



Alaska Eskimo Whaling Commission  
P.O. Box 570  
Barrow, AK 99723



Inupiat Community of the Arctic Slope  
P.O. Box 934  
Barrow, AK 99723



North Slope Borough  
P.O. Box 69  
Barrow, AK 99723

June 15, 2011

**VIA ELECTRONIC MAIL**

Doug Hardesty  
Air Permits Project Manager  
hardesty.doug@cpa.gov

Suzanne Skadowski  
Community Involvement  
skadowski.suzanne@cpa.gov  
Region 10 EPA  
1200 Sixth Avenue, Suite 900  
Seattle, WA 98101

Re: Request for Region 10 to not hold overlapping written comment periods for OCS Air Permits.

Dear Mr. Hardesty & Mrs. Skadowski,

Thank you for providing our communities with information on the up-coming public notice and comment periods Region 10 intends to provide on air permits for oil and gas activities in the Outer Continental Shelf (OCS). While we appreciate this advance notice, we are extremely concerned about Region 10's intent to accept comments on four air permits during the same time-period.

Region 10 has indicated that it intends to accept public comment on a revised major source OCS PSD permit for Shell for the Beaufort Sea in early July. Region 10 has further indicated that it intends to accept public comment on a revised major source OCS PSD permit for Shell for the Chukchi Sea also in early July.<sup>1</sup> Additionally, Region 10 has indicated that it intends to accept comment on a synthetic minor source air permit and a Title V permit for Shell for the Kulluk and the Beaufort Sea in mid-July. Finally, Region 10 has indicated that it also intends to accept public comment on a Title V permit for ConocoPhillips for the Chukchi Sea in mid-July.

<sup>1</sup> We note that previously Region 10 held entirely separate public notice and comment periods on these air permits.

We support Region 10 hosting public meetings to collectively address these air permits, but it is infeasible for us to provide meaningful written comments on *four air permits* at the same time. Each permit application is hundreds of pages long as are the draft permits and statements of basis that accompany the draft permits. In addition, the administrative record that accompanies each permit is voluminous. Reading through, processing, and commenting on these permits, therefore, takes a significant amount of time. Having sufficient time to review and provide written comment on these permits is critical because they pertain to new sources of air pollution that will forever alter the air quality in our region.

Unless Region 10 provides separate public notice and comment opportunities on each air permit without overlap and at least 45 days for written comment on each draft permit, we will not be able to provide meaningful written comments or otherwise adequately participate in the public process. Please feel free to contact us with any questions about this request and we look forward to receiving your response.

Sincerely,



Harry Brower  
AEWC  
Chairman



Dereen Lampe  
ICAS  
President V.P.  
George OLEMAN



Edward S. Itta  
North Slope Borough  
Mayor



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10  
1200 Sixth Avenue, Suite 900  
Seattle, WA 98101-3140

JUL 21 2011

OFFICE OF  
AIR, WASTE AND TOXICS

**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

Harry Brower  
Chairman  
Alaska Eskimo Whaling Commission  
P.O. Box 570  
Barrow, Alaska 99723

Doreen Lampe  
President  
Inupiat Community of the Arctic Slope  
P.O. Box 934  
Barrow, Alaska 99723

Edward S. Itta  
Mayor  
North Slope Borough  
P.O. Box 69  
Barrow, Alaska 99723

Dear Chairman Brower and Mayor Itta and President Lampe:

Thank you for your June 15, 2011, letter requesting that the U.S. Environmental Protection Agency not hold overlapping comment periods as planned for the Outer Continental Shelf (OCS) exploratory drilling air projects (Shell Discoverer, Shell Kulluk, and ConocoPhillips) that are currently being processed. We appreciate your desire to participate in our permitting process and understand your interest in providing comments on the permits. We are doing our best to balance interests and have stepped up our outreach efforts in a way that we hope will ensure meaningful participation and better permits. At the same time, we have determined that we must adhere to a schedule with some overlap in comment periods in order to fulfill our responsibility for issuing timely permits.

It is unusual for the EPA to be processing three OCS projects (four air permits) simultaneously. Because all three projects plan to drill only during open water seasons, a short delay in permit issuance can result in a long delay in exploration, into the next season. We also have mandatory deadlines that we must meet. For these reasons, the EPA is making an effort to adhere to our original schedule, with increased outreach.

The EPA is committed to continually improving participation in our permitting process. To that end, we are employing unique approaches for these projects. In June 2011, the EPA held public meetings on the North Slope to describe the projects and our process as well as to present our anticipated timing for the permits so communities would know what to expect during the permit comment periods. We are staggering the comment periods somewhat, with the two Shell Discoverer permits available for

comment for 30 days, from July 6<sup>th</sup> to August 5<sup>th</sup>, and the other two permits (Shell Kulluk and ConocoPhillips) available for 45 days from later in July to early September (final dates are still pending).

