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ENVIR. APPEALS BOARD

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

In re:

Shell Offshore Inc.  
Kulluk Drilling Unit and  
Frontier Discoverer Drilling Unit

OCS Permit Nos. R10OCS-AK-07-01  
R10OCS-AK-07-02

OCS Appeal Nos. 07-01 & 07-02

**SHELL OFFSHORE INC.'S RESPONSE TO PETITIONERS' REPLY BRIEFS**

Pursuant to the Board's direction at the conclusion of the hearing in this matter on August 10, 2007, Shell Offshore Inc. ("SOI") hereby files its response to the Reply Briefs of Petitioners North Slope Borough ("NSB") and REDOIL, Northern Alaska Environmental Center, Alaska Wilderness League, Center for Biological Diversity, Natural Resources Defense Council ("NRDC") (collectively "REDOIL"). For the reasons set forth in SOI's and EPA's oppositions to the Petitions for Review, in oral argument before the Board, and in this Reply brief, Petitioners have shown no clear error on the part of EPA in issuing the permits here at issue.

## ARGUMENT

### I. The Statutory Definition of “OCS Source” Does Not Specify How Drill Ship Exploration Should Be Regulated; The Regulatory Definition Controls the Scope of the OCS Source.

OCSLA defines an “OCS Source” to include any “equipment, activity or facility” which (1) emits or has the potential to emit any air pollutant, (ii) is regulated or authorized under OCSLA, and (iii) is located on the OCS or in the waters above the OCS. See 42 U.S.C. §§ 7627(a)(4)(c)(i)-(iii); 40 C.F.R. § 55.2. Drill ship “exploration” is explicitly listed in this definition. *Id.* The reference to drill ship exploration, however, only serves to clarify that such exploration falls under the definition of OCS Source. The statute provides no guidance about whether the scope of the OCS source for such exploratory activity extends to the drill ship wherever it may go or whether it encompasses simply the drill ship at each drill site.

Nevertheless, both Petitioners take this omission as somehow confirming their view that the drill ship remains a single source no matter how many times or over what distances it relocates. NSB Reply at 4, REDOIL Reply at 7. Petitioners have failed to accept the fact that the statutory language does not clearly compel the interpretation that the drill ship, wherever it goes, defines the scope of the OCS source. Rather, one must look to the implementing regulations, which say that drill ship exploration is regulated as an OCS source only when a vessel conducting that activity is attached to the sea bed. According to the regulations, an OCS source:

shall include vessels only when they are: (1) Permanently or temporarily attached to the seabed and erected thereon and used for the purpose of exploring, developing or producing resources therefrom . . . ; or (2) Physically attached to an

OCS facility, in which case only the stationary sources aspects of the vessels will be regulated.

40 C.F.R. § 55.2. In the preamble to the OCS regulations, EPA explained that drill ship vessels are not covered as a source unless they are attached to the seabed: "Drill ships are considered to be an 'OCS source' because they are attached, at least temporarily, to the seabed, and so are authorized and regulated pursuant to the OCSLA; as such, *they will be subject to regulation as stationary sources while attached to the seabed*" 56 Fed. Reg. 63774, 63777 (Dec. 5, 1991) (emphasis added).

It is clear that the definition of OCS source contained in 40 C.F.R. § 55.2 provides the specific direction for regulating drill ship exploration as an OCS source. The regulations support EPA's decision that each drill site will constitute an OCS Source for SOI's exploration in the Beaufort Sea and that each time the drill ship detaches from the seabed the OCS source that was created by that attachment ends. Certainly in the absence of any statutory language to the contrary, this is the better "plain meaning" interpretation of 40 C.F.R. § 55.2, i.e., that the OCS source ceases to exist when a drillship detaches and a new OCS is created if and when it reattaches. Petitioners cite nothing in the regulation or its preamble to suggest that EPA either (a) was required to or (b) intended to adopt Petitioners' extraordinary "now-you-see-it; now-you-don't" interpretation of the term OCS source as applied to exploration by vessels. Certainly, Petitioners have not demonstrated clear legal error by Region 10 in its rejection of their theory.

**II. Previous Agency Practice and the Unique Nature of Offshore Leases Dictate That the Entire Lease Block is not the Appropriate Focus for Determining the Scope of the Source.**

Petitioner NSB argues that, for purposes of potentially aggregating separate drill site sources as "major emitting facilities" under CAA 169, the Board must focus on the entire lease block as the "property" in defining the scope of a source because leases are the basic area on which exploration is authorized on the outer continental shelf (just as on federal onshore lands). NSB asserts that EPA

must focus on these large tracts because “[t]he lease block defines the geographic scope of the property interests held by Shell as mandated by Congress.” NSB Reply at 5. It simply does not follow that EPA has clearly erred by concluding that this 5,760 acre area of open water accessible by the public is not the “property” for purposes of determining potential aggregation of emissions under the PSD regulations. The nature of these leases differs significantly from the normal understanding of a property right and makes such a supposed plain meaning interpretation unreasonable. For example, Shell does not have the right to exclusion on these leases, only having an exclusive right to mineral exploration on the ocean floor. Nothing in the Clean Air Act requires Region 10 to define vast areas of open water in which SOI has a right to explore, tiny areas of which it will occupy during exploration and from which it has no right to exclude any other person or otherwise exercise broader property rights, as the “properties” within the meaning of the contiguous/adjacent property rule for determining whether to aggregate sources.

Instead, a drill site is much more similar to a typical onshore stationary source and is the proper focus for PSD analysis. Like a factory, for example, the drill site is exclusively possessed by the owner or operator. Disregarding this clear comparison would place offshore developers of oil and gas resources at a distinct disadvantage in terms of being subject to PSD review. Congress, by contrast, expressly recognized the importance of regulating offshore sources in the same manner as their onshore counterparts, declaring that one of the goals of the OCS statute was to bring about a more level regulatory playing field between onshore and offshore activities by “applying the same air quality protection requirements as would apply if the OCS sources were located within the corresponding onshore area.” S. Rep. No. 101-228 at 28, 101st Cong., 1st Sess., *reprinted in* 6 U.S.C.C.A.N 3463 (1990). This legislative intent is codified in OCSLA’s requirement that OCS sources within 25 miles of a state’s seaward boundary must comply with the same requirements that apply to sources located in the “corresponding onshore area.” 42 U.S.C. § 7627(a)(1).

It is worth noting that Petitioner NSB's approach to aggregating sources based on the entire lease block would lead to counterproductive results for purposes of protecting air quality. In order to demonstrate that SOI's drillship will meet the NAAQS, Region 10 determined and SOI readily agreed that the affected ambient air begins at the edge of the hull of the drill ship – beyond that point the public cannot be excluded from the area and theoretically could be present at that location. Kulluk Final Permit at 12; Discoverer Final Permit at 13. If, as NSB advocates, the “property” on which aggregated drill sites are located is an entire lease (or multiple contiguous lease blocks) then the “fence line” for the “property” at which NAAQS compliance must be determined should also be the perimeter of the lease block(s). That Petitioners would certainly maintain that this would be an absurd result highlights the unworkable nature of NSB's formalistic “property” approach to source aggregation.

Petitioner NSB seeks to rely on previous EPA permitting decisions on the OCS to argue that the entire lease block is the applicable “property” for purposes of determining the source under the PSD regulations. NSB Reply at 5. This reliance is misplaced. The Destin Dome project off the coast of Florida, cited by NSB in its brief and at the hearing, does not indicate an EPA policy of permitting OCS projects based on the entire lease block.<sup>1</sup> The Destin Dome Unit 56 development and production project was to encompass as many as 21 wells producing up to 450 million cubic feet per day of natural gas. SOI Attachment 16 at 1. The gas was to be produced from satellite well locations and routed through permanent lines to a central processing facility. *Id.* This was a pre-existing, well-defined, integrated industrial operation that bears only the most superficial resemblance to SOI's limited exploration plan in the Beaufort Sea. Exploration had already occurred and what was at issue was expansion of a single existing, integrated industrial operation.

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<sup>1</sup> It should be noted at the outset that the decision documents for Destin Dome provide only a very limited description of the project and basis for approving its permits.

Nor does ARCO's 1993 permit for the Kulluk as a major source support Petitioners' contention. At ARCO's election, EPA issued one major source permit for the project. This does not establish a precedent that compels issuing one permit for an entire project or aggregating sources on the basis of entire lease blocks. Why ARCO chose to pursue a permit of this type is neither in the record nor relevant to this case. What is clear is that, under the cover of a major source permit, ARCO emitted over twice as much pollution per well site as SOI's ORL would allow. Moreover, as NSB correctly notes, "ARCO's potential to emit ("PTE") exceeded major source thresholds for *each* drill site, and thus, a PSD permit was required independent of EPA's decision to aggregate the emissions from all drill sites." NSB Reply at 6 (*quoting* EPA Response 17) (emphasis added).

By contrast to these two inapposite offshore permits, a recent permitting decision by the Alaska Department of Environmental Conservation ("ADEC"), which was reviewed and approved by EPA Administrator Stephen Johnson, supports EPA's decision to focus on the drill site, rather than the entire lease block in the context of an oil and gas industry project. In early 2004, ADEC issued an Operating/Construction permit to BP Exploration (Alaska) Inc. for Gathering Center # 1 ("GC# 1") located within the Prudhoe Bay Unit. This decision by ADEC provides useful guidance for two reasons. First, both this project and SOI's exploration plan involved siting pollutant-emitting activities on only small portions of much larger tracts of property and both were issued permits that reflect this fact. Second, Alaska's North Slope is the corresponding onshore area for the purpose of this action, serving as the model for regulating OCS sources in the Beaufort Sea. *See* 42 U.S.C. § 7627(a)(1).

In a Statement of Basis published on February 17, 2004, ADEC rejected precisely the literalist property analysis that NSB is advocating, refusing to find that the entire Prudhoe Bay Unit should be considered the source, even though it comprises contiguous lease blocks. SOI

Attachment 4 at 3. ADEC declined to aggregate all emissions points simply because the emissions occurred on the same lease or contiguous leases. In interpreting the term "contiguous or adjacent properties," ADEC determined that the relevant "property" is the improved surface areas, and not the entire lease area:

To determine if the "property" or "properties" are located in close proximity, the relevant "property" must first be identified. ADEC has determined that within the North Slope Oilfields "property" is considered to be the improved surface areas (pads) because: (1) oil and gas production activities occur over vast areas in which there is limited surface disturbance, (2) land use permits must be obtained from the state for any surface disturbances, (3) the unique permafrost environment limits the extent of any surface disturbances, and (4) the pollutant emitting activities are located on the pads.

*Id.* ADEC's analysis closely mirrors that of Region 10 in this case. See Response to Comments at 59-60. ADEC considered factors such as uniqueness and proximity to conclude that it could only aggregate pollutant-emitting activities that fit a "common sense notion of a plant." SOI Attachment 4 at 3.

ADEC found that the 300 square miles covered by the lease blocks at Prudhoe Bay "severely stretches the concept of proximity." *Id.* at 5. The agency instead used its discretion, and the flexibility afforded under 40 C.F.R. § 51.166, to apply the contiguous/adjacent property test in a way that accounted for the unique circumstances raised by these leases and noted that, for purposes of sources in the PBU, only the actual improved site would be considered "property," in part because "oil and gas production activities occur over vast areas in which there is limited surface disturbance." *Id.* at 3. Thus, pads located on contiguous leases could not be deemed to be located on contiguous "properties" for purposes of defining the source.

To interpret "adjacency," ADEC also applied a "common sense notion of a plant," which ADEC interpreted as requiring interdependent operation of a processing plant (hub) and wells from which oil flows to the plant (spokes). ADEC interpreted the term "plant" in the oil and gas field to

be equivalent to the manufacturing process for a product, with raw materials flowing from production wells to processing plants, and the resulting product delivered to a pipeline for transportation. Thus, proximity alone is not enough to determine a “common sense notion of a plant” in the oil and gas field; rather, interdependence and flow of material throughout a plant-like process was necessary. ADEC only aggregated interdependent wells and processing plants that “cannot exist without each other and constitute a complete production plant,” while rejecting inclusion of other nearby facilities that were not integrated into that production process. *Id.* at 5. Obviously, the record contains nothing to suggest that this type of linkage, dependence or flow of materials will occur between the Kulluk and the Frontier Discoverer as part of SOI’s exploration operation.

Administrator Johnson affirmed this interpretation in April 2007, also rejecting the view that the entire PBU is contiguous or adjacent property by virtue of contiguous leases stretching over 300 square miles, and concurred in ADEC’s view that, where stationary sources exist on large oil and gas leases, the relevant properties for potential source aggregation are individual well and facility sites. SOI Attachment 5 at 8.

