precisely because of

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[27] The Williams Energy Guidance, in particular, advises that independent operations that lack a physical connection should not be aggregated. By contrast, previous guidance documents finding operational dependence involved a much greater level of connectedness than is seen between two distinct and sequential exploration wells. *See* Metal Castings Guidance (two metal casting foundries aggregated because all castings produced at both foundries are coasted, packaged and shipped at one of the facilities); Anheuser-Busch Guidance (landfarm brewery treated as a single source due to physical connection and fact that landfarm served integral function in brewery operations); and Acme Guidance (two facilities at integrated steel mill aggregated because the traditional functions of a steel mill had been separated between the two sites).

[28] NSB does not challenge EPA's conclusions that (1) materials are not routinely transferred between facilities, and (2) that a production process under the *Kulluk* permit is not split between facilities. *See* SOI Supplemental Submission on *Kulluk* Drilling Site Operations, Submitted to EPA Region 10, February 7, 2008 ("SOI Supplemental Submission") at 27; Supplemental Statement of Basis at 14 (quoting Attachment 25 at 30).

their proximity to the original discovery well." NSB Petition at 37. NSB focuses on the word "proximity" to the exclusion of the full text of this question. The record in this case shows that individual exploration wells are not located so that "operations at those separate locations can be integrated." Supplemental Statement of Basis at 13. Fundamentally, each drilling location is selected independent of any other location and is chosen for its independent value as a potential source of information on what is thought to be a distinct accumulation of oil. "Even if a well is drilled immediately adjacent to a prior well, the two wells would remain independent, and were they hundreds of miles apart, SOI would not lose any meaningful interdependencies, interactions, or efficiencies (because there are none to lose)." SOI Supplemental Submission at 26. Indeed, each well can only be drilled at a given location—SOI could not "rig" the game by locating wells so as to achieve operational synergies or to avoid aggregation: the location of a given exploration well is where it is.

NSB also objects to Region 10's reasoning with respect to the second question:

> 3. Will managers or other workers frequently shuttle back and forth to be involved actively in both facilities? Besides production line staff, this might include maintenance and repair crews, or security or administrative personnel.

EPA found that the answer to this question weighed against aggregating separate Exploratory Operations. Although EPA recognized that different exploration drill sites could be served by the same crew, it concluded, relying on information provided by SOI, that each Exploratory Operation is not dependent on any other Exploratory Operation. "These are not operations that could be performed equally well at a single location . . . ." Supplemental Statement of Basis at 14 (quoting Attachment 25). In other words, "[i]nterdependence does not exist where, as here, the operation or activity in question is not effectively being 'split' between two locations even though it could or would logically be performed at one location." SOI Supplemental Submission

at 31. S*ee also* Williams Energy Guidance at 6 (finding that even though two facilities shared personnel and were served by common delivery pipelines, they were not physically connected and operated independently and were thus properly treated as separate sources).[29]

3. No Limit on the Permit

Finally, NSB objects to the permit on the grounds that it "does not place any limitations on how many wells can be drilled over what time frame or targeting which prospects." NSB Petition at 34. Thus, NSB argues, EPA had "inadequate information" to determine that Exploratory Operations are not interdependent. *Id.* This argument fundamentally misses the point. As discussed above, each Exploratory Operation is an independent source providing unique information, regardless of where or when the *Kulluk* drills any given well, or how many such wells it drills.

D. EPA Properly Conducted the Remand Proceedings.

NSB[30] claims that its efforts to comment on the proposed revised permit were prejudiced because EPA changed its position between the Supplemental Statement of Basis and the Response to Comments. Specifically, NSB claims that EPA designated interdependence as the "key factor" in the Supplemental Statement of Basis and proximity as the "key factor" in the Response to Comments. It further claims that EPA introduced three "new criteria" to its interdependence analysis in its Response to Comments, thereby depriving NSB of the opportunity to comment on those "new criteria." A careful examination of the Supplemental

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[29] NSB's literal application of this question would lead to an unlawful result. If a common crew or vessel were dispositive, the source would necessarily become the drillship wherever it goes, an interpretation which the Board rejected when considering the definition of "OCS Source." *Shell Offshore Inc.* at 21-22.

[30] Because AWL's petition on this point is virtually identical to NSB's, SOI will refer only to NSB's arguments.

Statement of Basis and the Response to Comments shows that these claims are false. Moreover, even if they were true, they would not justify granting the Petitions for review of the Permit.

1. EPA Has the Discretion to Change Permit Conditions or Rationales in its Response to Comments.

Implicit in NSB's argument is the assumption that a permitting authority may not change its position or rationale in its Response to Comments. Region 10 did not change its position or rationale, *see infra* Section II.D.2., and there is no support for NSB's claim that doing so would have been improper. Public comment periods are required precisely for the purpose of giving the permitting authority the opportunity to refine its decision in response to comments it receives, which is what Region 10 properly did when it issued the *Kulluk* permit.

NSB cites two cases for the proposition that a "shifting and contradictory rationale renders EPA's decisions unclear, and thus subject to remand." NSB Petition at 23. Both cases are factually distinct from this case. In those cases, the Board remanded the permits because the permitting authority's response to the petition for review was at odds with its position (or lack thereof) in the response to comments—in effect, a post hoc rationalization. *See In re Austin Powder Company*, 6 E.A.D. 713, 718-19 (EAB 1997) (defense of cumulative effects raised for the first time on appeal); *In re Matter of GSX Services of South Carolina, Inc.*, 4 E.A.D. 451, 453-54 (EAB 1992) (record provided no rationale for the three-year permit term). Thus, these cases stand for the proposition that the Response to Comments must reflect a permitting authority's final rationale in support of its decision, which cannot be changed or supplemented *on appeal*. NSB provides no justification that would support extending this doctrine to a change in rationale between the Statement of Basis, which is not required to be a "final" statement of position, and the Response to Comments, which is.

EAB encourages permitting decision-makers to keep an open mind when considering comments.[31] EPA regulations require the Agency to respond to comments and anticipate that changes may be made in response to the comments received.[32] The regulatory authorization to make changes to the permit in response to public comments, without having to re-open public comment on the changed permit terms, is no different from authority to adjust or more fully explain the rationale supporting the permit. Both are essential to reaching a rational conclusion to the decision-making process.

EPA's regulations and the Board's case law interpreting those regulations unambiguously give the permitting authority the latitude and obligation to make such changes to a permit as are necessary to ensure that the final permit is issued with the benefit of the public comments received. *See In re Weber #4-8*, 11 E.A.D. 241, 245 (EAB 2003) ("The idea behind the regulations is that the *decision maker* have the benefit of the comments and the response thereto to inform his or her permit decision."). Locking a permitting authority into positions adopted in the Statement of Basis would render the entire commenting process irrelevant to the permitting decision.

2. EPA Consistently Maintained That It Would Determine Stationary Source Based on Proximity and Interdependence.

Contrary to NSB's allegations, EPA consistently and properly stated that it would conduct a fact-specific analysis of *both* interdependence *and* proximity to determine whether

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[31] *See In re Amerada Hess Corporation Port Reading Refinery*, 12 E.A.D. 1, 16-17 (EAB 2005), quoting *In re Rockgen Energy Ctr.*, 8 E.A.D. 536, 556 (EAB 1999) ("[i]f the [permit issuer] prepares a response to comments after it has already made its final permit decision, it runs the risk that the comments will not be considered with an open mind but instead with an eye toward defending the decision."); *see also In re Autochem N. Am. Inc.*, 3 E.A.D. 498, 499 (Adm'r 1991).

[32] *See, e.g.*, 40 C.F.R. § 124.17 (response to comments on draft required); 124.17(b) ("If new points are raised or new material submitted during the public comment period, EPA may document its response to those matters by adding new materials to the administrative record."); § 124.19(a) (standing for parties wishing to challenge permit conditions new to the final permit).

multiple Exploratory Operations should be considered "adjacent," and, therefore, one stationary source. As discussed below, the examples cited by NSB do not represent a change of position or of criteria. Instead, EPA was substantively responding to Petitioners' comments, as required by 40 C.F.R. § 124.17.

a. NSB Errs in its Allegation that EPA Changed the "Key Factor" for Determining Adjacency.