The two Shell Discoverer major source permits issued last year were remanded to the EPA to address specific concerns. The EPA has revised the Shell Discoverer permits to address those concerns. Because only the changes to the permits are open for comment, we are holding a 30-day comment period. To assist reviewers, we are making redline-strikeout versions of the revised draft permits available. We also explain the permit changes in the Supplemental Statement of Basis for the two permits, as we committed to in the North Slope meetings.

Because the other two permits are for new minor source projects, we think it is appropriate to hold 45-day comment periods. This way, we are also able to offset to a greater extent the comment periods for the two new projects from the comment period for the Shell Discoverer revised permits. As minor source permits, the two new permits will have many similarities. In response to a request during our June informational meeting in Barrow, we plan to create a roadmap for navigating the new permits to highlight for reviewers the structure and components of the permits.

We are aware that holding many separate meetings can be difficult for communities. We will use these meetings to provide information that will help reviewers compare and contrast all four permits simultaneously. We plan to hold public meetings in early August in Barrow and possibly other locations to discuss all four permits. These meetings will give us a chance to explain the differences between the permits and to walk through the roadmap for the two new permits.

Finally, we plan to schedule a government to government consultation meeting with the Inupiat Community of the Arctic Slope in early August. We look forward to hearing ICAS's concerns and advice. We would also welcome an opportunity to meet with the Alaska Eskimo Whaling Commission and the North Slope Borough while we are in Barrow or at another time via teleconference.

Doug Hardesty is the project manager for all four permits. If you have any questions about the projects, please feel free to contact Doug at (208) 378-5759 or by email [hardesty.doug@epa.gov](mailto:hardesty.doug@epa.gov). If you have any additional concerns, please feel free to contact me by phone at (206) 553-1847.

Sincerely,



Richard Albright, Director  
Office of Air, Waste and Toxics

Cc: Catherine Villa, Tribal Coordinator  
Tami Fordham, Alaska Resource Extraction Tribal Policy Advisor  
Doug Hardesty, Project Manager, Arctic Air Permits  
Emma Pokon, North Slope Borough Law Department - via email: [Emma.Pokon@north-slope.org](mailto:Emma.Pokon@north-slope.org)



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June 15, 2011

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George OLEMAN



Edward S. Itta  
North Slope Borough  
Mayor



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
**REGION IX**  
75 Hawthorne Street  
San Francisco, CA 94105

March 29, 2011

Larry Kennedy, Major Source Permits Supervisor  
Nevada Division of Environmental Protection  
901 South Stewart St., Suite 4001  
Carson City, NV 89701

**Re: Draft Air Quality Operating Permit- Lockwood Regional Landfill (LRL)**

Dear Mr. Kennedy,

This letter is in response to Nevada Division of Environmental Protection (NDEP) Draft Air Quality Operating Permit, FIN A0018, AP4953-1148.01 for LRL, owned and operated by Refuse, Inc., in Storey County, Nevada. The draft permit includes a significant revision to the Title V permit for the existing 555 acre landfill for the installation of three new 2,233 horsepower internal combustion engines. The engines will combust landfill gas collected at the site to generate usable energy. It is our understanding that the EPA 45-day review concludes on April 8, 2011.

Comments in the enclosure address several concerns regarding the significant permit revision. Although the aggregate potential to emit of carbon monoxide from the proposed engines exceeds 250 tons per year, LRL will avoid Prevention of Significant Deterioration (PSD) permitting requirements by limiting facility-wide emissions. In order to avoid requirements to obtain a PSD permit based on GHG emissions from this source, Refuse, Inc. may need to begin actual construction related to the modification before July 1, 2011.

We look forward to working with you to address our comments. Please contact me at (415) 972-3974 or Omer Shalev of my office at (415) 972-3538 if you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "Gerardo C. Rios".

Gerardo C. Rios  
Chief, Permits Office

Enclosure

cc: Greg Remer, Nevada Division of Environmental Protection  
Michael Elges, Nevada Division of Environmental Protection

**EPA Comments on Refuse, Inc. Lockwood Regional Landfill (LRL)–  
Class I (Title V) Significant Revision**

**Significant Revision and Synthetic Minor Source**

Applicable federal requirements for stationary sources of air pollution may differ significantly depending on whether a stationary source is classified as a major source of criteria pollutant emissions. For those sources where emission estimates and/or emission limits are relatively close to the federal major source thresholds, EPA encourages a 5-10% buffer between the permitted emission limits and the federal threshold.