Petitioners claim that this case “involved onshore and not offshore facilities and therefore is inapplicable to the facts of this case.” NSB Reply at 12 n 6. As discussed above, Congress clearly intended that under section 328 of the Clean Air Act offshore facilities must be regulated as if they were located onshore. S. Rep. No. 101-228 at 28, 101st Cong., 1st Sess., *reprinted in* 6 U.S.C.C.A.N 3463 (1990). This goal is embodied in the requirement that OCS sources within 25 miles of a state’s seaward boundary must comply with the same requirements that apply to sources located in the “corresponding onshore area.” 42 U.S.C. § 7627(a)(1). The BP project is located on the corresponding onshore area, was permitted by the state under state laws and regulations governing



the corresponding onshore area, and thus provides direct guidance for an appropriate approach to SOI's OCS permits, one that is not clearly erroneous.

Just as the Administrator declined to overturn ADEC's application of the contiguous/adjacent property test and the resulting "wagon wheel" model, the Board should similarly decline to review EPA's interpretation of the same phrase and the 500 meter threshold. The Administrator's recent order clearly demonstrates that permitting authorities need not aggregate even simultaneously operating sources within the same lease block or on contiguous leases. Region 10 conducted a strikingly similar analysis to the one upheld by the Administrator in his April 2007 Order and considered the relevant factors of uniqueness, proximity, and interrelatedness to determine that aggregating operationally independent sources was unreasonable. Petitioners NSB and REDOIL have not demonstrated that Region 10 acted clearly erroneously in deciding to aggregate emissions from separate drill sites only when those sites are within 500 meters of each other.

**III. EPA Has Discretion in Making Emissions Aggregation Determinations and is not Bound by a Supposed "Plain Meaning" Interpretation of the PSD Regulations.**

**A. *Alabama Power***

One of Petitioner NSB's most inventive claims is that *Alabama Power*, which has consistently guided EPA's approach to emissions aggregation for over 25 years, is somehow irrelevant not only to this action but to all Agency decisions regarding aggregation because "EPA's [revised] regulation contains specific terms not included in the regulation when it was reviewed by the *Alabama Power II* court." NSB Reply at 8.

Petitioner exaggerates the extent to which the definition of "source" changed in the wake of *Alabama Power II*. At the time the D.C. Circuit reviewed the PSD regulations in the case, "source" was defined as "any structure, building, facility, equipment, installation or operation (or combination

thereof) which is located on one or more contiguous or adjacent properties and which is owned or operated by the same person (or by persons under common control).” *Alabama Power*, 636 F.2d 323, 394 (D.C. Cir. 1979) (quoting 40 C.F.R. §§ 51.24, 52.21 (1978)). Today, the concepts embodied in this 1978 definition are found in nearly identical form in the definitions of “stationary source”<sup>2</sup> and “building, structure, facility or installation.”<sup>3</sup>

The substantive changes EPA made to the PSD regulations following *Alabama Power II* were not significant. EPA added “belonging to the same industrial grouping” to the definition of “building, structure, facility or installation” and narrowed the scope of stationary source by eliminating “equipment,” “operation,” and “(or combination thereof)”. Moreover, breaking these concepts out into two separate terms certainly does not undercut the court’s holding in *Alabama Power II*.

The nearly identical language of the regulations reviewed in *Alabama Power II*, as well as over 25 years of consistent reliance upon its guidance by federal and state permitting authorities, establishes that the D.C. Circuit’s analysis of the plant-focused definition of “major emitting facility” in Section 169 of the Clean Air Act in that case remains good law and guides EPA’s administration of the PSD program. Even assuming that NSB’s literalist interpretation of “property” as comprising blocks of multiple nine-square-mile leases were not unlawful under *Alabama Power*, Region 10’s approach in permitting SOI’s drill sites is far from clearly erroneous. In *Alabama Power I* the D.C. Circuit in its initial per curiam opinion upheld EPA’s PSD source definition under which sources

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<sup>2</sup> “Stationary source” is defined as “any building, structure, facility or installation which emits or may emit a regulated NSR pollutant.” 40 C.F.R. § 52.21(5).

<sup>3</sup> “Building, structure, facility, or installation” is defined, in pertinent part, as “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. § 52.21(6).

could sometimes be combined if on contiguous or adjacent properties, provided that EPA would “refrain from unreasonable literal applications of the definition” and would instead “consider as a single stationary source only common sense industrial groupings.” *Alabama Power Co. v Costle*, 606 F.2d 1068, 1078 (D.C. Cir. 1979). As the court made clear in its subsequent followup opinion in *Alabama Power II*, it is *only* when multiple pollutant-emitting activities are “units of a plant” that they should be aggregated for purposes of PSD review. This is because the definition of “major emitting facility” in section 169 of the Clean Air Act specifically mentions numerous types of “plants” as a proper permitting unit; but for that language, aggregation of separate sources would never be proper. See *Alabama Power*, 636 F.2d at 397. Different OCS drill sites on SOI’s leases do not bear any relation to each other, or resemble a plant in any meaningful way. NSB’s theory is precisely the sort of unreasonable literal application that the D.C. Circuit cautioned against back in 1979.

Petitioners’ literalist interpretation also contradicts 25 years of EPA’s implementation of NSR review under *Alabama Power*. When EPA promulgated rules on aggregating sources, it did so based on *Alabama Power* having set “boundaries” on the definition of source, including that “it must approximate a common sense notion of “plant.” 45 Fed. Reg. 52676, 52694-95 (Aug. 7, 1980).

#### B. Agency Discretion

In finding no basis for aggregating separate exploration drilling sites, Region 10 sought to follow the mandate of *Alabama Power* and the Agency’s regulations. This was not clear error. Contrary to Petitioner NSB’s arguments, it has been settled since *Alabama Power II* that, at a minimum, EPA has discretion to weigh the applicable factors and determine when and how to aggregate emissions for PSD purposes. *Alabama Power* clearly endorsed EPA’s “intention to *refrain from unreasonable literal applications* of the definition and instead to consider as a single source only common sense industrial groupings.” See *Alabama Power Co. v Costle*, 606 F.2d at 1078.

Even if, arguendo, the guidance provided by *Alabarra Power II* became inoperative case law following the 1980 regulations, EPA explicitly set forth its intention in promulgating these revised regulations, confirming the view that the revised regulations preserved the Agency's discretion to aggregate sources in a common sense manner:

In EPA's view, the December opinion of the court in *Alabarra Power* sets the following boundaries on the definition for PSD purposes of the component terms of "source": (1) it must carry out reasonably the purposes of PSD; (2) *it must approximate a common sense notion of "plant"*; and (3) it must *avoid aggregating pollutant-emitting activities that as a group would not fit within the ordinary meaning of "building," "structure," "facility," or "installation."*

45 Fed. Reg. at 52694-95 (emphasis added).

This agency pronouncement is fatal to any attempt to limit EPA to a plain meaning application of the contiguous/adjacent property test. As NSB correctly indicates in its reply, an agency's interpretation of its own regulation must be guided by the "plain meaning of the regulation or by other indications of the agency's intention at the time the regulation is promulgated." *Aspenwood Investment Co. v Martinez*, 355 F.3d 1256 (10th Cir. 2004) (citing *Thomas Jefferson University v Shalala*, 512 U.S. 504, 512-513 (1994)); see also *Safe Air for Everyone v U.S. E.P.A.*, 488 F.3d 1088, 1098 (9th Cir. 2007) ("[S]ome indication of the regulatory intent that overcomes plain language must be referenced in the published notices that accompan[y] the rulemaking process."). EPA provided such an intention, an intention to preserve its discretion to aggregate sources according to the "common sense notion of a plant" and the "ordinary meaning of 'building,' 'structure,' 'facility,' or 'installation.'" Petitioner NSB claims that the language in the preamble to the 1980 regulations "does not provide any indication of EPA's 'intent.'" NSB Reply at 11. This is contradicted by EPA's clear statement in 1980 of its understanding of Alabama Power and the Agency's intent in the then-new regulations. Thus, there is no basis for the contention that "[u]nder the revised

regulation, a project that fits squarely within the plain meaning of the regulation should, by definition, approximate a 'common sense notion of a plant.'" *Id.* at 8. Indeed, if this interpretation were correct, the Administrator could not have approved ADEC's permit for a processing plant at Prudhoe Bay in 2005, because it would have required ADEC to include all oil and gas facilities on contiguous leases in that field in the source definition for the new processing plant, no matter how unrelated they were to, or how far from, the plant.

The regulations did not specify precise distances, or other factors, but rather gave EPA 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 Agency can answer that question only through case-by-case determinations." 45 Fed. Reg. at 52695. Region 10 followed this approach in a reasonable manner that is supported by the record, and the Board should not disturb as "clearly erroneous" its decision to limit aggregation of emissions in this case to sites sources located within 500 meters of one another.

### C. Guidance Documents

The regulations do not provide clear direction to permitting authorities making aggregation decisions in all instances. So EPA has published various guidance documents to assist in the implementation of the site aggregation principle. These documents provide useful guidance on the factors to be considered when making these determinations and confirm that permitting authorities have discretion to use a case-by-case approach that ensures aggregation only when it advances the "common sense notion of a plant."

A January 12, 2007 memorandum from the Acting Assistant Administrator for Air, William L. Wehrum, to all regional administrators "provide[s] guidance to assist permitting authorities in making major stationary source determinations for the oil and gas industry." SOI Attachment 3 at 1

("Wehrum Memo"). The guidance extends to oil and gas operation on land, in state waters, and on the OCS. *Id.* The Wehrum Memo confirms that *Alabama Power v Costle* and the preamble to the 1980 regulations remain the basic principles governing source aggregation, noting that the "foremost principle that guides our decision-making is that we should apply a 'common sense notion' of a plant." *Id.* at 2. The memorandum expands on these core principles of *Alabama Power v Costle* and the PSD regulations in light of the unique circumstances often confronting the oil and gas industry.

To fulfill the mandate of *Alabama Power* and the PSD regulations, the Wehrum Memo advises regional administrators to exercise their technical expertise and conduct a fact-specific inquiry to determine whether aggregation is appropriate under the contiguous/adjacent property test: "[e]ven when two or more pollutant-emitting activities are clearly under common control and belong to the same 2-digit SIC code, the unique geographical attributes of the oil and gas industry necessitate a detailed evaluation of whether the activities are contiguous and adjacent." *Id.* To guide this case-by-case approach, the Wehrum Memo notes that EPA has historically "used such factors as operational dependence and proximity to inform [its] analysis of whether two properties are contiguous or adjacent." *Id.* at 3.

Given the unique nature of oil and gas leases, the Wehrum Memo suggests that permitting authorities are unlikely to aggregate sources and will instead focus on a narrower use of the term "property" for purposes of the contiguous/adjacent property test: "In a great majority of cases, we expect that permitting authorities will find that *a single surface site* is the most-suitable industrial grouping because it correlates best with the definition of a stationary source." *Id.* at 5. Thus, EPA specifically endorsed the approach of treating individual facilities on one or more oil and gas leases as separate sources if they most closely resemble the "common sense notion of a plant." *Id.*

In addition to the Wehrum Memo, two other EPA guidance documents clarify EPA's obligations in making source aggregation determinations: (i) a May 21, 1998 Region 8 letter to the

Utah Division of Air Quality, and (ii) a May 19, 1999 Region 4 letter to Mecklenberg County Department of Environmental Protection. Petitioner NSB's attempt to undercut reliance on these guidance documents is unavailing. It is true that both documents were written to provide guidance on grouping adjacent sources; however, both documents highlight the necessity of a functional interrelationship to justify aggregating sources under either term; reiterate the guiding principle of a "common sense notion of a plant;" and emphasize that EPA must proceed on a case-by-case basis.

In the first guidance document, Region 8 clearly states that there is not a specific physical distance within which sources must be aggregated. "In brief, our answer is that the distance associated with 'adjacent' must be considered on a case-by-case basis. This is explained in the preamble of the August 7, 1980 PSD rules..." SOI Attachment 1 at 1. Rather, "any evaluation of what is 'adjacent' must relate to the guiding principle of a common sense notion of a 'source.'" *Id.* at 1-2. As seen elsewhere, a key factor in making this determination is a source's operational independence; sources that have no "functional inter-relationship" will not likely comport with the "common sense notion of a plant" and should be permitted as separate sources. *Id.* at 3. Far from relying on a plain meaning approach to the contiguous/adjacent property test, Region 8 confirmed that source aggregation determinations require a flexible approach and a fact-specific, case-by-case inquiry.