NSB's assertions of inconsistency rest on the premise that EPA designated interdependence as the "key factor" of its adjacency analysis in the Supplemental Statement of Basis, and then switched to a different "key factor" in the Response to Comments. Assuming for purposes of argument that Region 10 could not designate a key factor and could not properly have made such a change in response to comments (which change would be entirely permissible under its obligation to respond to and address comments)—that claimed switch did not occur, as EPA's language in the documents itself demonstrates. To show the supposed inconsistency, NSB draws selectively from EPA's discussion of the various guidance documents to which the Board, in *Shell Offshore Inc.*, slip op. at 40 n.37, referred the Agency.

Most of Region 10's adjacency analysis in the Supplemental Statement of Basis consists of descriptive summaries of past EPA actions to which the Region looked for guidance when making its fact-specific determination in this case. Specifically, EPA discusses the guidance identified by the Board in *Shell Offshore Inc.*, the Source Determinations Memorandum, and a prior *Kulluk* permitting decision. Throughout its summary of the various precedents, EPA occasionally draws preliminary conclusions concerning how the standard discussed in the particular guidance would apply to SOI's exploratory activities.[33] On the final page of the

[33] *See, e.g.*, Supplemental Statement of Basis at 15 ("Thus, applying the policy laid out in the Oil and Gas Memorandum [Source Determinations Memorandum] to the relevant facts of this specific permitting action would result in a determination that[] none of the Exploratory Operations . . . would be located in

analysis EPA renders its ultimate conclusion, drawing on both proximity and interdependence to support its conclusion that separate Exploratory Operations should not be aggregated:

> The facts presented in the present permitting action show that each Exploratory Operation is separated by open water, and each resides above a different part of the prospect from which distinct data is collected. The activities at one Drill Site are largely independent from activities at another Drill Site. One Exploratory Operation utilizing the Kulluk is not a support facility for activities at another because the exploration activity at one drill site must be concluded before subsequent drilling using the same equipment may begin at a different site. Therefore, consistent with the Agency guidance discussed above, each Exploratory Operation in this case is independent and not in close enough proximity to one another to be considered adjacent.

Supplemental Statement of Basis at 16. In doing so, EPA clearly makes a fact-specific determination on adjacency that considers facts relevant to both interdependence and proximity.

The language NSB cites to support its "key factor" theory does not come from this concluding analysis. Instead, it comes from Region 10's summary of prior precedent. The first sentence NSB cites is a descriptive statement by Region 10, summarizing the guidance, which explains that the agency has "historically stressed the significance of interdependence (or lack thereof)" when determining whether "seemingly nearby activities operating simultaneously" should be considered separate stationary sources. *See* Supplemental Statement of Basis at 13. This statement assumes that proximity—"seemingly nearby activities"—is a necessary condition for aggregation of sources that also are interdependent, not that interdependence is "key." The second citation is actually a quotation from guidance issued by a different Region, and is also a descriptive statement, in which Region 4 notes that "[i]n *most* of the EPA documents we reviewed, the key factor in deciding that separate facilities should be considered as one source

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close enough proximity to be considered a single stationary source."); *id* at 16 ("Like the bulk gasoline terminals, in this permitting action there exists no permanent stationary physical connection[] . . . conveying raw materials or products from one Kulluk Drill Site to the next").

was that the facilities were interdependent or linked in some sense." Supplemental Statement of Basis at 15 (quoting Letter from Winston A. Smith, Director Air, Pesticides, and Toxics, EPA Region 4 to Randy C. Poole, Mecklenburg County Department of Environmental Protection (May 19, 1999)) (emphasis added). In both of these sentences, Region 10 was merely describing past analyses, but not necessarily endorsing them as determinative.

EPA had the latitude to designate a "key factor" for purposes of evaluating whether to aggregate *Kulluk* emissions at various locations. But, contrary to NSB's claims, EPA did not designate interdependence a key factor in the Supplemental Statement of Basis. In fact, Region 10 never used the phrase "key factor" except in quoting guidance issued by Region 4. *Id.* NSB can cite no supposed definitive statement by EPA that interdependence is the "key factor" in this case, thus significantly undermining its claim of Agency inconsistency. To the contrary, EPA repeatedly and appropriately states throughout the Supplemental Statement of Basis that *both* interdependence and proximity must be considered and devotes significant time to explaining the meaning of the Source Determinations Memorandum and its implications for SOI's exploration activities. *Id.* at 13, 15-16. Moreover, to the extent EPA emphasized either factor in the Supplemental Statement of Basis, it was proximity. *Id.* at 15 (noting that under the Source Determinations Memorandum "proximity is the most informative factor" for the oil and gas industry).

Like the Supplemental Statement of Basis, EPA's Response to Comments also makes clear that the Agency uniformly recognized and addressed both factors in its analysis. Before individually addressing the comments relating to proximity and interdependence in the Response to Comments, EPA restated its conclusions from the Supplemental Statement of Basis that the *Kulluk's* Exploratory Operations are operationally independent from each other and not close

enough in proximity to be considered adjacent. 2008 Response to Comments at 59. It affirmed that the comments submitted do not "necessitate[] a change in this determination." *Id.* EPA also emphasized that its reference in the Supplemental Statement of Basis to interdependence as a "key factor" was a description of the decision-making used in some of the guidance documents to which the Board referred it on remand.[34] It then explained that SOI's exploratory activities, as oil and gas activities, fall within the scope of the Source Determinations Memorandum, thus confirming the importance of proximity in Region 10's analysis of the Revised Permit. By providing this explanation, EPA was not changing its position. Rather, it was giving a full and substantive response to public comments clarifying that, although interdependence had been used as the key factor in *other* permitting decisions (though never without consideration of proximity), the factual circumstances of this permit demanded the reverse, such that proximity was the key factor (though not without consideration of interdependence).

The Board should reject NSB's selective characterization of Region 10's analysis in which it attempts to punish EPA for its thorough response to public comments, and deny review on this issue.

b. **EPA Consistently Determined Interdependence on a Fact-Specific Basis.**

The existence of interdependence between two or more sources must be determined on a fact-specific, case-by-case basis, and EPA consistently made such determinations during the remand proceedings based on the facts presented. EPA used all of the guidance documents referred to it by the Board to inform and shape its analysis of the stationary source issue, but

[34] *See id.* at 60 ("While some of EPA's prior source determinations may have found that sources separated by distances of more than 1000 meters should be aggregated, as discussed more fully in the [Supplemental Statement of Basis] . . . those prior determinations considered interdependence rather than proximity to be the key factor in the making source determination.").

properly did not attempt to distill a "test" or a set of "criteria" from them. For example, it used the Four Questions Guidance to develop facts bearing on the question of aggregation. EPA properly understood that the questions are intended only as guides to develop a set of facts relevant to such a determination. *See* Four Questions Guidance. They are not individually dispositive. Region 10 appropriately used the questions as a "starting point" in its analysis. Supplemental Statement of Basis at 13.

Once it had identified facts related to SOI's proposed activities of relevance to the aggregation determination with the help of the guidance documents, EPA could make a preliminary determination of whether multiple Exploratory Operations should be aggregated. That preliminary determination, in turn, could be checked to ensure that it conformed to the three requirements of *Alabama Power*: reasonably carrying out the PSD program, adhering to a common sense notion of a plant, and avoiding aggregating activities that would not fit within the ordinary meaning of "building," "structure," "facility," or "installation." 45 Fed. Reg. at 52,694-95. Those requirements constitute EPA's sole regulatory "test" for aggregation.

NSB narrowly focuses on the individual facts that EPA developed and found persuasive in its analysis of SOI's exploratory activities to argue that these facts constitute a new or specialized test for interdependence unveiled for the first time in the Response to Comments. The three allegedly "new criteria" are the following: exploratory wells will not produce a tangible product, the wells will be drilled sequentially, and the wells will not be connected by a physical link. *See* NSB Petition at 22-23. These facts neither are criteria, nor are they new. EPA identified these facts in its case-specific analysis, i.e., these are facts that EPA found relevant to its determination of whether SOI's Exploratory Operations are interdependent. And

all of these facts were raised in the Supplemental Statement of Basis.[35] By emphasizing these three facts in its Response to Comments, Region 10 was not crafting a *sui generis* test for interdependence guaranteed to show that SOI's wells are operationally independent—rather, it was simply reciting the facts specific to this project that, with the benefit of public comments, it found most relevant to its interdependence analysis. In so doing, it was following established agency practice of making a case-specific, fact-based determination of interdependence.