We have identified estimated emissions of certain pollutants that are within a margin of less than 5% of the federal annual threshold limits. These limits include the Prevention of Significant Deterioration (PSD) major source threshold (MST) of 250 tons per year (tpy) for carbon monoxide (CO). Moreover, in the Technical Review, NDEP has determined that because LRL will not exceed the MST for CO, it is not a PSD major source of CO, and therefore not subject to PSD review. Although the facility-wide emission limit of 249.0 tpy for CO is enumerated in the permit, the permit should also state that if this limit is relaxed at any time, the facility will be subject to the requirements of 40 Code of Federal Regulations (CFR) 52.21(r)(4). In addition, if the 249.0 tpy limit is exceeded, the facility may trigger PSD requirements and may be treated as a source that should have obtained a PSD permit for CO.

***40 CFR 52.21(r) Source obligation-***

*(4) At such time that a particular source or modification becomes a major stationary source or major modification solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements or paragraphs (j) through (s) of this section shall apply to the source or modification as though construction had not yet commenced on the source or modification.*

**Condensable Particulate Matter (PM)**

Accurate emissions inventories are critical for regulatory agencies to develop control strategies and demonstrations necessary to attain and maintain air quality standards. EPA has completed the revision of Test Method 202– Condensable Particulate Matter, and the transition period allowing for the exclusion of condensable PM ended on January 1, 2011, 40 C.F.R. 52.21(b)(50)(vi). Therefore, permits issued by NDEP for major sources should quantify condensable PM emissions, and in particular condensable PM<sub>2.5</sub> emissions.

**Greenhouse Gas (GHG) Emissions**

The proposed LRL permit does not quantify GHG emissions resulting from the modification of the facility. PSD permitting requirements apply to GHG emissions from sources subject to PSD permitting requirements as of January 2, 2011 as stated in “Reconsideration of Interpretation of Regulations that Determine Pollutants Covered by Clean Air Act Permitting Programs.” (75 FR 17004) (April 2, 2010). In addition, existing sources that have the potential to emit 100,000 TPY carbon dioxide equivalent emissions (CO<sub>2</sub>e) or more and experience a modification increasing its



CO<sub>2</sub>e emissions by 75,000 TPY or more that *begin actual construction*, as defined in 40 CFR 52.21(b)(11), after July 1, 2011 may do so only after obtaining a PSD permit. Without a quantification of GHG emissions, it is difficult to determine whether the following modification would make LRL subject to the GHG requirements. Although EPA's proposed action entitled "Deferral for CO<sub>2</sub> Emissions From Bioenergy and Other Biogenic Sources Under the Prevention of Significant Deterioration (PSD) and Title V Programs: Proposed Rule" (76 FR 15249) (March 21, 2011) likely applies to this source and modification, it is important to note that this deferral applies to only CO<sub>2</sub> emissions and has not been finalized as of the date of this letter.

**40 CFR 52.21(b)(11)**

*Begin actual construction means, in general, initiation of physical on-site construction activities on an emissions unit which are of a permanent nature. Such activities include, but are not limited to, installation of building supports and foundations, laying underground pipework and construction of permanent storage structures. With respect to a change in method of operations, this term refers to those on-site activities other than preparatory activities which mark the initiation of the change."*

**ALASKA WILDERNESS LEAGUE—AUDUBON ALASKA  
CENTER FOR BIOLOGICAL DIVERSITY—DEFENDERS OF WILDLIFE  
EARTHJUSTICE—EYAK PRESERVATION COUNCIL—GREENPEACE  
NATIONAL WILDLIFE FEDERATION  
NATURAL RESOURCES DEFENSE COUNCIL  
NORTHERN ALASKA ENVIRONMENTAL CENTER—OCEAN CONSERVANCY  
OCEANA—PACIFIC ENVIRONMENT—REDOIL—SIERRA CLUB  
THE WILDERNESS SOCIETY—WORLD WILDLIFE FUND**

September 6, 2011

**VIA EMAIL**

Shell Kulluk Air Permit  
EPA Region 10  
1200 6th Avenue, Suite 900, AWT-107  
Seattle, WA 98101  
Email: r10ocsairpermits@epa.gov

**Re: Draft Air Permit No. R10OCS030000 for Shell's Proposed *Kulluk* Drilling  
Operations in the Beaufort Sea, Alaska**

Alaska Wilderness League, Audubon Alaska, Center for Biological Diversity, Defenders of Wildlife, Earthjustice, Eyak Preservation Council, Greenpeace, National Wildlife Federation, Natural Resources Defense Council, Northern Alaska Environmental Center, Ocean Conservancy, Oceana, Pacific Environment, REDOIL, Sierra Club, The Wilderness Society, and World Wildlife Fund hereby submit the following comments on U.S. EPA Region 10's draft Clean Air Act Outer Continental Shelf ("OCS") Permit to Construct and Title V Air Quality Operating Permit for Shell Offshore Inc. ("Shell"), authorizing air emissions from Shell's *Kulluk* conical drilling unit (or "drillship") and associated vessels for proposed oil and gas exploration drilling operations in the Beaufort Sea.