In the second guidance document, Region 4 echoes many of the comments found in the Wehrum Memo and the 1998 Region 8 letter. The letter begins by explaining that "EPA has never specifically defined by regulation an exact separation distance that would cause two facilities to be considered as located on adjacent or contiguous properties. Case-by-case variations preclude a 'one size fits all' definition that would be reasonable in every instance." SOI Attachment 2 at 2. Contrary to Petitioner's attempts to distinguish this guidance, Region 4 advocated a case-by-case approach for situations involving both contiguous and adjacent facilities.

Region 4 explains at length the critical importance of determining whether facilities were “interdependent” or “linked in some sense”:

In most of the EPA documents we reviewed, *the key factor in deciding that separate facilities should be considered as one source was that the facilities were interdependent or linked in some sense.* Our understanding is that the WEV [Williams Energy Ventures] terminals is that they can and do operate independently, that one terminal does not act as a support operation for the other, and that 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 (emphasis added). As in the Region 8 example letter above, EPA again refused to endorse a plain meaning approach to the phrase “contiguous and adjacent properties,” advocating instead a case-by-case evaluation of interdependence to determine whether the sources should be aggregated.

#### **IV. EPA Appropriately Considered a Variety of Factors in Making Its Aggregation Determination.**

SOI’s permits dictate that emissions from the drill ships will be aggregated if they operate within 500 meters of each other. Kulluk Final Permit at 12; Discoverer Final Permit at 13.

REDOIL claims that “no explanation was provided for the choice to use 500 meters, other than that it was suggested by Shell.” REDOIL Reply at 10. This is not correct. In making its aggregation determination, EPA considered three separate facts specific to SOI’s operations: (1) the unique nature of SOI’s “property” -- or lack thereof -- on the OCS; (2) the proximity between potential drill sites; and (3) the operational independence of the drilling operations. Response to Comments at 59.

REDOIL further suggests that the 500 meter buffer cannot stand because EPA failed to “consider the effects of emissions” 500 meters apart from each other. REDOIL Reply at 11. However, this consideration is irrelevant to the determination of a “common sense notion of a plant” for purposes of source aggregation. As discussed below, the 500 meter buffer was predicated on SOI’s and Region 10’s agreement that the Kulluk and Discoverer should not operate close



enough to each other such that emissions from either would cause a violation of the NAAQS, and a consequent hypothetical health risk to nearby persons, at the boundary of either vessel where ambient impacts of the emissions would be highest.

**V. EPA Did Not “Clearly Err” in Calculating the OCS Source’s “Potential to Emit” or in Approving the ORLs.**

**A. EPA Did Not Clearly Err in Not Listing SOI’s Fleet Activity Projections In the Draft Permit Docket.**

NSB continues to contend that, because SOI’s fleet activity projection was not referenced in the public notice/statement of basis for the permits, the entire permitting process should be invalidated, apparently as “clear error.” NSB advances this conclusion even though, having now had this information since, at the latest, July 12, 2007, NSB has been unable to suggest any specific deficiency in the emissions estimates that were based on the fleet activity projection, or point to any other actual prejudice resulting from this omission. Instead, in its Reply, NSB would have the Board simply assume that this oversight was something other than harmless error:

The public was entitled to the same information that the agency deemed necessary for the analysis. NSB is under no obligation to prove any other injury or prejudice from the agency’s failure to properly disclose the required information to the public.

NSB Reply at 16. NSB presumably adopts this new<sup>4</sup> argument— that no specific prejudice need be demonstrated -- because Petitioner cannot identify any prejudice in this case (even though NSB manifestly has the technical resources to do so, based on its comments and briefing). If NSB was, in

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<sup>4</sup> Originally, in its Petition, NSB argued vehemently that it had been particularly prejudiced in this case because it lacked the ability to secure an expert to review the fleet operations data. Moreover, it lamented the fact it had had only five days to review the documentation. NSB Petition at 37. SOI pointed out in its Opposition that the first argument would only be credible to the extent NSB had in fact secured a technical expert to review the bulk of the PTE documentation that was clearly available and referenced in the administrative record, and that the issues concerning the second issue could all have been avoided if NSB had promptly requested the fleet operation documentations when it first became available, two weeks prior to Petitioner’s ultimate request. SOI Opposition at 40-41, nn.17-18. Predictably, rather than refute these arguments, in its Reply, NSB simply shifts its challenge, now claiming that no prejudice was ever necessary for rights under 40 C.F.R. part 124 to be abridged.

fact, prejudiced by the oversight, NSB would certainly explain how, and its failure to do so in either of its briefs should speak volumes about the absence of any actual prejudice to NSB or any other person.

Moreover, had NSB felt itself prejudiced by receiving the fleet activity projection on July 11 or July 12 with the administrative record, NSB had a remedy under 40 C.F.R. §124.14(b). Under that section, Region 10 would have been authorized to reopen the public comment period upon request. This regulation undercuts two aspects of NSB's argument. First, the regulation suggests that there is an appropriate time and place for making a challenge to an omission of information—that is through a request submitted to the Regional Administrator to reconsider the closure of the public comment period. *See* 40 C.F.R. §124.14(b). Here, instead of seeking the available procedural remedy before Region 10, Petitioner improperly waited to ambush Region 10 by raising the supposedly material omission in its Petition to the Board. This was an impermissible failure by NSB to exhaust its proper administrative remedies, and NSB's claim of prejudice should be dismissed for this further reason.

Second, section 124.14(b) highlights what NSB repeatedly refuses to recognize—that in cases where an oversight occurred with regard to public disclosure of documentation, it is a matter of *discretion* on the part of the Region as to how resolve the situation.<sup>5</sup> The permit is not *per se* invalidated. In this specific case, NSB cannot, and indeed, Petitioner does not even attempt<sup>6</sup> to argue that the Region abused its discretion in allowing the permitting to proceed.

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<sup>5</sup> The regulatory provision provides that reopening the comment period is only appropriate “[i]f any data, information, or arguments . . . appear to raise substantial new questions about a permit...” 40 C.F.R. § 124.14(b)(emphasis added). Even in the face of “substantial” new questions, reopening the comment period is but one of several options open to the Regional Administrator—the other options being much less drastic and time-consuming. *Id.*

<sup>6</sup> NSB Reply at 16.

No prejudice resulted from Region 10's failure to reference the fleet operation documentation. The information contained in the unreferenced material was merely ancillary to the PTE issue. This is demonstrated by how much information relevant to the PTE calculation— even according to NSB itself— was properly included in the public record:

The permit application provides the following: yearly emissions in tons for individual emissions units, yearly fuel consumption for vessels and vessel groups, equivalent operating hours for individual emissions units, emissions factors for individual emissions units, expected hourly emissions, the compliance equation, expected maximum emissions, and supporting data for specific emission factors.

NSB Petition at 15. Petitioner nonetheless claims that this is insufficient, because “equivalent operating hours” or “expected maximum emissions” are “only available in the March 8, 2007 submittal.” *Id.* Such a charge is one easily raised, given that in a complex permitting process there always can be some detail that is left out of the public comment docket on the draft permit, and one can always demand a further breakdown of data by different parameters or subcategories.

Compared to what was properly referenced, it is clear, however, that the fleet operation information was minimal in scope and was not essential to an analysis or critique of permit terms. While the March 8 submission contained information that underlay other information that was used in EPA's PTE calculations, having that information did not alter the challenges to the permits. NSB has had the data for over a month and has cited no deficiency in the fleet activity projection or how SOI translated it into emissions estimates for well drilling operations.

As a final matter, even if the failure to adequately reference the fleet operations data were to have caused some prejudice, such that Region 10, in its discretion, should have taken remedial measures to address its oversight, any harm was cured by the inclusion of these documents in the final administrative record. No party disputes that, in contrast to the administrative record for the draft permit, the March 8, 2007 material was definitively contained in the final administrative record.

NSB received this information when it finally requested such record from Region 10. As SOI noted in its Opposition, Petitioner bears responsibility for a substantial part of the delay in its receipt of the fleet activity information. SOI Opposition at 40 n.17. Had NSB timely requested this information, it would have had additional time in which to review it. Having failed to act on its rights, NSB cannot now claim prejudice from that failure.

In summary, the “missing” fleet operation material does not reflect “clear error.” NSB has not shown any actual prejudice to itself or to the public from the omission of that information. NSB has identified no substantive flaws in the permit or underlying data based on its review of the March 9 submission. Moreover, EPA’s regulations provided a procedural remedy that would have cured any prejudice that might have existed had NSB chosen to pursue and exhaust those procedures. In reality, the information in the March 8 submission was minimal in scope, particularly when compared with the information included in the public comment materials, and was not essential to an analysis or critique of the permits, as confirmed by the fact that NSB still has not used the March 8 submission to any substantive end. Finally, the inclusion of the March 8 submission in the administrative record cured any possible prejudice.

**B. Region 10 Reasonably Determined that SOI Submitted Emissions Estimates in Accordance with Alaska Requirements.**

In its Petition, NSB initially advocated a bright-line test concerning whether or not SOI had properly checked the box on the quantitative requirements of 18 AK ADC § 50.540(j) (“An application for a minor permit establishing an owner requested limit (ORL) must include the information and materials required under 18 AAC § 50.225(b)(2) - (7).”) (emphasis added). Both SOI and EPA responded directly to NSB’s claim concerning the facial requirements of 50.225(b)(3) - (4), explaining that both potential to emit and actual emissions were in fact provided in the

application. SOI Opposition at 48-49; EPA Opposition at 25-26. Now, however, that this complaint has been resolved by reference to an Alaska regulation that defines the two terms as being interchangeable in this instance, NSB shifts ground. In lieu of arguing that the express terms of the Alaska regulation have not been met, Petitioner now argues that the spirit of the regulations has been breached: “the clear intent of these regulations [has been breached].” NSB Reply at 17.<sup>7</sup>

NSB’s fallback position does not present a serious challenge to EPA’s action. First, as set forth in EPA’s and SOI’s previous briefs, EPA complied fully with the regulations at issue.

Petitioners cannot sidestep that fact merely by invoking an unsubstantiated regulatory “spirit” that purportedly presents an entirely different set of requirements than does the actual regulation in question. Moreover, Alaska itself has approved SOI’s ORL application in the present case.<sup>8</sup>

Alaska’s conclusion should be accorded substantial deference. *In re Teck Cominco Alaska Incorporated*, 2004 WL 1658594, 11 E.A.D. 457 (“We do generally give substantial deference to the state’s interpretation of its own laws.”)

Finally, NSB’s new argument should be rejected because it was not properly preserved for review. Petitioner’s new argument is that a comparison must be done between the new ORL limit and, importantly, the “maximum design capacity” in order to demonstrate the effect the limit will have on the stationary source’s emissions. Maximum design capacity now becomes the missing

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<sup>7</sup> As an initial matter, it should be noted that NSB fails to raise in its Reply its prior argument in its Petition that “EPA Improperly Based Potential to Emit on Expected or Average Emissions.” NSB Petition at 37-41. Given SOI’s arguments to the contrary in its Opposition, NSB seems to have conceded that PTE properly can be based on average emission rates or factors.

<sup>8</sup> In its May 11 and May 15, 2007 comments, the Alaska Department of Environmental Conservation, Air Quality Division (“ADEC”) stated “[SOI’s] exploration plan will be consistent with Alaska Air Quality Statutes and Regulations if certain alternate measures are added.” In “Alternate Measure 1,” ADEC addressed the issue of ORLs and the completeness of application materials. Its only objection was whether all emissions sources had been included, specifically whether tanks, vents and flares were included. ADEC was on notice of the precise issue raised by NSB, and yet saw fit to say nothing about the present issue. Apparently, the State of Alaska has a different view of “the clear intent of these regulations” than does NSB.

figure from SOI's application, because in order to provide "information on the effect of the requested ORL" at a time when "there is no ORL in place," the ORL must be measured against some other number. NSB Reply at 18. The "only way to read the regulations to provide them with any meaning" is apparently to make this other number the maximum design capacity.

The phrase "maximum design capacity," however, appears nowhere in the relevant section of NSB's Petition, nor does it emerge in the EPA Response to Comments. Neither SOI nor Region 10 was on notice of the issue until it appeared this past week in NSB's Reply. 40 C.F.R. § 124.13 (all reasonably ascertainable issues must be raised during the public comment period in order to be preserved for administrative review). Accordingly, the Board should deny review of the permits on this ground.