Moreover, NSB's arguments attacking the relevance of each of these facts to EPA's interdependence analysis are unpersuasive.

1) Tangible Product

EPA's citation to the absence of a tangible product was not an attempt to somehow sidestep NSB's argument that wells will share information as a "product." *See* NSB Petition at 20-21. To the contrary, EPA devotes two full pages in the Response to Comments addressing that argument directly and explaining more fully its position that "[o]perational dependence is found when each activity relies on the other for its operation." 2008 Response to Comments at 61. Specifically in response to NSB's argument regarding information sharing between delineation wells, EPA responded that "sharing information between wells is not an operational dependence, because each individual well site can still be drilled regardless of whether it receives information shared from another site." *Id.* at 62. EPA acknowledged that SOI would "most likely use information collected at one well to refine its exploratory drilling plans for other locations," but concluded that such sharing of information is insufficient to support aggregation of the wells into a single stationary source. *Id.* EPA noted that similar information sharing

[35] *See* Supplemental Statement of Basis at 14 (the only "product" of the wells is information, which is self-evidently not tangible); *id.* at 13, 16 (the wells will be drilled sequentially); and *id. at* 16 (there is no physical link between the wells).

occurs "in the course of normal operations for almost any business venture serving or operating in multiple locations" and declined to make such a link the basis for aggregation. *Id.*

Far from trying to avoid NSB's arguments, EPA fully considered and rejected them, maintaining its position from the Supplemental Statement of Basis that the Exploratory Operations are not interdependent because "[e]ven if one operation did not proceed, the other operation(s) would remain viable." Supplemental Statement of Basis at 14, (quoting SOI Supplemental Submission at 32); *see also* 2008 Response to Comments at 62 ("One well is not dependent on another well to operate."). EPA's use of the phrase "tangible product" in the Response to Comments is merely another way of answering Region 8's Question 4: Would the production process be split between wells?

2) Sequential Drilling

Also, contrary to NSB's other claim, EPA did not arbitrarily change in its Response to Comments the weight it assigned to the fact of sequential drilling. NSB claims that EPA found that the existence of sequential drilling at *different* Exploratory Operations militates against aggregation of emissions from those two locations, but inconsistently determined that two sequential wells within *a single* Exploratory Operation should be aggregated. *See* NSB Petition at 22-23. However, in each evaluation, sequential drilling was one of many facts EPA considered. In its evaluation of Relief and Replacement Wells as part of a single Exploratory Operation, EPA found that, by virtue of their function, a Relief or a Replacement Well would necessarily be located near the associated Planned Well *and* would be closely related to it (and would be drilled after it). A Replacement Well would obtain the same information as the failed Planned Well, and a Relief Well would aid the distressed Planned Well. EPA found that all of these facts supported aggregation, whereas the sequential nature of drilling such wells, without

more, did not. Balancing the facts, EPA concluded the Relief and Replacement Wells should be aggregated with their corresponding Planned Well. Supplemental Statement of Basis at 11.

In contrast, when it analyzed Planned Wells, which are, by definition, in different Exploratory Operations, EPA found again that sequential drilling was one of many facts militating against aggregation. Other facts included open ocean between wells, the distinct information each well would provide, and the independence of operations at each Planned Well site. EPA accordingly determined that Planned Wells should not be aggregated. *Id.* at 16. Thus, EPA did not change the weight it accorded sequential drilling in the two analyses; rather, the different results were the reasonable product of EPA's fact-based analysis of each scenario. Contrary to NSB's implication, individual facts viewed in isolation are not dispositive in this kind of analysis. The suite of different facts presented in each scenario are weighed in context to determine the ultimate conclusion. In this case, EPA weighed the two different sets of facts for the different scenarios and properly reached divergent conclusions.

3) Lack of a Physical Connection

Finally, NSB's contention that EPA cannot rely merely on the lack of physical connection between the wells carries no weight, NSB Petition at 23, because it depends on the Board accepting NSB's arguments that sequential drilling and the lack of tangible product should not be considered. As discussed above, those arguments are unavailing. Moreover, lack of connection is a well-established fact to be considered in aggregation decisions. *See, e.g.*, Guidance cited in footnote 14. And finally, as discussed *supra* in II.C., EPA conducted an exhaustive interdependence inquiry, examining all facets of SOI's activities, and made the decision on the totality of its analysis—not just these three facts—that separate Exploratory Operations should not be aggregated.

EPA has developed a substantial record supporting its determination that the *Kulluk*'s Exploratory Operations are not interdependent. NSB's disagreement with the conclusion that EPA drew from the record is irrelevant to the determination of whether EPA's decision is clearly erroneous.

E. MacClarence's Petition for Review Fails to Establish Clear Error or a Reviewable Act of Discretion in EPA's Decision.

MacClarence confines his petition to the argument that EPA's decision to define a stationary source under the Revised Permit as a single Exploratory Operation violated the Clean Air Act. He contends that the Source Determinations Memorandum, upon which he mistakenly claims EPA exclusively relied, is a "significant departure from more than 30 years of precedent following the 1972 Clean Air Act and is a serious abrogation of the public trust." MacClarence Petition at 2. However, neither the facts of this case nor the EPA guidance he cites supports these allegations. The Board should therefore reject his petition.

1. The Source Determinations Memorandum is Not the Sole Basis for EPA's Stationary Source Determination.

MacClarence claims that "[f]or EPA to base [its] disaggregation (sic) decision solely on this [Source Determinations Memorandum] without further justification is an egregious act." MacClarence Petition at 2. However, as discussed extensively above in response to NSB's Petition, the Source Determinations Memorandum is only one of many guidance documents to which EPA referred when making its fact-specific determination in this case. EPA's "justification" for its decision can be found in the Supplemental Statement of Basis (at 16) and in the Response to Comments (addressing proximity at 60-61 and interdependence at 61-63). These documents demonstrate that EPA made its final stationary source determination based upon the unique facts of this case after considering all relevant guidance documents and public

comments. MacClarence's claim that the decision was based "solely" on the Source Determinations Memorandum is unsupported and simply untrue.

MacClarence argues that the Source Determinations Memorandum led EPA to improperly emphasize proximity in its stationary source determination. However, as discussed in detail above, proximity has historically been part of the stationary source determination, as recognized by all of the guidance documents MacClarence cites. Consequently, EPA did not err by considering proximity. Nor did EPA rely entirely on this factor. As discussed *supra*, EPA conducted extensive analysis of the facts relating to both proximity and interdependence and made a fact-specific determination that neither factor supported aggregation. MacClarence has not established that EPA would have decided this issue differently in the absence of the Source Determinations Memorandum. And MacClarence has not carried his burden to demonstrate that EPA's determination that the Planned Wells are not contiguous or adjacent was clearly erroneous or constitutes a reviewable exercise of discretion.

2. The Source Determinations Memorandum is a Valid and Proper Enunciation of the Agency's Position.

MacClarence contends that the Source Determinations Memorandum violates the Clean Air Act and improperly favors the oil and gas industry, but fails to support these allegations with law or Agency practice.

a. The Source Determinations Memorandum is Consistent with Past EPA Positions on PSD Review.

MacClarence contends that EPA's decision to "disaggregate" the various Exploratory Operations violates the Clean Air Act because the concept of aggregation underlies major Clean Air Act policies, including the PSD program. However this claim provides an incomplete and incorrect picture of aggregation. Aggregation can only occur under the PSD program where it meets the criteria in EPA's regulations. Consistent with the Court of Appeals' direction in

Alabama Power, EPA has prohibited aggregation of stationary sources except where aggregation (1) reasonably carries out the purposes of the PSD program; (2) "approximate[s] a common sense notion of a 'plant';" and (3) avoids aggregating activities that, as a group, would not fit within the ordinary meaning of "building," "structure," "facility," or "installation." 45 Fed. Reg. at 52694-95; *see also Alabama Power Co.*, 636 F.2d 323, 395-96.