In any event, Petitioner is incorrect that providing the "maximum design capacity" is the "only way to read the regulations to provide them with any meaning." NSB Reply at 18. The term does not appear in 18 AAC § 50.225(b)(2) - (7). This new reading contradicts what NSB stated in its Petition, that "[SOI could] provide a calculation of both potential to emit and actual emissions ... to demonstrate the effect of the Permit limits on potential to emit." NSB Petition at 41 (emphasis added). Finally, NSB is wrong in stating that the only meaningful comparison for ORL purposes is between the limit and the maximum design threshold at which the emissions equipment can operate. Comparing the ORL from an emissions site to a capacity at which the facility will never be operated is a useless exercise in abstraction with no real-world applicability.<sup>9</sup> For example, maximum design

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<sup>9</sup> Petitioner's stand-by case of *U.S. v Louisiana-Pacific Corp.*, 682 F.Supp. 1141, 1158 (D.Colo. 1988) makes it clear that maximum design capacity is an empty concept:

The broad holding of *Alabama Power* ... contemplates the maximum emissions that can be generated while operating the source *as it is intended to be operated and as it is normally operated*. Of course, it is possible that a source could be operated without the control equipment designed into it or that a Konus heater could be operated so badly that the fire would go out. Yet, *Alabama Power* stands for

capacity would presumably include, contrary to fact, simultaneous operation of drilling engines on the drill ship as well as other engines that only operate when drilling is *not* occurring.

With respect to these permits, actual emissions of NO<sub>x</sub> at a drill site under reasonable drilling scenarios are 245 tons of NO<sub>x</sub>, the same figure as the ORL. SOI thus did submit information on the source's PTE in the absence of the ORL as required by the Alaska regulations, and the emissions inventory did not rely upon the ORL. EPA Response to Comments at 36 ("Shell estimates worst-case annual emissions (drillships & support vessels) from a particular drill site as [245 tons per year]"); *compare* NSB Reply Brief at 18. This resulted in the figure of 245 tons per year, being the source's potential to emit.<sup>10</sup> The ORL of 245 tons, of course, ensures that the projected emissions are not exceeded. But because the operation is predicted not to exceed 245 tons NO<sub>x</sub> even in the absence of an ORL, NSB's demand that meaningful ORL effects on emissions be shown in this case does not apply. Consequently, there is no basis for reading into ADEC's regulations language that would require Region 10 to have required SOI to provide "maximum design capacity" in addition to "potential to emit," with its ORL request.

**C. Region 10 properly accepted SOI's ORL application as conforming with applicable standards.**

At the outset, it must be noted that NSB failed to preserve many of the specific objections to enforceability and monitoring under the permits for potential review by the Board. NSB argues that arguments pertaining to both enforceability and monitoring were raised during the comment period.

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the proposition that hypothesizing the worst possible emissions from the worst possible operation is the wrong way to calculate potential to emit.

(emphasis added).

<sup>10</sup> NSB apparently agreed that SOI's PTE was not based on ORL in its Petition, because it had an entire section devoted to the impropriety of calculating PTE using forecasts, estimations, and averaging to calculate this figure. See NSB Petition at 37-41.

Petitioner discusses enforceability and monitoring interchangeably, suggesting that there was substantial commentary on both issues. NSB Reply at 20-21. In fact, sparse comments exist with respect to either and none of these comments identify with any particularity the issues upon which NSB now focuses its claims.

With regard to monitoring—the only one of the two issues raised in its Reply—NSB notes several very general monitoring comments, *see, e.g.*, NSB Reply at 21 (“there is ‘no monitoring on site’ ... ‘emissions should be monitored’” (citations omitted)), before coming to the most direct comment, ADEC’s general concern over the need for verifying SOI’s capacity for ORL compliance. None of these comments specifically preserve any objection concerning whether monitoring is sufficiently short-term and, with regard to AP-42 issues, precise – the two issues upon which NSB’s Petition and Reply turn. *See* 40 C.F.R. § 124.19(a) (petitioner must show that any issues raised on appeal were raised during the public comment period to the extent required by the regulations); 40 C.F.R. § 124.13 (all reasonably ascertainable issues must be raised during the public comment period).

NSB’s broad call for monitoring and verification was insufficient to preserve the issues it now identifies for potential review. The purpose of the public comment requirement is to “alert the permit issuer to potential problems with a draft permit and to ensure that the permit issuer has an opportunity to address the problems before the permit becomes final.” *In re City of Phoenix, Ariz.*, 9 E.A.D. 515, 524, 2000 WL 1664964 (EAB Nov. 1, 2000) (citations omitted). Where, as here, a commenter gives insufficient detail to enable an agency to discern potential problems with its decisionmaking, the agency is not properly put on notice to address the concern. *In re Rodegen Energy Ctr.*, 8 E.A.D. 536, 547-48 (EAB 1999) (denying review where administrative record reflected that the issue on appeal was not raised with sufficient specificity during the public comment period).



In the present case, generalized allegations that the permits do not require monitoring could not serve as notice to Region 10 of a few very specialized and specific objections to SOI's ORL compliance monitoring—namely that the AP-42 emissions factors are unreliable, that the monitoring time lag is excessive—and now—for the first time in the Reply, that there is the hypothetical possibility that both generic emissions factors, for large as well as small engines, could be incorrect and SOI could potentially exceed the ORL in the first 24 days of drilling, prior to direct stack-testing coming on-line. NSB Reply at 24. The detailed, technical nature of these objections counsels two things—first, that these issues needed to be specifically preserved for appeal, and were not, and that deference is appropriate with regard to the agency decision.

Assuming *arguendo* that these generalized comments did preserve concerns about either the short-term and verifiable nature of monitoring or the enforceability of AP-42 emissions factors, still NSB asserts no standards by which Region 10's decisions could be deemed clearly erroneous. The emissions factor issue is resolved by the fact that EAB precedent establishes that AP-42 may be used to determine emissions limits.<sup>11</sup> With regard to whether SOI monitoring is sufficiently short-term and verifiable, no discernable standard can be ascertained from either NSB's Petition or Reply to evaluate NSB's contentions. In the Reply, Petitioner speaks in generalities, never asserting any definitive standard against which the correctness of Region 10's permitting decision can be measured. NSB variously remarks: "Traditionally a short term limit on emission rate is coupled with an operational limit to yield a practically enforceable limit on a source's capacity to emit." (p. 21)

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<sup>11</sup> *In re Steel Dynamics, Inc.*, 9 E.A.D. 740 (EAB 2001); NSR Manual, at A-22 (AP-42 permissible form for establishing PTE). Moreover, in the present case, AP-42 emissions factors are only used for a small percentage of emissions sources (10%). This is the distinction that makes NSB's premier authority, *Peabody*, in fact favor Region 10's permitting decision. In *Peabody*, although upholding the agency decision not to rely on AP-42, the Board acknowledged that if Petitioner provided additional forms of testing to complement the AP-42 emissions factors, Petitioner might then be entitled to a synthetic minor permit. Here, SOI has completely followed the mandate of *Peabody*. In any event, as in *Peabody*, the Board should accord deference to the technical determination properly made by Region 10.

and “One such traditional limit would be a limit on the concentration of NO<sub>x</sub> in pounds per hour coupled with a limit on hours of operation.” (p. 22)

It is unclear from this discussion whether NSB is arguing, as an absolute matter, that Region 10 must require SOI to measure NO<sub>x</sub> using “pounds per hour” as units in order for its monitoring method to be sufficient and not “clearly erroneous.” Regardless, the ORL’s hard cap on NO<sub>x</sub> emissions at 245 tons per drill site is not a simple “blanket restriction” of the sort proscribed by *Louisiana Pacific*, but is instead tied to specific, measurable, ongoing factors, including measured fuel use and/or output measured as load, and calculated emissions based on emission factors for every emitting source, which emissions factors will be validated by stack testing for sources generating well over 90 percent of the emissions. SOI’s permitting offers short-term monitoring because Permit Condition 12.4 (c) allows SOI to monitor engine loads/output every 15 minutes for these 90-percent sources.<sup>12</sup> This is part of a comprehensive hybrid compliance monitoring and tracking system that includes calculation of emissions from small engines using emission factors and from larger sources using empirical measurements. *See generally* SOI Opposition at 51; EPA Opposition at 29-30. The permits also contain weekly “rolling cumulative total emission limits for NO<sub>x</sub> with emissions recorded each week and added to the total from the previous 51 weeks to determine an annual emissions total each week.” This requirement ensures that SOI will see cumulative emission totals at a drill site and will know when it is approaching 245 tons. At that point, SOI would have every incentive not to exceed 245 tons over the course of the next week because, as noted in Region

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<sup>12</sup> “The permittee shall monitor, calculate, and record data as follows: (i) Monitor and record each engine’s operating load once every 15 minutes. At that time, identify whether engine is transitioning between operating loads. (ii) Every 15 minutes, calculate and record each engine’s preceding 3-hour average operating load.” (emphasis added); *see also* EPA Response to Comments at 44; *id.* (“Although the permit requires Shell to calculate cumulative NO<sub>x</sub> emissions once per week, EPA would expect Shell to deploy a data acquisition and handling system that also computes drill site cumulative emissions at least once per day for those large emission units employing data loggers.”)

10's Response to Comments, SOI would thereby have allowed conversion of the drill ship at that site to a major source, which would constitute a PSD violation that SOI could do nothing after the fact to correct.<sup>13</sup> See Response to Comments at 43-44.

Petitioners raise the specter that, because the permits allow SOI a period of 24 days from startup within which to complete emissions testing for the large engines that will comprise over 90 percent of emissions from a drilling operation, SOI might complete a well before these measurements are made and the 250 ton cap on NOx emissions might already have been exceeded. In addition to the clear disincentive for SOI to belatedly discover that it has violated PSD requirements, the obvious response to this assertion is that SOI has not projected any real possibility of completing a well in less than 30 days, which would leave several days' cushion even if SOI does not complete emissions testing until the 24<sup>th</sup> day. Moreover, Petitioners themselves have advanced the theory that total emissions from a drill site will vary in direct relationship with the duration of drilling. Thus, Petitioners have alleged that SOI will be unable to complete wells requiring *longer* than estimated times to drill without exceeding the 245 ton ORL on NOx. Petitioners provide no evidence to suggest that a well that takes far *less* than the anticipated drilling time to complete is also likely to generate more than 250 tons of NOx. Drilling on any exploration rig proceeds continuously round the clock to the extent possible. If SOI finishes a well within 30 days, it will be because the drilling operation went smoothly and without excessive interruption. Petitioners have offered no concrete scenario under which a 30-day drilling effort reasonably would require consumption of fuel, and corresponding emissions of 245 tons of NOx, equal to a 60 day drilling effort.

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<sup>13</sup> Compare NSB Reply Brief at 23 ("EPA is not requiring that Shell use CEMs to establish compliance with a 365-day rolling limit on actual emissions.")

Additionally, Petitioners fail to note that EPA and SOI utilized emission factors that are rated by EPA as highly reliable to project emissions from the larger engines, which constitute 90 percent of all emissions. Those initial factors will be utilized to calculate total emissions until emissions monitoring is completed. Thus, the initial emissions factor for internal combustion engines with more than 600 horsepower was drawn from AP-42 Table 3.4-1 and 3.4-2. See "Calculations," Exhibit B to Permit Application, Petitioners' Exhibit 1 at B-14. According to the referenced table, AP-42 emission factors for these engines are all "B," or good. See AP-42 at Table 3.4-1. According to the Introduction to AP-42, a rating of B for an emissions factor means the emission factor is "above average." *Id.*, Introduction at 9. Thus, the risk that these initial emissions factor would seriously underpredict NO<sub>x</sub> or other emissions during drilling operations lasting less than 30 days is without foundation and it was not clearly erroneous for Region 10 to rely on the published factors for the first 24 days of operation.<sup>14</sup>

In short, NSB's Petition and Reply fail to raise reviewable issues with respect to monitoring. NSB's arguments with respect to the use of AP-42 are not preserved for review. In any event, while the challenged use of AP-42 was minimal and implicated only a small amount of the overall emissions from the project, its use was also expressly approved by EAB precedent. NSB's argument

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<sup>14</sup> In its Petition, NSB also mischaracterized the significance and reliability of the emission factors that EPA is using for fuel-consumption based emissions monitoring for the small segment of sources on the drill ships and support vessels for which emissions testing is not required. NSB asserts that the emissions factor for these small engines, which is drawn from AP-42 Table 3.3-1, have a quality rating of D. NSB asserts: "A rating of D indicates that the tests used to establish the factor are "based on a generally unacceptable method, but the method may provide an order-of-magnitude value for the source." NSB Petition at 52, quoting AP-42, Introduction at 8 (sic.) In fact, NSB here confuses AP-42's rating for "test quality data" with its rating system for "emission factor quality ratings." A rating of "D" for test quality data means the results are "generally unacceptable" and may only provide order of magnitude accuracy. AP-42, Introduction at 9. But, while emission factors for small engines have a "D" quality rating, such a rating must be based on data that has a quality rating of not less than "C." *Id.* at 10. Only an emissions factor with a quality rating of "E" can be based on test data with a data quality rating of "D." *Id.* Thus, NSB's suggestion that the emissions factor that SOI used to project emissions from the smaller engines may be too low by an order of magnitude is simply incorrect.

that monitoring is not sufficiently current also was not sufficiently identified in NSB's comments to preserve this issue for review. Moreover, NSB's unspecified claim that monitoring to confirm permit compliance will not be performed on a sufficiently short-term basis fails to recognize that elements of monitoring already occur on a weekly, daily, and even a quarter-hourly basis. NSB's failure to identify any specific criticism of monitoring in its comments and its ongoing failure to identify any specific standard that has been violated confirms that there is no defect in the monitoring under the permits that would warrant granting review or overriding the technical deference owed to Region 10 on a technical issue such as this.

**VI. EPA and SOI Appropriately Modeled the Air Quality Impacts of Combined Operations at Multiple Drilling Locations.**

NSB argues in its Reply that, under 40 C.F.R. Part 51, Appendix W, Region 10 was required to model the combined effects of the simultaneous operation of both drillships "in the vicinity" of each other. SOI does not believe that such modeling was required under Appendix W.<sup>15</sup> Nevertheless, the record reflects that in the third week of March, 2007, SOI's air modeling consultants, Air Sciences, advised Mr. Dan Meyer of EPA Region 10 by telephone that, by

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<sup>15</sup> Appendix W indicates that "all sources expected to cause a significant concentration gradient in the vicinity of the source or sources under consideration for emission limit(s) should be explicitly modeled." However, determination of what additional sources should be modeled with the proposed source for NAAQS compliance purposes is committed to the Region's discretion:

The number of such sources is expected to be small except in unusual situations. Owing to both the uniqueness of each modeling situation and the large number of variables involved in identifying nearby sources, no attempt is made here to comprehensively define this term. Rather, identification of nearby sources calls for the exercise of professional judgement by the appropriate reviewing authority (paragraph 3.0(b)). This guidance is not intended to alter the exercise of that judgement or to comprehensively define which sources are nearby sources.

40 C.F.R. part 51, Appendix W, 9.2.3(b) Recommendations (Multi-Source Areas)--*Nearby Sources*. NSB has adduced no record evidence to suggest that Region 10's air quality experts did not exercise professional judgement or otherwise committed clear error in connection with the modeling of air quality impacts from the Kulluk, the Frontier Discoverer or both.

superimposing on the previously-reported air quality impacts from the drillship the same impacts again, but shifting the superimposed location and, thus, the impacts by 500 meters upwind, the worst-case short-term combined impacts of two drill vessels drilling simultaneously at least 500 meters apart (highest 24-hour  $PM_{10}$  impacts), and the worst-case longer-term combined impacts of a single vessel relocating 500 meters for a second drill program (highest annual  $NO_x$  impacts), were shown to be below the NAAQS. Declaration of Rodger Steen, ¶ 5, Aug. 14, 2007 (SOI Attachment 17). This was based entirely on the February 2007 dispersion modeling analyses submitted to EPA and the results of that analysis as reported to Region 10, and the Region could have readily replicated these results. *Id.* On March 20, 2007, Air Sciences sent an e-mail to Mr. Meyer at Region 10 confirming that, based on Air Sciences' modeling of combined impacts described above, SOI believed a 500 meter radius around separate drill sites would ensure that air quality standards would not be exceeded at the locations of maximum potential impact. *Id.*; see Item E-32 in certified index to administrative record. Air Sciences submitted to Region 10 an Addendum to the permit applications, which was dated March 26, 2007, that, inter alia noted SOI's proposal that the permits impose a minimum separation of 500 meters for simultaneous or successive drill sites and stated, "from an impact analysis perspective this distance [500 meters] is sufficient even under the worst combinations of source locations and winds to avoid impact aggregation." See March 26, 2007 Addendum at 5; Item A-6 in certified index to administrative record.

Thus, the point of the 500 meter separation requirement was to ensure compliance with the NAAQS at those locations where the highest concentrations of criteria pollutants, including both  $NO_x$  and  $PM_{10}$ , were likely to occur in the ambient air. The hypothetical worst-case, highest impact location was at the perimeter of the drillship's hull, including not only emissions from that drillship, but also under worst-case conditions emissions from the other, upwind drilling vessel. SOI's consultants determined and apprised Region 10 that (a) for a single drill site approach,

exceedances of the NAAQS for NO<sub>x</sub> or P10 would not occur at this worst-case location and (b) provided a second drill site or drillship was located at least 500 meters away, emissions from the second drilling operation would not cause air pollution at the first ship's perimeter to exceed NAAQS. Thus, the record does reflect Region 10's consideration of worst-case additive effects of simultaneous operation of the Kulluk and Discoverer and determination that, as long as the vessels were at least 500 meters apart, no NAAQS exceedance (or hypothetical associated health risk to persons located even in close proximity to either drillship) would occur.

Even if the two drill ships were operating at a distance of 501 meters from each other such that emissions of PM-10 or NO<sub>x</sub> might combine, it is highly unlikely that any individuals would be present near either vessel in order to be exposed to the modeled maximum ambient concentrations of either pollutant. The Environmental Assessment for the exploration plan, which is Item K-4 in the Certified Index to the record for these permits (SOI Attachment 18), discusses in detail the location of the leases mentioned in SOI's exploration plan and provides data on the historical locations of bowhead hunts that demonstrate the low probability that any subsistence hunters would ever be in the vicinity of either drillship during drilling operations:

Exploration drilling with accompanying vessel and aerial support is proposed for the four Olympia Prospect lease blocks 12 mi northwest of Kaktovik and the four Sivulliq Prospect lease blocks 45 mi west of Cross Island, the traditional staging location for Nuiqsut subsistence whaling. The locations of whale harvests around Cross Island and Kaktovik are shown on Figures 12 and 13, respectively. Also cleared for potential future exploration is this EA but not analyzed in the EP are the Fosters and Fireclaw Prospects 25 mi east of Barter Island and the Cornell Prospect 20 miles north of the Coleville River Delta.

EA for SOI Exploration Plan at 14. In addition to the relevant text from the EA, the maps contained in Figures 12 and 13, and Figure 1, a map showing the leases listed in SOI's exploration plan, are attached hereto as Exhibit C. With respect to the Sivulliq Prospect, these maps

demonstrate that the easternmost bowhead strike approaching the Sivulliq Prospects is still approximately 5 miles away from the edge of the associated lease blocks. *Compare* Figures 12 and 1. The Olympia Prospect is separated by a similar distance from the vast majority of bowhead strikes off the coast of Kaktovik. *Compare* Figures 13 and 1. Thus, while SOI modeled the worst-case impacts of each drill ship on PM-10 and NO<sub>x</sub>, and the combined worst-case effects, of both drill ships, and demonstrated that under neither scenario would the NAAQS be violated, the risk of exposure of any person to those worst-case (but still compliant) conditions is negligible.

#### **VII. EPA Amply Provided for “Meaningful” Public Comment.**

As modified by its Reply, NSB’s remaining objection regarding public participation and the EPA’s trust obligation has become a particularly narrow one. After conceding that Region 10 met “the minimum requirements for public notice and comment under the applicable permitting regulations,” NSB Reply at 26, NSB must now prove that Region 10’s choice not to undertake obligations over and above those legally mandated clearly was an abuse of discretion. NSB cannot carry its burden here for three reasons.

First, Region 10 in fact exceeded any legal floor, and actually met the requirements for a “qualitatively”-assessed public participation standard. While not everything requested by NSB or local commenters was provided, Region 10 made multiple and repeated accommodations, in addition to the two (one formal, one informal) hearings in Nuiqsut. EPA met any additional qualitative requirements by consulting with federally-recognized Tribal groups. On Feb. 21, 2007, EPA sent a letter and fact sheet to the President, Chairman, Village Coordinator, and First Chief of 30 federal-recognized tribes, inviting them to initiate government-to-government consultation. At the request of the Native Village of Nuiqsut, the parties scheduled a conference call on March 26, 2006. EPA initiated the call, but representatives of the Native Village of Nuiqsut did not join the



call. The cumulative conclusion from the above is, that despite Region 10's decision ultimately not to postpone local hearings, it provided far more than any quantitative floor, with regard to its obligations under Executive Order 13175, and in fact offered all commenters a meaningful opportunity to comment. As EPA notes in its Opposition, the level of local participation is palpably demonstrated by the voluminous local comments in the record. EPA Opposition at 52.

Second, assuming that Region 10's efforts above and beyond holding the public meeting in Nuiqsut (which even this, it was not obligated to do) did not meet some "qualitative" obligation under the Executive Order, still the permitting decision should be upheld because the Executive Order does not apply in this case. By its terms, Executive Order 13175 only applies to "Federal policies that have Tribal implications." A draft EPA guidance interprets this language to mean that the Executive Order does not apply to permitting decisions, such as here, for land outside of sovereign Indian territory. 71 Fed. Reg. 20314, 20328 (April 19, 2006) ("Do the Requirements of Executive Order 13175 Apply to Permitting Activities?")(Permits issued to non-Tribal facilities do not have Tribal implications "even if the facility is located in or near Indian country or some other area of interest to a Tribal government since the effect on the Tribe would be indirect in nature.")

Consigned to a footnote, NSB's response to this point is that the Guidance is "not binding" and in any event, incorrect, because it contradicts the Executive Order. Two things can be said about this. First, NSB is more than willing to rely on EPA Guidance when it suits its interests— see, e.g., NSB Reply at 30 (environmental justice). Second, the Board lacks the jurisdiction to undertake the inquiry suggested by Petitioner. The Board may only consider the appropriateness of individual permitting decisions, not the validity of the underlying statutes and regulations upon which such permit is issued. See, e.g., *In re Federated Oil & Gas of Traverse City*, 6 E.A.D. 722 (EAB 1997)(in the context of a review of a minor source permit, it was improper to test the validity of agency regulation). At its simplest level, the Board's function is to test the rationality of agency decision-

making against a deferential standard that recognizes most permit decisions should reside with the Regions. Where, as here, Agency guidance tells the Region exactly what to do, the Region's action in conformance with the guidance will always be supported by adequate basis. Where rules support its action, there simply is no concern that the Region is acting arbitrarily. Consequently, Region 10's permitting decision should be upheld in this case.

Finally, NSB's argument fails for the further reason that it does not recognize that Region 10 appropriately must balance various interests. NSB does not go so far as to argue that Region 10 had an absolute duty to reschedule the public meetings in question— it concedes rescheduling involved the Region's weighing of different interests. NSB Petition at 27. These competing interests included, according to Region 10, (1) the fact that extensive information sharing had already occurred; (2) seasonal conditions on the North Slope were changing with the onset of Fall; and (3) a national priority of facilitating domestic energy projects. NSB may certainly disagree with Region 10's weighing of these interests, but it has not demonstrated the Region 10's decision not to reschedule the meeting was clear error.

#### **VIII. EPA Fully Satisfied Its Environmental Justice Responsibilities.**

Although NSB's environmental justice argument is some four pages in length, the only real point of contention is the single footnote in that section. The first three pages consist of Petitioner's concession that a NAAQS violation is a prerequisite to any comparative environmental justice study. NSB then reiterates its prior NAAQS argument to suggest that a comparative analysis is not precluded in this case.

Petitioner's complaint that no modeling considered the eventuality of two drill ships operating at minimum proximity can be dismissed for the same reasons previously articulated. First,

contrary to NSB's express contention, such modeling was, in fact, conducted. At 501 meters distance it naturally demonstrated lesser figures of PM10 than Petitioner arrives at by erroneously assuming the two facilities will operate on top of each other.<sup>16</sup> Specifically, the supposed NAAQS "exceedance") under NSB's reckoning, does not exist when two drilling vessels are 501 meters apart. Moreover, as discussed in detail above, even if, despite the predictions of the modeling, some momentary NAAQS violation were to occur in the shadow of the two ships, this would occur far out at sea, far from the villages here at issue and far from any hypothetical kayaker. Because Petitioners can show no harm to human health, there can be no need for a comparative analysis of harm for environmental justice purposes.

Footnote 10 on pages 31-32 of NSB's brief invites the Board to compel an environmental justice analysis even if NAAQS were not violated, based on the premise that NAAQS is a faulty standard. This position should be rejected for three reasons. First, this issue has not been preserved for review. Second, the Board lacks the authority to evaluate the validity of substantive regulations or statutes—its mission, as described previously in "public participation"—is merely to evaluate whether agency actions conform to such rules. The Board does not delve deeper to second-guess the appropriateness of the rules themselves.