In administering the PSD program, EPA has issued various guidance documents, but, contrary to MacClarence's claim, has never created a "standardized all-inclusive definition of 'facility'" because it instead makes stationary source aggregation determinations on a case-by-case basis. EPA must balance the need for consistency with the need for specificity, and an industry-specific guidance can be an important tool when striking such a balance. Indeed, in one of the guidance documents MacClarence cites, EPA provided just such guidance in response to a citizen request for general information on whether grain elevators should be aggregated with ethanol facilities. *See* Grain Elevators Guidance (very similar to the Agency's approach in the Source Determinations Memorandum)

Although MacClarence claims that the Source Determinations Memorandum represents a "significant" departure from 30 years of Agency practice, the guidance documents that he claims are in "direct opposition" to the Memorandum simply do not support his claim.[36] To the contrary, several documents explicitly acknowledge the important role of close proximity in stationary source determinations. *See* Grain Elevator Guidance, American Soda Guidance, Four Questions Guidance, and Acme Guidance. Others highlight the need for strong evidence of

[36] The first document is irrelevant because it concerns only common control, which all parties agree is not in dispute. *See* Letter from Richard Long, Director Air Program, Region 7, to Julie Wrend, Colorado Department of Public Health and Environment (Nov. 12, 1998) (Coors brewery and a power plant owned by a third party located onsite and providing power to the brewery should be aggregated because they are effectively under common control).

interdependence between sites, such as coordination to complete a finished product, to counter greater distance between sites. *See* Four Questions Guidance, Grain Elevators Guidance, American Soda Guidance, Metal Castings Guidance, Anheuser-Busch Guidance, and Acme Guidance. The Source Determinations Memorandum does not violate the principles established in these documents. Instead, it applies them to the unique facts of the oil and gas industry. None of these guidance documents addresses the oil and gas industry, or the intermittent, sequential operation of a portable source at various locations. Nothing in these documents indicates that the Source Determinations Memorandum contradicts current Agency practice. To the contrary, these documents show that proximity and interdependence are dynamic, and sometimes interrelated, factors that must be analyzed on a fact-specific basis.

b. **The Source Determinations Memorandum is a Reasonable Exercise of Agency Guidance for a Unique Industry.**

The Source Determinations Memorandum is a reasonable exercise of EPA's discretion, providing guidance to standardize the Agency's approach to the unique fact patterns presented by the oil and gas industry across Regional offices. Oil and gas wells are often separated by significant distance; and operators generally do not control access to the land (or sea) between sites. This is a unique feature of oil and gas exploration and development with direct bearing on the determination of whether exploration activities should be considered to occur at contiguous or adjacent locations.

MacClarence's claim that the Source Determinations Memorandum improperly favors the oil and gas industry implies that the Memorandum grants the industry benefits not available to other industries. MacClarence does not assert, much less show, that source aggregation questions in another industry presenting similar circumstances would be decided differently. EPA frequently reasons by analogy between industries; however, the benefit of a close scrutiny

of proximity is not as meaningful in other industries because they do not present the unique fact patterns found in the oil and gas industry. Unlike industries or facilities where separation of functions among two or more sites was a business decision,[37] the record makes it abundantly clear that the *Kulluk's* oil and gas exploration activities cannot be consolidated on a single surface site, and that SOI could not elect to break up single-site functions into multiple locations.

3. Because EPA's Stationary Source Determination is Rational, MacClarence's Related Arguments Fail.

MacClarence argues that EPA's reliance on the Source Determinations Memorandum led it to erroneous conclusions regarding Best Available Control Technology ("BACT"), NAAQS, and global warming issues in issuing the *Kulluk* minor source permit. The Source Determinations Memorandum was only one piece of EPA's decision-making process, and there is no evidence, cited by MacClarence, or in the record, that it was the decisive piece supporting EPA's decision on these issues. Because MacClarence has not demonstrated that EPA's decision not to aggregate multiple separate Exploratory Operations is clearly erroneous or otherwise subject to review, these arguments, which rely on the Board accepting MacClarence's argument demanding aggregation, must fail.[38]

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[37] For example, Anheuser-Busch selected a landfarm as its preferred method of disposing of waste water, but other options were available; Acme separated functions that are traditionally located at one steel mill; nothing in the facts we have indicates that the American Soda processing plant was required to be located 44 miles from the mine to achieve its purpose.

[38] The additional documents MacClarence submitted on August 24 in response to the Board's August 18, 2008 order allowing petitioners to revise their petitions in response to any "new" information in EPA's administrative record have no relevance to this appeal. The two documents are a 1993 EPA guidance document relating to the use of permit fees from Title V operating permits as matching funds and a recent decision by the United States Court of Appeals for the District of Columbia, which struck down an EPA regulation prohibiting states from imposing supplemental monitoring requirements on Title V operating permits. *See Sierra Club v. EPA*, No. 04-1243, slip op. at 15 (D.C. Cir. Aug. 19, 2008). MacClarence notably failed to establish in his pleading any connection between these documents and the sole issue of this appeal: the scope of a stationary source for purposes of evaluating the applicability of major source permitting requirements.

a. BACT

MacClarence is correct that EPA's determination that Exploratory Operations should not be aggregated, in combination with ORLs that limit emissions from each such Exploratory Operation, obviated the need for BACT analysis. He is incorrect, however, that this is a "total abrogation of EPA's mandate to protect the public's air quality." MacClarence Petition at 3. EPA made a rational stationary source determination based upon the unique facts of this case and accordingly concluded that it could properly issue SOI a minor source air permit. MacClarence has not established error in EPA's method of determination, nor has he cited any facts that would counter EPA's determination. Quite simply, he disagrees with EPA's conclusions. However, that disagreement does not demonstrate clear error in EPA's aggregation determination or show that the determination constitutes a reviewable exercise of discretion.

b. NAAQS

MacClarence's primary argument regarding NAAQS seems to be that EPA should previously have aggregated *other* oil and gas activities on the North Slope. To the extent he makes that argument, it is clearly beyond the scope of this appeal. MacClarence presents no evidence to support his claims that emissions would be lower if all projects were aggregated. But more importantly, he fails to address the legal reality that EPA simply does not have the authority to aggregate multiple sources when they do not adhere to the common sense notion of a

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Both of these documents address components of EPA's operating permit program, implemented pursuant to Title V of the Clean Air Act. 42 U.S.C. §§ 7661-7661f. The implicit argument in MacClarence's pleading appears to be that, but for the Source Determinations Memorandum, EPA would have aggregated all aspects of SOI's exploratory program as a single major source, thereby subjecting the program to the regulatory requirements imposed on major sources, including, ultimately, the Title V program. MacClarence apparently reasons that the Source Determinations Memorandum interferes with a state's right to impose the additional monitoring requirements on Title V permits pursuant to *Sierra Club*. However, this argument is far beyond the scope of this appeal. It is an attack on the very concept of minor source permits. Under this logic, no minor source permit would ever be appropriate because all minor source permits would interfere with a state's supposed right to impose additional monitoring. Such an argument is not only contrary to almost 30 years of EPA practice, it is not warranted by any new information in the administrative record.

plant displaying the required features of common control, same industrial grouping, and location on contiguous or adjacent properties. Where, as here, EPA determines that sources are not adjacent because they are not proximate and interdependent, EPA lacks the discretion under its regulations to aggregate the sources.

c. Climate Change

Finally, MacClarence's argument regarding climate change is also beyond the scope of this appeal. Climate change was not included in the Board's remand instructions to EPA, nor is it implicated by any permit conditions, thus MacClarence cannot properly raise it in his Petition.

III. THE REMOTE CONTINGENCY OF RELIEF WELL DRILLING DOES NOT RENDER THE PERMIT'S OWNER-REQUESTED LIMITS IMPROPER.

Region 10 properly found that SOI could comply with the 245 tons of NOx emissions limit under Condition 8 and the cumulative 80-day time-on-site limit under Condition 15.1 of the Permit. Nonetheless, NSB[39] claims that the Permit violates the Alaska ORL regulation, 18 AAC § 50.542(f)(8)(A), because Relief Well drilling could hypothetically exceed either the emissions or time-on-site limit. The Alaska regulation states that a minor source permit using an ORL will be approved upon a finding that the stationary source "is capable of complying" with the limit. 18 AAC § 50.542(f)(8)(A). The administrative record demonstrates that the chances that Relief Well drilling might be required are extremely remote and that it was reasonable for EPA to address the application of the 245-ton or 80-day limits as it did.[40]

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[39] AWL does not join in this argument.