Finally with regard to the footnote text, Petitioner's objections are substantively incorrect. NAAQS must in fact "accurately reflect atmospheric conditions in the North Slope" because they are the National Ambient Air Quality Standards, and hence are calibrated to account for air quality conditions in all domestic U.S. territory. Alaska and the North Slope are not a special exception to

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<sup>16</sup> The 501 meter scenario also is unlikely at best for two reasons. First, SOI's area of lease blocks runs more than 300 miles in distance and each drilling operation is independent from the other drill ship. Under these circumstances, there seems no reason to anticipate that the drill ships would be operating in extremely close proximity. Second, there is a physical limitation on proximity created by the use of long-distance anchors. Based on their length, the two drill ships could not operate within one kilometer of one another, or more than twice the formal distance permissible under the permit.

NAAQS. Moreover, NSB misattributes the federal register citation in arguing that NAAQS is somehow not protective of human health. *See generally* 71 Fed. Reg. 2620. The only issue of potential NAAQS violations raised by Petitioner here relates to PM10, but the generic health risks cited by NSB from the proposed revisions to NAAQS PM limits (at 2635) refer to fine particulate matter, or PM2.5. Moreover, the general allegation set forth by NSB that “the most recent review of the NAAQS for fine particulate matter found that there is no level of particulate matter pollution at which no human health effects occur” is contradicted by the fact that where the Federal Register notice does, in fact, discuss PM10, it determines that annual standards may no longer be necessary:

In the last review, EPA retained ... annual PM 10 standards ... That decision was based in part on ... the plausibility of the potential build-up ... after long-term exposure. With regard to long-term exposure ... [new] studies reported no associations. ... Thus, the Administrator proposes to revoke the annual PM10 standard and is not proposing an annual PM10-2.5 standard.

71 Fed. Reg. at 2668-69. Consequently, the proposed rule-making does not support Petitioner’s efforts to cobble together a human health danger in order to trigger a comparative environmental justice analysis, despite the fact there is no PM10 NAAQS violation.

In short, no environmental justice comparative analysis is necessary in the present case because there is no NAAQS violation and NAAQS adequately protects human health. In any event, because Region 10’s reliance on the above arguments was not clearly incorrect, the standard of review warrants the Board dismiss NSB’s petition on this point.

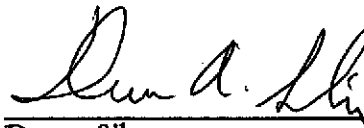
### CONCLUSION

The Board should defer to Region 10’s application of long-standing agency policies, and deny the Petitions for Review in this case. *See In re Hourret Corporation*, RCRA Appeal No. 05-04,

slip. op. at 14 (EAB, May 24, 2007) (the Board “give[s] greater deference to a position when it is supported by Agency rulings, statements, and opinions that have been consistent over time”).

Respectfully submitted,

PATTON BOGGS LLP  
Attorneys for Shell Offshore Inc.

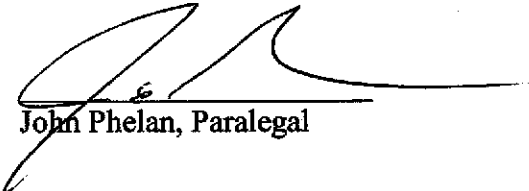
A handwritten signature in cursive script, appearing to read "Duane A. Siler", is written over a horizontal line.

Duane Siler  
Susan M. Mathiascheck  
2550 M Street NW  
Washington DC 20036  
Telephone: 202-457-6000  
Facsimile: 202-457-6315

### CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing Brief of Shell Offshore Inc was filed with the Environmental Appeals Board and sent, via Federal Express and Electronic Mail on the 15th day of August 2007, to the following:

<p>Chris Winter Crag Law Center 917 SW Oak St., Suite 417 Portland, OR 97205 Phone: (503) 525-2725 Facsimile: (503) 296-5454 Email: <a href="mailto:chris@crag.org">chris@crag.org</a></p>	<p>Michael LeVine Eric Jorgensen Clayton Jernigan 325 Fourth Street Juneau, AK 99801 Phone: 907-586-2751 Facsimile: 907-463-5891 <a href="mailto:mlevine@earthjustice.org">mlevine@earthjustice.org</a></p>
<p>Dan Meyer Richard Albright Office of Air, Waste and Toxics U.S. EPA, Region 10 1200 Sixth Avenue Seattle, WA 98101 Phone: (206) 553-1200 Facsimile: (206) 553-0110 <a href="mailto:meyer.dan@epa.gov">meyer.dan@epa.gov</a></p>	<p>Juliane Matthews Edward Kowalski, Regional Counsel Office of Regional Counsel U.S. EPA, Region 10 1200 Sixth Avenue Seattle, WA 98101 Phone: (206) 553-1083 Facsimile (206) 553-0163 <a href="mailto:matthews.juliane@epa.gov">matthews.juliane@epa.gov</a></p>
<p>Richard Ossias Associate General Counsel Office of General Counsel (MC-2344A) 1200 Pennsylvania Ave., N.W. Washington, D.C. 20460-0001 Phone: (202) 564-7606 Facsimile: (202) 564-5603 <a href="mailto:ossias.richard@epa.gov">ossias.richard@epa.gov</a></p>	<p>Elin Miller, Regional Administrator U.S. EPA, Region 10 1200 Sixth Avenue Seattle, WA 98101 Phone: (206) 553-1234 Facsimile: (206) 553-1809 Email: <a href="mailto:miller.elin@epa.gov">miller.elin@epa.gov</a></p>



John Phelan, Paralegal

# **SOI Attachment 16**

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

In re:	)
	)
Shell Offshore Inc.	)
Kulluk Drilling Unit and	)
Frontier Discoverer Drilling Unit	)
	)
OCS Permit Nos. R10OCS-AK-07-01	)
R10OCS-AK-07-02	)
	)

**DECLARATION OF RODGER STEEN**

The undersigned hereby makes the following declaration pursuant to 28 U.S.C. § 1746.

1. I am a principal with Air Sciences, Inc. ("Air Sciences"). Air Sciences is headquartered in Denver, Colorado. The firm specializes in dispersion modeling, visibility modeling, emission inventories, monitoring, permitting, and engineering services. Since the firm was founded over twenty years ago, Air Sciences has worked with industry and government on technical aspects of air pollution control. Industry sectors have included minerals extraction, minerals refining, power production, natural gas processing, chemical manufacturing, painting processes, and pesticide formulation. Government work has included fire emissions modeling and fire effects model development and application for federal land managers and studies of dust movement and modeling for EPA. Air Sciences' personnel have also provided technical air quality



services, including air program development, to over 20 Indian tribes. Our experience includes working in all aspects of de-centralized air pollution planning, including emission inventory development for communities, Tribes, States, and Regional Planning Organizations.

2. I received my BS degree in 1969 from Brown University and my MS degree in 1972 from the University of Chicago. I am a professional engineer, registered in Colorado and a Certified Consulting Meteorologist.

3. In early-2006, Shell Offshore Inc. engaged Air Sciences to assist in obtaining OCS air permits from EPA Region 10 for the Kulluk and Frontier Discoverer for a program of exploration drilling by each vessel in the Beaufort Sea. Air Sciences prepared projected emissions inventories for each vessel's drilling activities at specific drill sites and performed modeling of predicted air quality impacts of projected emissions at individual drill sites, the results of which SOI submitted in its permit applications in December 2006. Thereafter Air Sciences personnel worked on SOI's behalf to provide data, analyses and other technical information requested by Region 10 to assist in formulating the permits. I was primarily responsible for this effort at Air Sciences.

4. In the third week of February 2007, Air Sciences provided EPA Region 10 with two requested modeling reports, one for the impacts of the Shell Kulluk drill vessel, *Air Quality Impact Evaluation Report – No Exclusion Zone, Shell Kulluk 2007 – 2009 Beaufort Sea Exploratory Drilling Program, February 15, 2007*, and one for the impacts of the Frontier Discoverer, *Air Quality Impact Evaluation Report – No Exclusion Zone, Frontier Discoverer Beaufort Sea Exploratory Drilling Program, February 19, 2007*. The information, which we also filed electronically with Mr. Herman Wong at Region

10, demonstrated that the National Ambient Air Quality Standards (NAAQS) for NO<sub>x</sub>, PM-10 and SO<sub>2</sub> would be met at the hull of each drill vessel. That modeling exercise also showed air quality impacts with distance from the drill vessel. That exercise was performed consistent with acceptable procedures which included use of the ISC-PRIME dispersion model and screening meteorology. Mr. Wong responded telephonically to me with an acceptance of this modeling effort in mid-March, 2007.

5. On approximately March 19, 2007 I reported to Mr. Dan Meyer of EPA Region 10 by telephone that, by superimposing on the previously-reported air quality impacts from the drill ship the same impacts again, but shifting the superimposed location and, thus, the impacts by 500 meters upwind, the worst-case short-term combined impacts of two drill vessels drilling simultaneously at least 500 meters apart (highest 24-hour PM<sub>10</sub> impacts), and the worst-case longer-term combined impacts of a single vessel relocating 500 meters for a second drill program (highest annual NO<sub>x</sub> impacts), are shown to be below the NAAQS. There was no alteration of the February 2007 dispersion modeling analyses submitted to EPA and the results of our analysis as reported to Mr. Meyer could be readily replicated and our results confirmed.

6. More specifically, demonstration of compliance with the annual NAAQS for NO<sub>x</sub> was provided by superimposing the impact of the Shell Kulluk at 500 meters (25 ug/m<sup>3</sup>) upwind on the Kulluk at its hull (65 ug/m<sup>3</sup>), yielding an annual combined NO<sub>x</sub> impact at the hull of the downwind vessel of 90 ug/m<sup>3</sup>. (The Kulluk NO<sub>x</sub> impacts were higher than those of the Frontier Discoverer so the Kulluk impacts were used here.) Adding a background of 3 ug/m<sup>3</sup> yielded a total impact of 93 ug/m<sup>3</sup> which is under the standard of 100 ug/m<sup>3</sup>. Demonstration of compliance with the 24-hour PM<sub>10</sub> standard

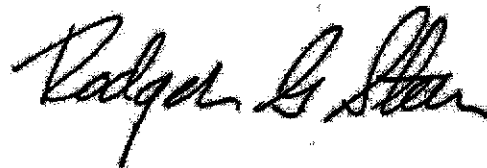
was provided by a similar superimposing of impacts, but with the two vessels drilling simultaneously separated by 500 meters (hull to hull). In this configuration the Shell Kulluk was assumed downwind of the Frontier Discoverer since the Shell Kulluk's PM<sub>10</sub> impacts are larger than those of the Frontier Discoverer. Superimposing the impact of the Frontier Discoverer at 500 meters (36 ug/m<sup>3</sup>) on the Shell Kulluk at its hull (103 ug/m<sup>3</sup>) yields a 24-hour combined PM<sub>10</sub> impact of 139 ug/m<sup>3</sup> at the hull of the Shell Kulluk. Adding a background of 7.9 ug/m<sup>3</sup> yielded a total impact of 147 ug/m<sup>3</sup> which is under the 24-hour PM<sub>10</sub> standard of 150 ug/m<sup>3</sup>. Considering that the installation of PM<sub>10</sub> filters is required on all engines under 600 horsepower, and the associated 60% or greater reduction in emissions was not taken into account in the modeling analysis, the PM<sub>10</sub> impacts will be smaller than estimated by this screening modeling. Impacts of the other criteria pollutants were all lower than these worst-case combined impacts relative to the applicable NAAQS.

7. On March 20, 2007, I sent an e-mail to Mr. Meyer at Region 10 confirming that, based on Air Sciences' modeling of combined impacts described above, SOI believed a 500 meter radius around separate drill sites would ensure that air quality standards would not be exceeded at the locations of maximum potential impact. A copy of the e-mail is attached hereto. I understand that this document is Item E-32 in the certified Index to Administrative Record in this matter.

8. Air Sciences submitted to Region 10 an Addendum to the permit applications, which was dated March 26, 2007, that addressed a number of technical issues. A copy of the relevant pages of the Addendum is attached. The Addendum noted SOI's proposal that the permits impose a minimum separation of 500 meters for simultaneous or

successive drill sites and, consistent with my e-mail to Mr. Meyer dated March 20, 2007, stated, "from an impact analysis perspective this distance [500 meters] is sufficient even under the worst combinations of source locations and winds to avoid impact aggregation." March 26 2007 Addendum, Item 5 at page 5. I understand that this document is Item A-6 in the certified Index to Administrative Record in this matter.

9. I make this Declaration based on personal knowledge. I certify under penalty of perjury under the laws of the United States of America that, to the best of my knowledge, the foregoing is true, accurate and complete.



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RODGER G. STEEN

Dated: August 14, 2007

# **SOI Attachment 17**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 4  
ATLANTA FEDERAL CENTER  
61 FORSYTH STREET  
ATLANTA, GEORGIA 30303-8960

FEB 8 1999

4APT-ARB

Ms. Sonji M. Fury  
ES&E Representative  
Chevron U.S.A., Inc.  
735 Gravier Street  
New Orleans, Louisiana 70112

SUBJ: Destin Dome Outer Continental Shelf Source

Dear Ms. Fury:

Chevron U.S.A., Inc. is presently preparing an Outer Continental Shelf (OCS) air permit application to be submitted to the Environmental Protection Agency (EPA) for a proposed natural gas development and production project in Destin Dome Unit 56. This project will be located off the coast of Florida in the Eastern Gulf of Mexico and is subject to the requirements of the OCS air regulations, codified at 40 C.F.R. part 55. This correspondence outlines the requirements for Chevron to consider in the preparation of their air permit application by: (1) defining the OCS source for the Destin Dome project with respect to Prevention of Significant Deterioration (PSD); (2) specifying requirements regarding the ambient air impact analyses; and (3) detailing the concurrent process for issuance of the OCS air permit and the Title V federal operating permit. The information presented herein is consistent with OCS air permitting actions and determinations made by EPA in Region 4, Region 9, Region 10, and the Office of Air Quality Planning and Standards, and in the governing federal and state regulations and Clean Air Act (Act) statutes.

According to preliminary information submitted by Chevron to the Minerals Management Service (MMS), the Destin Dome Unit 56 development and production project will encompass as many as 21 wells producing up to 450 million cubic feet per day of natural gas. Destin Dome Unit 56 encompasses eleven contiguous blocks located approximately 25 miles offshore of Pensacola, Florida (at their northernmost point). The proposed project will include the drilling of 20 new wells and the production of 21 wells (new and existing locations). The gas will be produced from satellite well locations which will be routed through infield lines to a central processing facility. There will be living quarters adjacent to the processing facilities and the field will be manned by a trained crew of experienced operators on a 24-hour basis. From the central processing facility, the gas will be moved by pipeline across federal waters to an area off the coast of Mobile, Alabama, where it will eventually be sent to shore in Mobile County through existing or proposed third party pipelines. All support for the project activities will come from existing shorebase facilities in Theodore, Alabama, or Passcroule, Mississippi, and will be provided by boat or helicopter.

### OCS Source Definition

Since the promulgation of the federal OCS air regulations in September 1992, OCS sources have been issued permits by EPA or delegated agencies in Regions 4, 9, and 10. For these permits, the OCS source was defined as all of the platforms and activities associated with the oil or natural gas project. These projects included:

#### *Santa Barbara (CA) Air Pollution Control District*

- Chevron, Point Arguello Project-3 platforms, onshore facility
- Exxon, Santa Ynez Unit-3 platforms, onshore facility
- Nuevo Energy (Unocal), Dos Cuadras Field-5 platforms
- Nuevo Energy (Unocal), Point Pedernales Project-1 platform, onshore facility
- Pacific Operators Offshore, Carpinteria Field-2 platforms
- Texaco, Pitas Point Unit-1 platform

#### *EPA Region 10*

- Arco Alaska, Beaufort Sea-2 drilling vessels/platforms
- BP Exploration Alaska, Liberty-gravel island, 1 platform, pipeline

#### *EPA Region 4*

- Chevron, Destin Dome 97-1 platform
- Chevron, Destin Dome 56-1 platform

According to §55.2, an "OCS source" is defined as:

any equipment, activity, or facility which: (1) emits or has the potential to emit any air pollutant; (2) is regulated or authorized under the Outer Continental Shelf Lands Act (OCSLA) and; (3) is located on the OCS or in or on waters above the OCS. This definition shall include vessels only when they are: (1) permanently or temporarily attached to the seabed and erected thereon and used for the purpose of exploring, developing or producing resources therefrom, within the meaning of section 4(a)(1) of OCSLA or; (2) physically attached to an OCS facility, in which case only the stationary sources aspects of the vessels will be regulated.

For an OCS source the "potential emissions" are defined as:

the maximum emissions of a pollutant from an OCS source operating at its design capacity. Any physical or operational limitation on the capacity of a source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as a limit on the design capacity of the source if the limitation is federally enforceable. Pursuant to section 328 of the Act, emissions from vessels servicing or associated with an OCS source shall be considered direct emissions from such a source while at the source, and while enroute to or from the source within 25 miles of the source, and shall be

included in the 'potential to emit' for an OCS source. This definition does not alter or affect the use of this term for any other purposes under §§55.13 or 55.14 of this part, except that vessel emissions must be included in the 'potential to emit' as used in §§55.13 and 55.14 of this part.

According to §55.13(d), the requirements of PSD (40 C.F.R. §52.21) apply to OCS sources located within 25 miles of a state's seaward boundary if the requirements of §52.21 are in effect in the corresponding onshore area (COA) and to OCS sources located beyond 25 miles of the state's seaward boundary. For the Destin Dome project, which is proposed to be located within 25 miles of the State of Florida's seaward boundary, the PSD requirements are in effect in the COA (i.e., in the State of Florida). In accordance with §55.14(e), the Florida PSD requirements have also been incorporated by reference into Appendix A of part 55.

For the purposes of PSD, a stationary source is defined as any building, structure, facility, or installation which emits or may emit any air pollutant subject to regulation under the Act. "Building, structure, facility, or installation" means all the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties and are under common ownership or control. An "emissions unit" is any part of a stationary source that emits or has the potential to emit any pollutant subject to regulation under the Act. To determine applicability with regard to the Chevron Destin Dome project, the three source criteria must be examined.

The term "same industrial grouping" refers to the "major groups" identified by two-digit codes in the Standard Industrial Classification (SIC) Manual, which is published by the Office of Management and Budget. The SIC Major Group encompassing the Chevron Destin Dome development and production project is Major Group 13 - Oil and Gas Extraction.

The MMS lease blocks encompassing Destin Dome Unit 56 are contiguous. The terminology "adjacent" is defined most recently in correspondence, dated May 21, 1998, from EPA Region 8 to the Utah Division of Air Quality (see Enclosure). According to this determination, the distance that is associated with "adjacent" must be considered on a case-by-case basis, and clearly falls within the distances presented for the Destin Dome project.

For the Chevron Destin Dome project, there is no dispute that the platforms and production wells are under common control, have the same Major Group SIC Code and are located on contiguous or adjacent properties. To conclude, based on these definitions, requirements, and guidance, the "OCS source" for the Destin Dome project includes the production platform, living quarters platform, and 21 production wells (proposed maximum). The potential emissions for the source would be the maximum air pollutant emissions from the production platform, living quarters platform, production wells, and vessels (including service vessels) constituting the Destin Dome project. If the maximum annual emissions will exceed 250 tons per year of any regulated air pollutant, then the OCS permit application from Chevron must meet the PSD permitting requirements contained in Chapter 62-212 of the Florida Administrative Code (F.A.C.) (the PSD requirements of §52.21).



### Ambient Air Impact Analyses

In terms of the ambient air impact analyses required as part of a PSD permit application for the Chevron Destin Dome project, you should follow the guidance contained in EPA's New Source Review Workshop Manual (Draft, 1990) and Guideline on Air Quality Models, codified at 40 C.F.R. part 51, appendix W. As has been the procedure used for the permitting of major OCS sources within 25 miles of a state boundary in EPA Regions 9 and 10, the PSD rules, and any applicable state requirements, must be complied with. Therefore, the Florida Department of Environmental Protection PSD regulations apply to the Chevron Destin Dome project. Accordingly, it must be demonstrated that the proposed emissions from the Chevron Destin Dome project will not cause or contribute to a violation of any PSD increment or National Ambient Air Quality Standard at all receptors beyond that area, if any, considered to be "non-ambient air." For land-based projects, non-ambient air includes the area owned or under the control of the source for which public access is restricted by a physical barrier. For OCS sources, non-ambient air is determined on a case-by-case basis and may be based on legal restricted access and control of the waters surrounding the project.

### 40 C.F.R. Part 70 (Title V) Federal Operating Permit

For the purposes of part 70 permitting, a "major source of air pollution" or a "Title V source" is defined under Chapter 62-210 of the F.A.C. as a facility containing an emissions unit or any group of emissions units, which is or includes any of the following:

- (a) for pollutants other than radionuclides, any emissions unit or group of emissions units that emits or has the potential to emit, in the aggregate, 10 tons per year or more of any one hazardous air pollutant (HAP), 25 tons per year or more of any combination of HAPs, or any lesser quantity of a HAP as established through EPA rulemaking. Notwithstanding the preceding sentence, HAP emissions from any oil or gas exploration or production well (with its associated equipment) and HAP emissions from any pipeline compressor or pump station shall not be aggregated with HAP emissions from other similar units, whether or not such units are in a contiguous area or under common control, to determine whether such units or stations are Title V sources, or
- (b) an emissions unit or group of emissions units, all belonging to the same two-digit Major Group as described in the SIC Manual, that directly emits or has the potential to emit 100 tons per year or more of any regulated air pollutant.

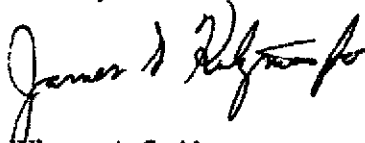
Based on the potential emissions from the Chevron Destin Dome project, these criteria will make the project subject to the part 70 operating permit requirements.

The State of Florida has an approved part 70 operating permits program. However, the State of Florida has not been delegated the authority for the OCS air program for sources located within 25 miles of the state's seaward boundary. For this reason, EPA Region 4 will issue a part 70 operating permit to Chevron for the Destin Dome project. The permit application should

follow the requirements of Chapter 62-213 of the F.A.C. The part 70 permit application will be processed concurrently with the OCS air permit application.

If you have any questions or comments concerning these OCS air permitting requirements, please contact Mr. Scott Davis of my staff at (404) 562-9127.

Sincerely,



Winston A. Smith  
Director  
Air, Pesticides and Toxics  
Management Division

Enclosure

cc: Debbie Tucker, Florida Governor's Office  
Howard Rhodes, Florida DEP  
Terry Scholten, MMS  
David Sanders, OAQPS  
Dan DeRoeck, OAQPS

# **SOI Attachment 18**

Environmental Assessment

**Shell Offshore Inc.  
Beaufort Sea Exploration Plan**

Beaufort Sea OCS-Y-1743, 1805, 1807, 1808, 1809, 1817, 1828, 1834, 1841, 1842,  
1845, and 1849

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Prepared by

Office of the Regional Supervisor  
Leasing and Environment  
Alaska OCS Region

have been demonstrated and CAA's have tended to mitigate on and offshore seasonal oil industry activities.

The multiple-sale EIS defines "significant" effects on sociocultural systems as: "A chronic disruption of sociocultural systems that occurs for a period of 2-5 years, with a tendency toward the displacement of existing social patterns..." The analyses for Sales 186, 195 and 202 use the lower threshold of 2 years. This increment is used because it is believed it would take at least 2 years for such an effect to become evident in the social system. It should be noted that the significance threshold for subsistence-harvest patterns of a subsistence resources becoming unavailable, undesirable for use, or available only in greatly reduced numbers for 1 year (meaning one (1) harvest season) would be reached long before the significance threshold for sociocultural systems could be applied.

Effects on the sociocultural systems of the communities of Barrow, Nuiqsut, and Kaktovik could come from noise disturbance produced by exploration drilling activities. Because activity staging would not be from local communities, stresses to local village infrastructure, health care, and emergency response systems are expected to be minimal. Social systems in these communities would experience little direct disturbance from the staging of people and equipment for exploration.

The long-term deflection of whales from their migratory routes or increased skittishness of whales due to increased exploration activities in the Beaufort Sea would make subsistence harvests more difficult, dangerous, and expensive. To date, no long-term deflections of bowheads have been demonstrated. On the other hand, drilling activity of the magnitude discussed in the scenario for the Shell EP has not been approached since the 1980's, and potential whale deflections are likely.

Required mitigation, monitoring, and conflict avoidance measures under IHA's issued by NMFS and FWS would serve collectively to mitigate disturbance effects on Native lifestyles and subsistence practices and likely would mitigate any consequent impacts on sociocultural systems. With such measures in place, impacts would be minimized.

Conclusion. Before exploratory drilling activities can commence, Shell must have an IHA from the NMFS and a conflict avoidance agreement. In the event there is not an agreement, the MMS must make a final determination on the adequacy of the measures taken to prevent unreasonable conflicts with subsistence harvests following meeting with the parties in accordance with lease stipulation 5. Potential long-term impacts from climate change would be expected to exacerbate overall potential effects on sociocultural systems.