[40] It should be noted at the outset that the *Kulluk* permit imposes significant real-time emissions limitations, not at issue here, on *all* drilling activities at *all* times during an Exploratory Operation, including during drilling of a Replacement or Relief Well. Thus, at all times, fuel burned in any engine on the *Kulluk* or its support vessels may not contain more than 0.19 percent sulfur (Condition 10) or, for some *Kulluk* deck engines, no more than 0.05 percent sulfur (Condition 13.3). Fuel-burning equipment

Not only does NSB's argument lack any basis in fact or law, it is procedurally barred for three reasons. First, the Board considered and rejected the issue of whether Alaska ORL regulations demand quantification of all possible eventualities last year in *Shell Offshore Inc.*, and NSB cannot now re-litigate this issue. Second, to the extent NSB's present complaints regarding 18 AAC § 50.542(f)(8)(A) are new or distinct, they were already reasonably ascertainable the last time NSB appeared before the Board, and NSB, having failed to raise them then, is barred from doing so now. Third, even if the legal arguments raised in the Petition had not already been adjudicated or were timely, these arguments diverge so significantly from NSB's submitted comments that they were not properly preserved for appeal and should be rejected. Finally, the remand order does not cure these procedural bars against NSB's arguments.

On the merits, NSB's arguments fail because the Alaska ORL regulations do not require that the emissions limits that render a stationary source a "synthetic minor" source also guarantee that there will never be exceedances in the event of an environmental emergency, such as drilling to contain the blowout of an oil well. Indeed, general case law and EPA's guidance clearly demonstrate that emergency situations need not be considered as violations. NSB's unwarranted interpretation of Alaska's regulation should be rejected for the further reason that it renders an absurd result: under its logic, ORLs could never really be used because some remote

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may not at any time exceed exhaust opacity limits (Condition 12). Exhaust gas from fuel-burning equipment must at all times meet particulate matter standards and filters for the *Kulluk*'s diesel engines must be maintained for that purpose (Condition 13). At all times, the *Kulluk*'s generator engines must be monitored for PM compliance every 15 minutes (Condition 13.4). The *Kulluk*'s main generator engines must at all times be operated so as to generate no more than 4.2 MW of electricity during any hour when the vessel is occupying a drill site, and comply with associated monitoring requirements (Condition 17). At no time may the *Kulluk* operate both of the vessel's Thrustmaster engines simultaneously while the *Kulluk* is occupying a drill site (Condition 19). In short, emissions from the *Kulluk* and its support vessels would be just as tightly regulated during the emergency drilling of a Relief Well as during the drilling of a Planned Well.

contingency would always threaten a synthetic minor source's compliance. Consequently, NSB cannot meet its burden of showing that Region 10's application of Alaska's regulations was clearly erroneous, especially as NSB has adduced nothing that would support its view of how Alaska regulations should be applied.

Finally, EPA was responsive to NSB's concerns. NSB complains that, although EPA sufficiently responded to Comments concerning Condition 8, Region 10 never acknowledged its Comments concerning Condition 15.1. However, EPA provided a direct response to the Condition 15.1 comment in Category 7 of its Response to Comments. Moreover, even if a more detailed response was required with regard to Condition 15.1, Region 10's response to NSB's concern of potential non-compliance with Condition 8 (245 tons per year) equally addresses the NSB's parallel concern about potential non-compliance with Condition 15.1 (80 days on site). No issue unique to the Condition 15.1 claim remains unresolved by the response to comments concerning Condition 8.

A. NSB's ORL Arguments Are Procedurally Barred.

Three separate procedural bars prevent NSB from raising these arguments in this appeal. The Board should therefore decline to consider the arguments. *See Shell Offshore Inc.*, slip op. at 52-53 (procedural bars prevent review of arguments by Petitioners).

1. It Is the Law of the Case That the *Kulluk* Permit Complies With 18 AAC § 50.542(f)(8)(A).

NSB's apparent argument—that the Alaska ORL regulation requires absolute certainty that an emergency such as Relief Well drilling will not cause ORL exceedances—is duplicative of NSB's "practical enforceability" arguments that the Board rejected last year. Having failed to file a timely motion for reconsideration last year, NSB is foreclosed from "appealing" the issue

in this subsequent petition. The law of the case requires the Board to again reject NSB's contorted interpretation of the Alaska ORL regulations.

Last year NSB argued that synthetic minor source permits were improper where there was no iron-clad guarantee that exceedances could never occur. 2007 NSB Petition at 43-53; 2007 NSB Reply Brief at 19-24. In last year's comments, NSB expressly included the possibility of a relief well being drilled in its laundry list of contingencies that conceivably might cause an ORL exceedance:

> Shell's emission inventory for the Kulluk drill ship and its associated support vessels of 245 tons of oxides of nitrogen (NOx), barely falls below the PSD threshold for a major source permit of 250 tons. There is little room for error in this emission estimate. *The total emissions can easily exceed 250 tons at any single well if it takes longer than 59 days to drill,* heavy ice conditions are encountered, if any of Shell's operating restriction assumptions are incorrect, *or if a relief well is required.*

NSB Comments, May 11, 2007 at 12 (emphasis added).

In 2007 the Board ruled that, although NSB preserved individual issues concerning practical enforceability of ORL limits, its comments appeared to ask only "for general clarification on how the Region intends to monitor compliance" and did not refer to the regulatory requirement that the ORL be federally enforceable. *Shell Offshore Inc.,* slip op. at 52-54. Consequently, the Board ruled that because NSB's comments failed to provide the "degree of specificity necessary to alert the Region to the issue," NSB was precluded from challenging the efficacy of the ORLs in its Petition. *Id.* at 54. In short, although NSB has argued this issue previously, the Board properly rejected it at that time on a procedural basis.

Moreover, NSB's present arguments track another argument it unsuccessfully raised last time before the Board regarding EPA's asserted imprecision in modeling air quality impacts from the *Kulluk*'s operations. 2007 NSB Petition at 53-59; 2007 NSB Reply Brief at 24-26. There, NSB generally complained that modeling was insufficient because it did not account for

all possible emissions sources. The Board, however, upheld Region 10's position, particularly as NSB had offered no legal basis for challenging EPA's policy of not considering emissions arising from emergency conditions:

> NSB has not alleged or demonstrated clear error in this Response to Comments. In particular, NSB has not demonstrated that any omitted emissions units will be operated in conditions other than emergency or upset conditions, *or that the Region is incorrect in stating that emissions from emergency or upset conditions are generally not considered in the air quality analysis.*

Shell Offshore Inc., slip op. at 59-60 (emphasis added).

The "new" issue of whether Relief Well drilling might ever result in exceedances clearly overlaps with and is subsumed in both of these prior issues that were raised by NSB and rejected by the Board in 2007. At that time, the Board appropriately rejected NSB's unsupported argument in favor of EPA's conclusion that such remote contingencies should not drive permitting. Now, in 2008, NSB improperly tries to resurrect these issues that have been conclusively decided by the Board. *In re Knauf Fiber Glass, GmbH*, 9 E.A.D. 1, 7 (EAB 2000) (explaining that the Board's first decision denying review of some issues, but remanding two others, was final as to the issues not specifically remanded). Law of the case requires summary dismissal of both NSB's recycled arguments that potential Relief Well operations violate the Alaska ORL regulations.

2. Assuming *Arguendo* the Board Did Not Consider Relief Well Drilling in 2007, NSB Has Now Waived the Issue Because EPA's Interpretation of the Regulations Was Clearly "Reasonably Ascertainable" During the First Round of Permitting.