#### IV.B.3 Effects on Other Resources

##### IV.B.3.a. Effects on Other Coastal and Marine Birds

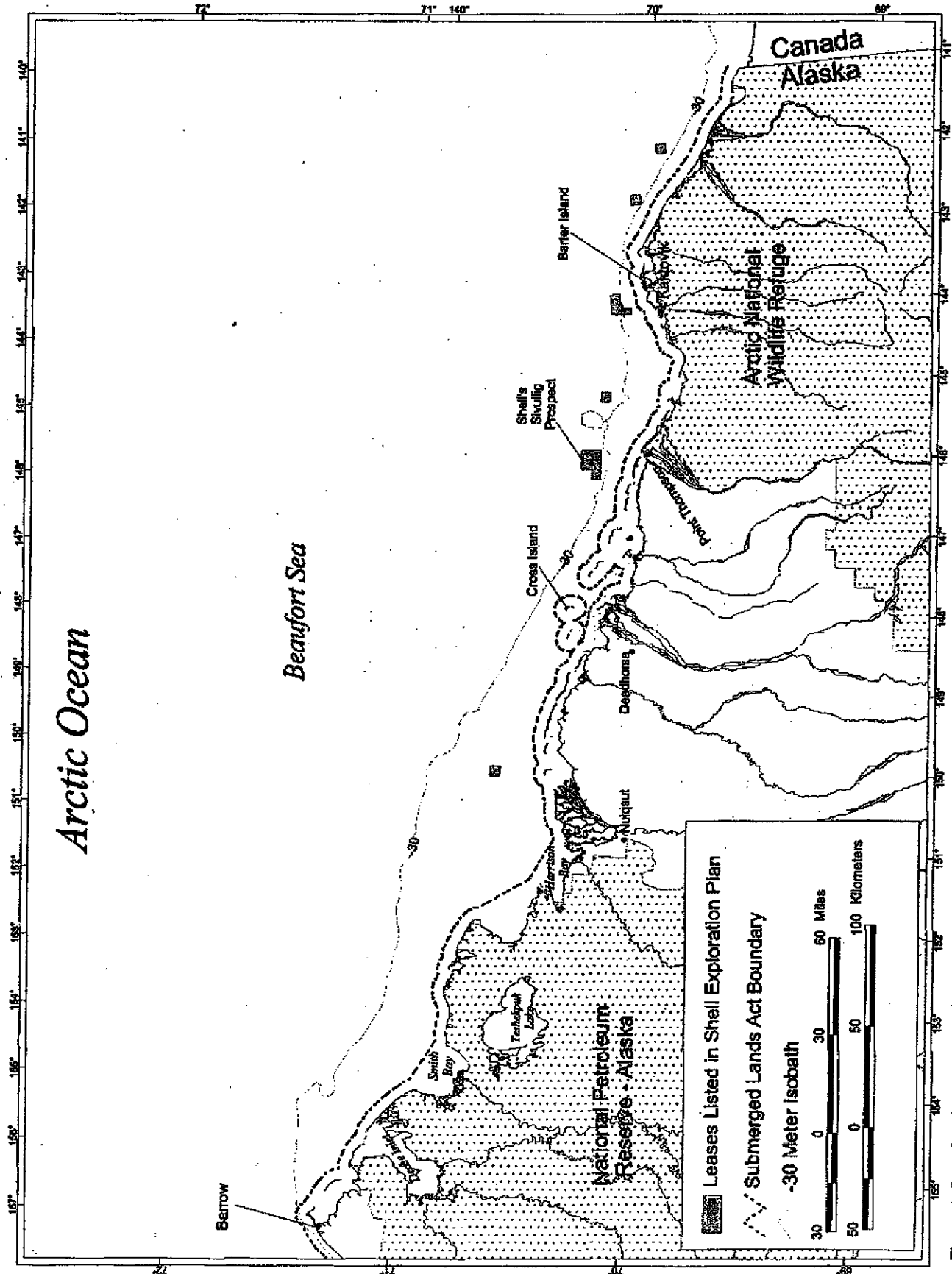
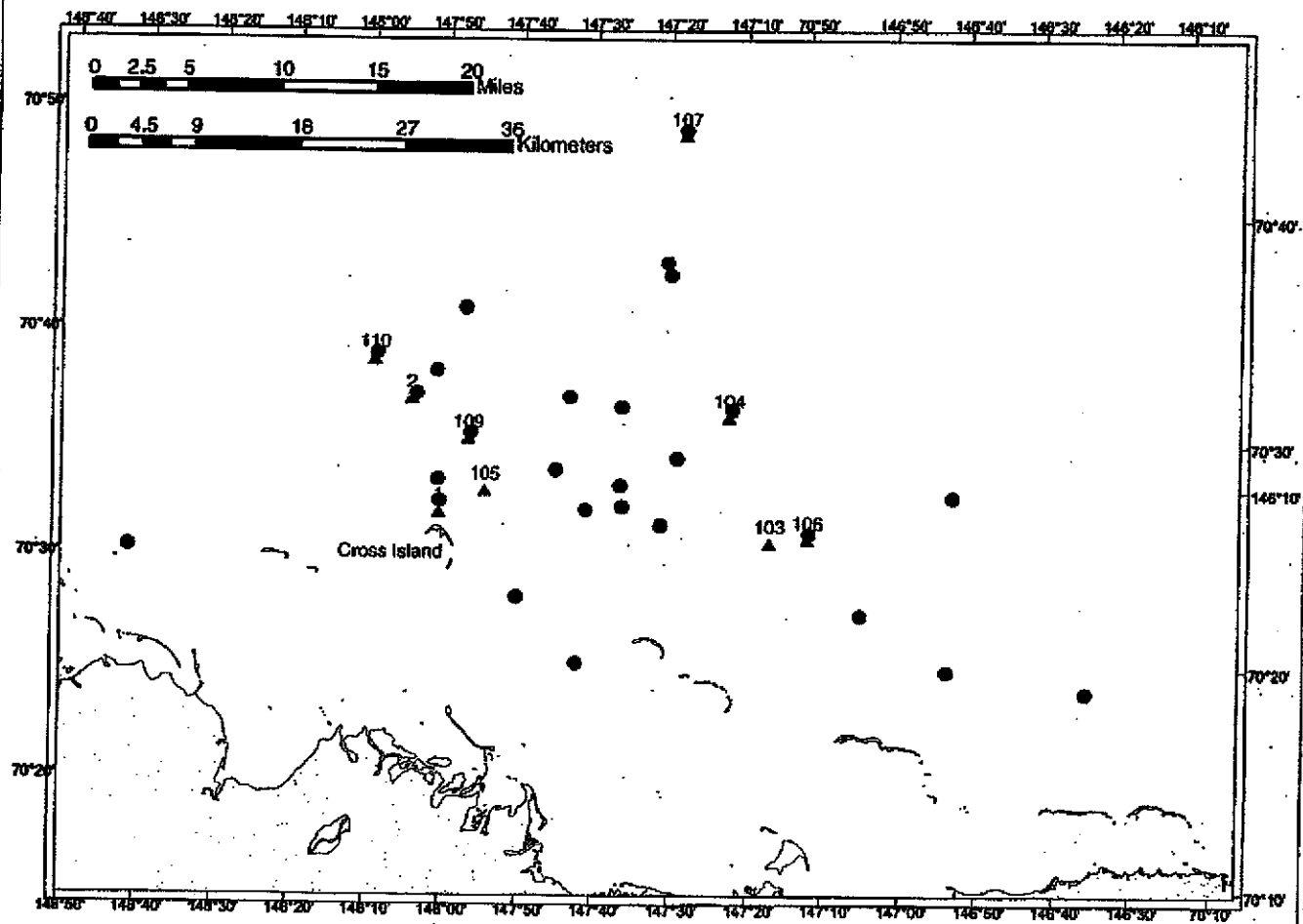


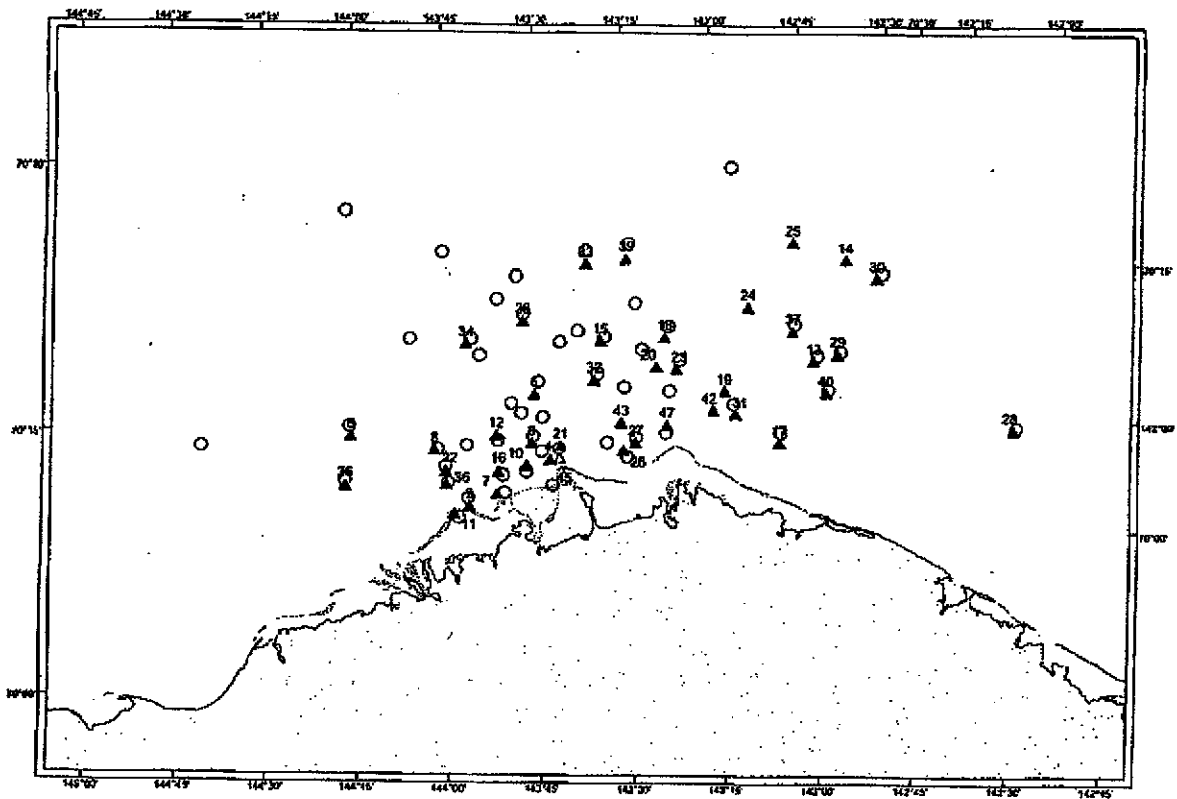
Figure 1. Beaufort Sea area showing the -30 meter isobath and the leases listed in Shell Oil's exploration plan, and Shell's Sivullig Prospect.



- ▲ Bowhead Whale Strikes 1937-1992
- Historic Bowhead Strikes 1937-2001

Location ID	Year
1	1937
2	1940
101	1973
102	1982
103	1983
104	1985
105	1986
106	1990
107	1991
109	1992
110	1992

Figure 12 Bowhead Whale Harvest Locations Near Cross Island. Sources: Long (1996); North Slope Borough Planning Dept. (1993); Bowhead Strikes 1937-2001



- ▲ Bowhead Strikes 1988-1995
- North Slope Borough Bowhead Strikes 1989-2001

1	9-17-1988
2	10-02-1988
3	10-02-1988
4	10-02-1988
5	10-02-1988
6	9-27-1991
7	9-28-1991
8	10-02-1991
9	10-04-1991
10	9-31-1992
11	9-1-1992
12	9-2-1992
13	9-1-1992
14	9-1-1992
15	9-3-1992
16	9-12-1992
17	9-17-1992
18	9-19-1992
19	9-23-1992
20	9-24-1992
21	9-26-1992

22	9-26-1992
23	10-8-1992
24	10-5-1993
25	10-7-1993
26	10-13-1993
27	10-18-1993
28	10-19-1993
29	10-20-1993
30	10-13-1993
31	10-1-1994
32	9-5-1995
33	9-6-1995
34	9-11-1995
35	9-16-1995
36	9-16-1995
37	9-18-1995
38	9-20-1995
39	9-20-1995
40	10-16-1995
41	10-17-1995
42	10-17-1995

Sources: Kaleak (1996); North Slope Borough Planning Dept. (1993); North Slope Borough (2001).

Figure 13. Bowhead Whale Harvest Locations near Kaktovik