Even if the law of the case did not require dismissal of NSB's objections relating to Relief Wells, those objections are nonetheless waived because they should have been raised in the prior petition. EAB regulations require issues to be raised as soon as they are "reasonably ascertainable." *See* 40 C.F.R. § 124.13. While these administrative exhaustion requirements are

commonly invoked to preclude review of legal arguments raised before the EAB for the first time when they could have been raised before the Region, they apply equally in the remand context. *See In re Brooklyn Navy Yard Res. Recovery Facility*, 3 E.A.D. 867, 870 (Adm'r 1992) (rejecting argument in second petition round which was reasonably ascertainable in the first round); *In re Dominion Energy Brayton Point, L.L.C.*, NPDES Appeal No. 07-01, slip op. at 42 (EAB, Sept. 27, 2007) (noting, in a case involving subsequent Petition, "Although BPS raised this issue in comments on the Draft Permit, BPS did not raise, and therefore effectively abandoned, this issue in the first Petition for Review.") (internal citations omitted).

NSB was unquestionably aware of the Relief Well drilling issue in 2007. NSB Comments, May 11, 2007 at 12 ("[exceedances might occur] if it takes longer than 59 days to drill ... *or if a relief well is required.*") (emphasis added). The Relief Well issue was reasonably ascertainable because the Alaska Department of Environmental Conservation and Region 10 discussed at length the general issue of assuring regulatory compliance with ORLs in 2007. *See* ADEC Comments, May 11, 2007 at 2; 2007 Response to Comments at 24.[41] Consequently, NSB is procedurally barred from trying to raise "new" issues before the Board in 2008.

3. NSB's Legal Challenge Based on Supposed Violation of the Alaska ORL Regulation 18 AAC § 50.542(f)(8)(A) Is Not Supported by NSB's or any other Party's 2008 Comments.

[41] On the final page of its Petition, NSB embeds a new argument in its Condition 8 section, relating to the inclusion of emissions that arise from clean-up operations for potential oil spills. This appears to be a back-door attack on MMS' prior approval of SOI's Oil Spill Response Plan and consequently is improperly brought before the Board. *In re Knauf Fiber Glass, GmbH*, 8 E.A.D. 121, 161-62 (EAB 1999) (Board's review is limited only to those issues that are directly related to permit conditions). NSB has certainly not demonstrated that this argument was preserved in the comments. However, even if this argument were preserved, its consideration is barred because the issue of emissions from clean-up operations was raised by comment in 2007, *see* 2007 Response to Comments at 68, thus making the issue reasonably ascertainable at that time, and waived now. Furthermore, the argument fails on the merits for the same reasons as NSB's Condition 8 and 15.1 arguments—no Alaska regulation requires inclusion of emissions irrespective of their likelihood of occurring.

NSB's challenge to Region 10's determination to issue the Permit is purely legal: How should 18 AAC § 50.542(f)(8)(A)[42] be interpreted, and does this permit meet the requirements of these Alaska ORL regulations? Although this issue was thoroughly addressed in the 2007 comments, response to comments, and NSB's petition, this year neither NSB nor any other petitioner preserved the issue in comments.

NSB states that it preserved the Condition 8 issue on p. 17 of its 2008 comments. NSB Petition at 48. Page 17, however, alludes to Condition 8 only briefly, and it does not specify any legal basis for a challenge. Under a generalized heading, entitled "All air pollution sources must be included in the permit," thereafter primarily focusing on flare gas, NSB provides a single relevant sentence in the middle of 28 pages of comments:

> The record does not demonstrate that Shell has included all air pollution associated with its operation when computing PSD applicability. *Neither EPA nor Shell computed the air pollution associated with drilling a relief well and replacement well when computing the total air pollution from this project.* Emissions from gas flaring and/or gas venting were not included; nor were the full transit emissions from all vessels operating within a 25-mile radius.

(emphasis added)(continuing on to discuss flare gas for three paragraphs). NSB purports now to have preserved its Condition 8 challenge by this fleeting reference, but nowhere is the legal basis that is the ostensible cornerstone of NSB's argument on appeal raised—that 18 AAC § 50.542(f)(8)(A) has been contravened. In fact, no Alaska regulations are mentioned at all. NSB therefore failed to put EPA on notice of the specific nature of its argument, improperly depriving EPA of an opportunity to respond to that argument. *Shell Offshore Inc.*, slip op. at 54 (requiring specificity in order to properly preserve issues for appeal).

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[42] 18 AAC 50.542(f)(8)(A) states that "The department will. . .(8) approve a minor permit establishing an owner requested limit under 18 AAC 50.508(5), if the department finds that (A) the stationary source is capable of complying with the limit".

With regard to Condition 15.1, NSB's position is also unavailing. NSB likewise fails to reference in its comments the essential part of Region 10's analysis to which NSB now objects—that EPA has improperly applied Alaska regulations. Harvey Aff. at 5-6.

Because neither NSB nor any other person referred to or discussed in their comments the grounds NSB now advances in its legal challenge for either Condition 8 or Condition 15.1, NSB lacks standing under 40 C.F.R. § 124.13 to raise this issue in its Petition. Consequently, the only comments on which NSB can rely for its present argument are those submitted in 2007, and as explained above, the Board rejected NSB's contentions in remanding on the different issue of source definition.

4. The Remand Order Does Not Authorize Reexamination of NSB's Condition 8 and Condition 15.1 Claims.

NSB may contend that the issue of whether emissions from an emergency Relief Well count against the permit's operational limits is within the scope of the Board's remand and, thus, can be litigated in this proceeding even though it was already resolved on the merits by the Board or, alternatively, was waived during the first petition round. NSB may contend that Condition 8 and Condition 15.1 relate to the definition of stationary source and thus are within the scope of remand. However, because NSB is only objecting to a general aspect of these Conditions, its challenge falls outside the scope of the remand order. In both cases, NSB is making the essentially legal claim that the Alaska ORL regulation needs to be applied in a certain manner—i.e., with absolute certainty:

- "The language of the regulation does not allow for EPA to ignore emissions based on the likelihood that those emissions will occur as a result of permitted activities." NSB Petition at 49.

- "The regulations do not provide EPA with the discretion to exempt certain activities from the capability determination because those activities, although covered by the permit, are unlikely to occur." *Id.*, at 47-8.

NSB's challenge here is not to EPA's definition of stationary source (or to EPA's finding that NAAQS will be met, given EPA's definition of stationary source, if operations are limited to 80 days at each Exploratory Operation). Even if these arguments arose in permit Conditions that coincidentally relate to the issues on remand, which they do not, these arguments are substantively unrelated to the purpose of this remand and are outside of its scope.

NSB further attempts to wedge the Conditions within the scope of the remand by arguing that the term "Exploratory Operations" appears in the texts of those Conditions, and, therefore, those Conditions, as a whole, fall within the scope of remand. NSB Petition at 40, 49. NSB is impermissibly trying to shoe-horn its challenge to other permit conditions which happen to incorporate the term "Exploratory Operations," into a purported objection to the definition of stationary source (Exploratory Operation) in Condition 1.6, which does fall within the scope of remand. The mere fact that the new term "Exploratory Operations" appears in both Conditions 8 and 15.1 is insufficient to trigger this Board's review. The cross-reference to "Exploratory Operations" was merely a house-keeping measure for purposes of "internal consistency." 2008 Response to Comments at 27 (explaining why Region 10 changed "the Kulluk exploratory drilling activity" to "an Exploratory Operation" in the context of Condition 25); *see also id.* at 72 n.28. Consequently, no greater meaning should be attributed to the inclusion of this term in the respective permit Conditions than what Region 10 expressly indicated in the Response to Comments.

B. NSB's Legal Interpretation of the Alaska ORL Regulation 18 AAC § 50.542(f)(8)(A) Lacks Merit.

NSB's argument also fails on the merits. NSB contends, respectively, with regard to Conditions 8 and 15.1:

- "The language of [18 AAC § 50.542(f)(8)(A)] does not allow for EPA to ignore emissions based on the likelihood that those emissions will occur as a result of permitted activities." NSB Petition at 49.

- "The regulations do not provide EPA with the discretion to exempt certain activities from the capability determination because those activities, although covered by the permit, are unlikely to occur." NSB Petition at 47-48.

In order to prevail on its interpretation of the regulatory language, NSB must carry a heavy burden. *See D.C. Mun. Separate Storm Sewer Sys.*, 10 E.A.D. at 342 (Region need only demonstrate due consideration which is rational in light of all the information in the record). NSB cannot demonstrate that Region 10's interpretation was clearly erroneous because (a) the regulatory language in question is not susceptible to NSB's interpretation; (b) Region 10's interpretation is reasonable; (c) NSB cites no authority for its position; and (d) ultimately NSB's interpretation results in an absurd outcome that would curtail the entire ORL-based synthetic minor permitting scheme.

NSB's interpretation of the pertinent regulation is extreme. NSB first acknowledges that the inquiry under 18 AAC § 50.542(f)(8)(A) is whether SOI is "capable of complying" with the Permit conditions. *See* NSB Petition at 38-50 (citing the phrase 11 times). Nonetheless, NSB's Petition then makes clear that it is actually arguing that the Alaska ORL regulation requires *absolute certainty* that the permittee will comply with the permit conditions in every single circumstance, no matter how remote. NSB cites no authority, nor does it even engage in any textual analysis, in support of its assertion that 18 AAC § 50.542(f)(8)(A) requires absolute advance assurance of compliance with an ORL in a permit and that Region 10's contrary interpretation is clearly unreasonable. This is particularly so, as the calculations collected by Region 10 demonstrate, the likelihood that SOI would need to drill an emergency Relief Well to address a blowout is extremely remote.

1. It Is Extremely Unlikely That the Confluence of Events Posited by NSB Will Occur.

Region 10 relies on authoritative studies by MMS in the record to find that the probability that SOI will need to drill a Relief Well in any Exploratory Operation under this permit is less than 1 in 5,960. 2008 Response to Comments at 44-45.

To this already extremely remote scenario, NSB adds specific assumptions, speculating that a relatively deep Relief Well might need to be started—and completed—near to the time that the Permit limits were about to be reached. NSB Petition at 44 (noting that, depending on depth, wells take from 43 to 75 days to drill, and relief wells take from 16 to 34 days; consequently positing an absolute worst case scenario under which the 80-day limit could conceivably be exceeded). However, because the risk of an exceedance of the *Kulluk* ORLs depends on these further assumptions concerning not only the occurrence, but also the timing, of a blowout, the odds against such an exceedance are even greater. Furthermore, under the authoritative MMS study of the OCS exploration well blowout rate of 1992-2006 on which EPA relied, no Relief Well was drilled to completion in that period. Paul Smith (SOI) Letter, May 6, 2008, at 10 (citing MMS study). Consequently, the notion that the *Kulluk* would drill a Relief Well of maximum duration, a necessary prerequisite to NSB's "exceedance" theory, is even less probable.

NSB does not dispute that the probability of a blowout is low, that the probability that a Relief Well would be needed is smaller still, and that the probability that this would occur at a particular time in the drilling operation is smaller still. At best, NSB contends that because the Permit does not specify a fixed number of wells to be drilled, it cannot be determined whether the odds that a Relief Well will be started at some point are greater than 1 in 5960 (or more), i.e., the odds that a Relief Well will be needed will rise with the number of wells drilled under the

permit. NSB overlooks the fact that the Permit itself limits the total number of drilling days to 160 per year (Condition 15.2). Thus, even if each of SOI's wells were drilled in the shortest possible expected time (i.e., NSB's suggestion of 43 days),[43] a maximum of 3 wells would be drilled to completion in any season (i.e., 160 days / 43 days = 3.7). Restated as a function of the probability in this case, and assuming that the probability is cumulative, still the odds against the *Kulluk* starting a Relief Well under this permit in any season would be about 2000 to one (5960/3), and much smaller still that such a Relief Well would cause an exceedance of Permit limits.[44]

2. NSB Cites No Basis for Challenging Region 10's Interpretation of 18 AAC § 50.542(f)(8)(A).

Region 10 has rationally determined that emissions from highly-remote emergency drilling events are not implicated by the Alaska ORL regulation: "given the infrequent need for relief wells, EPA has determined that Shell is not required to submit further information related to relief well emissions prior to issuance of the minor source permit." 2008 Response to Comments at 45. Region 10's interpretation of the regulation is reasonable, uncontradicted in the record, and entitled to deference from the Board. Moreover, NSB has failed to point to any authority to support its contrary theory of the regulation.

Region 10's interpretation is supported by the text of the regulations:

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[43] Of course this assumption undermines the core of NSB's objection, because, as discussed above, to even run the risk of a Relief Well causing a violation of one of the ORLs, it must be drilled to completion at the *end* of NSB's outer limit on drilling times.

[44] Even assuming that the *Kulluk* were to drill 3 wells per season for 10 seasons—a highly conservative estimate that would require, *inter alia*, renewal of SOI's Beaufort Sea leases, which are well into their 10-year terms at this time—the odds against a Relief Well being drilled in *any* of those seasons would be about 200 to 1. The likelihood that this would cause an exceedance of the permit limits is even lower.

> (f) Approval criteria. The department *will* ... (8) *approve* a minor permit establishing an owner requested limit under 18 AAC 50.508(5), if the department finds that (A) the stationary source *is capable of* complying with the limit;

18 AAC § 50.542(f)(8)(A) (emphasis added). This provision directs approval so long as the agency finds that a source is *"capable"* of complying, not whether a source is required to comply. "Capability" does not connote an absolute guarantee of compliance in every circumstance, no matter how remote.[45] Region 10 properly applied a rule of reason under which a minimum 6000 to one longshot non-compliance scenario does not preclude a reasonable finding that the *Kulluk* is "capable" of complying with ORLs.

Finally, Region 10's conclusion that 18 AAC § 50.542(f)(8)(A) applies only to emissions from reasonably foreseeable contingencies is sensible and consistent with how the EPA and courts have generally addressed arguments implicating remote possibilities that could cause environmental impacts. 2008 Response to Comments at 46 n.11 (citing EPA excess emissions guidances, which authorize non-enforcement of air permit violations in case of emergencies); *see also Ground Zero Center for Non-Violent Action v. U.S. Dep't of the Navy*, 383 F.3d 1082. 1090 (9th Cir. 2004) (upholding decisions not to require analysis under the National Environmental Policy Act of how the "remote possibility" of an accidental missile explosion would affect the riparian environment, including endangered salmon species).

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[45]While NSB's Petition repeatedly claims that Condition 15.1 violates 18 AAC 50.542(f)(8)(A), NSB correctly notes in a footnote that EPA's approval of Condition 15, which assures NAAQS compliance by imposing an 80-day time-on-site limit on each of the *Kulluk*'s Exploratory Operations, is actually governed by 18 AAC 50.542(f)(1)(B). Under this provision, ADEC "will deny a minor permit ... if the department finds that construction and operation *will result* in a violation of an ambient air quality standard." (emphasis added). This provision's use of "will" instead of "may" clearly indicates that a denial of the *Kulluk* permit based on a potential emergency Relief Well requiring the *Kulluk* to remain at a location longer than 80 days would be unlawful. A 1-in-6000 chance of such an occurrence is not a rational basis to find that the *Kulluk*'s operation will result in a violation of this operating limit.

Moreover, it is proper to reject NSB's argument because were Region 10 to follow NSB's logic, it effectively could never issue synthetic minor source permits for any industry in which emergencies that might result in additional emissions could occur. Because there is no evidence ADEC intended the applicability of the ORL-based minor source permitting scheme to be so drastically curtailed, this interpretation is absurd and should be rejected out of hand. *Cf. Crown Simpson Pulp Co. v. Costle*, 445 U.S. 193, 196-97 (1980) (in rejecting interpretation of venue statute for CWA appeals, noting that it is proper, *inter alia*, to consider the "irrational" practical implications of a given statutory interpretation).

In the face of this, NSB provides no authority to substantiate its theory of how 18 AAC § 50.542(f)(8)(A) functions. In the absence of any secondary authority, NSB must supply at least a compelling countervailing textual analysis. However, NSB does not do this either. Consequently, NSB has not met its burden of demonstrating that Region 10 clearly erred in interpreting the Alaska ORL regulations. *Shell Offshore Inc.*, slip op. at 59-60 (rejecting parallel concern about emergency emissions based on lack of legal support). NSB has done nothing to affirmatively build the case for a contrary proposition of law, other than repeatedly demand a more detailed showing by Region 10.[46]

C. Region 10's Response to NSB's Comments Concerning Condition 15.1 Does Not Invalidate Its Permitting Decision.

[46] NSB notes in passing that Region 10 failed to establish any generally applicable principles when it made its "ad hoc determination" concerning Condition 15.1. Petition at 48. To the extent that this argument invokes18 AAC 50.542(f)(1)(B) or 18 AAC 50.542(f)(8)(A), NSB's entire premise is incorrect. Region 10 met the plain language of each provision. In the former case, EPA had no obligation to deny the permit, because there was no finding "that construction and operation will result in a violation of an ambient air quality standard." In the latter case, Region 10 properly found that SOI was "capable" of complying with permit limits in the overwhelming majority of situations. Consequently, no discretion was exercised, and even if it was, NSB indicates no legal basis for requiring Region 10 to establish a fixed test for the exercise of such discretion. Certainly in the present case, where the likelihood complained of is less likely than 1 in 5960 to occur, any exercise of discretion by Region 10, if it occurred, would have been objectively reasonable.

Region 10 properly considered all of NSB's comments, including its comments on Condition 15.1. Contrary to NSB's claim, Region 10 responded to NSB's comments on Condition 15.1. NSB claims that neither Category 8 nor 10-2 of the Response to Comments contain a response. *Id.*, at 42-43. But Category 7 in the Response to Comments clearly provided a response to the argument concerning Condition 15.1:

> It was not necessary for Shell to demonstrate its ability to collectively drill within the 80 day period a Planned Well, Replacement Well, and Relief Well. *Shell simply needed to demonstrate its ability to comply with NAAQS assuming compliance with the operational restrictions.* It did that. The resultant permit contains adequate monitoring, recordkeeping and reporting to document compliance with the 80-day limit and applicable emission limits. See Conditions 15.1 and 15.3 of the permit. No permit amendments, including those recommended by NSB, are necessary to assure compliance with the NAAQS or the 245 tpy NOx limit. (emphasis added).

2008 Response to Comments at 36.

This directly-on-point discussion provided sufficient detail for its reasoned conclusion. *See In re Avon Custom Mixing Servs., Inc.*, 10 E.A.D. 700, 708 (EAB 2002) (responses by the permitting authority need only be as detailed as the comments themselves).

Furthermore, to the extent additional detail beyond that provided in the above-quoted text from Category 7 is required with regard to the agency response to Condition 15.1, the responses to Condition 8 provide that detail. The EAB has found in the past that grouping like issues together and providing collective responses can be a proper and non-prejudicial manner of addressing comments. *In re Dominion Energy Brayton Point*, 12 E.A.D. 490, 582-83 (EAB 2006) ("Moreover, the Region's decision to group related comments together and provide one unified response for each issue raised was an efficient technique, not an indication of unresponsiveness.") Because resolution of the two sets of comments has a shared basis, Region 10 could properly respond to them together, and EPA's specific response to the Condition 8 comment sufficiently addressed NSB's Condition 15.1 comments. *Dominion Energy*, 12 E.A.D.

at 579-80 n. 149 ("even if we were to find that the Region did not respond to comments on Duffy & Luders' 24.2C value, this would not be fatal to the Region's reliance on this study to support a 24C threshold temperature value because the Region did adequately respond to comments on the other value (i.e., the 24.4C value) that supported its determination."). Here, despite NSB's insistence that the two issues are distinct, they both pose the same fundamental question: must Region 10 be absolutely certain that the permittee will be able to meet its obligations under an ORL, or an emissions limit, even under highly improbable emergency conditions? Merely pointing out that the two Conditions measure operation of Relief Well drilling in different ways (emissions versus days), and they fulfill different regulatory requirements under the ORL (synthetic minor source compliance and NAAQS compliance), fails to address the fact that the NSB's main objections relating to these Conditions are identical. This is particularly so as NSB argues that the identical Alaska regulation upon which it basis its objections governs *both* its comments to Condition 8 and Condition 15.1

Even if EPA's specific response to the Condition 15.1 issue were insufficient by itself, the record supports the conclusion that Region 10's response for Condition 8 would properly apply in the context of Condition 15.1 as well. *Id.* at 580 n.149 ("we conclude below that the comments on the Casterlin and Reynolds study did not merit more than a generalized response, which the Region provided."); *id.* at 580 ("Moreover, even if we were to find that the Region did not respond to comments about one specific study, this would not be fatal as the Region's rationale for selecting the 24C temperature threshold value was well supported by several studies, not just one.") Consequently, NSB experienced no prejudice in the present case and its claim for appellate review should be rejected.

CONCLUSION

EPA has fully and faithfully carried out the Board's instructions on remand. It carefully examined SOI's exploration activities in light of the relevant guidance and crafted a new definition of stationary source for the permit, a single Exploratory Operation. The record supports EPA's well-articulated rationale for this determination. Therefore EAB should deny the Petitions for Review.

DATED this 6th day of October 2008.

Respectfully submitted,

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Appendix A

Van Dyk, Elisabeth

From: Smith.Kristi@epamail.epa.gov
Sent: Friday, October 03, 2008 5:31 PM
To: Siler, Duane; Parker, Kyle; chris@crag.org; billnjan@gci.net; pvantuyn@earthlink.net
Cc: Matthews.Juliane@epamail.epa.gov
Subject: Shell EAB Case - notice regarding Request for Clarification on ESA issues

To all lead counsel in the Shell OCS permit case (EAB, OCS Appeal Nos. 08-01, 08-02, 08-03):

I am writing to let you know that in the EAB brief that EPA Region 10 will file on Monday (Oct. 6) will inform the Board that the Region has determined that issuance of the Shell permit is fully compliant with the ESA compliance process established by the U.S. Fish and Wildlife Service, that no changes to the existing permit terms are called for, and thus the Shell OCS permit is ripe for review.

- Kristi

Kristi M. Smith
US EPA, Office of General Counsel
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Appendix B

Letter from William B. Hathaway, Director, Air, Pesticides and Toxics Division, Region 6, to Allen Eli Bell, Texas Air Control Board (Nov. 3, 1986)

Letter from Robert Kellem, Acting Director, Information Transfer & Program Integration Division, OAQPS, to Richard Long, Region 7 (Aug. 27, 1996)("Anheuser-Busch Guidance")

Letter from Joan Cabreza, Office of Air Quality, Region 10, to Andy Ginsberg, Oregon Department of Environmental Quality (Aug. 7, 1997) ("Metal Castings Guidance")

Letter from Cheryl Newton, Chief Air Permits and Grants Section, Region 5, to Donald Sutton, Illinois Environmental Protection Agency (Mar. 13, 1998) ("Acme Guidance")

Letter from Richard Long, Director Air Program, EPA Region 8, to Lynn Menlove, Utah Division of Air Quality (May 21, 1998) ("Four Questions Guidance")

Letter from Richard Long, Director Air Program, Region 7, to Julie Wrend, Colorado Department of Public Health and Environment (Nov. 12, 1998)

Letter from Richard Long, Director Air Program, Region 7, to Denise Myers, Colorado Division of Public Health and Environment (Apr. 20, 1999) ("American Soda Guidance")

Letter from Winston A. Smith, Director, Air, Pesticides & Toxics Management Division, Region 4, to Randy C. Poole, Mecklenburg County Department of Environmental Protection (May 19, 1999) ("Williams Energy Guidance")

Letter from Douglas E. Hardesty, Region 10, to John Kuterbach, Alaska Department of Environmental Quality (Aug. 21, 2001) ("Forest Oil Guidance")

Letter from JoAnn Heiman, Region 7 Chief Air Permitting and Compliance Branch to James Pray (Dec. 6, 2004) ("Grain Elevators Guidance")

Memorandum by EPA Acting Assistant Administrator William L. Wehrum, "Source Determinations for Oil and Gas Industries" (Jan. 12, 2007) ("Source Determinations Memorandum")

Letter from Judith Katz, Director, Air Protection Division, Region 3, to James Salvaggio, Director of Air Quality, Pennsylvania Department of Environmental Protection (undated) ("Salt Mine Guidance")

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing Response to Petitions for Review was electronically filed with the Environmental Appeals Board and sent via Electronic Mail and First Class Mail on the 6th day of October, 2008, to the following:

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Shaunice Thomas

Shaunice Thomas, Secretary