Shell proposes to undertake large-scale and long-term industrial operations involving many ships that will emit large amounts of pollution into the environment and create significant amounts of noise that is harmful to Arctic species. Shell's operations would affect a large region of the Beaufort Sea that contains important habitat for endangered species and that serves as subsistence hunting grounds for Alaska Native communities. Further, Shell's *Kulluk* permit application is just the beginning of what could become a massive influx of oil company development in the Arctic. Indeed, Region 10 also has received Clean Air Act permit applications from Shell for exploratory drilling operations in the Beaufort Sea and Chukchi Sea using the *Discoverer* drill rig and from ConocoPhillips ("Conoco") for exploratory drilling operations in the Chukchi Sea using a jack-up rig. Thus, it is essential that Region 10 exercise extreme diligence and caution; the agency's actions here will have consequences beyond the *Kulluk's* potential operations and will establish precedents that affect the Arctic's people and environment.

As an initial matter, Region 10 must account for the substantial lack of data concerning the Arctic environment. In June 2011, the Secretary of the Interior released a major report from the U.S. Geological Survey on the gaps in the scientific understanding of the United States' Arctic. See U.S. Geological Survey, *An evaluation of the science needs to inform decisions on Outer Continental Shelf energy development in the Chukchi and Beaufort Seas, Alaska* (Leslie Holland-Bartels and Brenda Pierce eds., 2011). The report concludes that there are large information gaps about the Arctic Ocean, and these gaps are a “major constraint[] to a defensible science framework for critical Arctic decision making.” *Id.* at 151. Region 10 must acknowledge these shortcomings in the scientific understanding of the Arctic and move forward cautiously, ensuring that any air permits it issues are designed to provide maximum protection for human health and the environment.

Further, this draft permit represents a significant step backward—rather than following the precedent set by classifying the *Frontier Discoverer* as a major source, subject to the Prevention of Significant Deterioration (“PSD”) program, Region 10 has reverted to the tack it took in 2006 by determining that less stringent protections are necessary because the *Kulluk* is a minor source. We encourage Region 10 to insist on strict compliance with the law and robust protection for the relatively pristine Arctic air.

In issuing the draft *Kulluk* permit, Region 10 has ignored established law and EPA policy. If issued as currently drafted, this permit would establish precedents that impair protection of the Arctic's people and environment as oil and gas activity intensifies. Region 10 must retract the draft permit and address the problems identified below.

**I. The Kulluk must be permitted as a major source because the owner-requested limits on Shell's potential to emit are unenforceable and unlawful.**

The Clean Air Act requires new sources to comply with PSD program requirements, including installation of “best available control technology” (“BACT”), if those sources are “major.” 42 U.S.C. §§ 7475, 7627. For emission units such as Shell's *Kulluk*, the Clean Air Act states that a new source is major if it has “the potential to emit two hundred and fifty tons per year or more of any air pollutant.” *Id.* § 7479(1). This default 250 ton per year (“tpy”) threshold applies to all of the so-called “criteria” pollutants, including nitrogen oxides (NO<sub>x</sub>), particulate matter (PM), sulfur oxides (SO<sub>x</sub>), and carbon monoxide (CO). For greenhouse gases, including carbon dioxide (CO<sub>2</sub>), EPA has “tailored” special rules defining when a new source is major. For a source that is already major for another pollutant, that source will also be subject to regulation for greenhouse gas emissions if it “will emit or will have the potential to emit 75,000 tpy CO<sub>2</sub>e or more . . . .” 40 C.F.R. § 52.21(b)(49)(iv).<sup>1</sup> Any other new source will be major if it “will emit or have the potential to emit 100,000 tpy CO<sub>2</sub>e . . . .” *Id.* § 52.21(b)(49)(v)(a).

Absent enforceable permit limitations, Shell's yearly potential to emit greatly exceeds the major source thresholds of 250 tpy (criteria pollutants) and 75,000 tpy (greenhouse gases), respectively. For instance, Shell's operations would emit 2,339 tpy of NO<sub>x</sub> and 141,487 tpy of greenhouse

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<sup>1</sup> CO<sub>2</sub>e means “carbon dioxide equivalent.” It is a standardized measurement for the climate change forcing effect of various greenhouse gases. The CO<sub>2</sub>e for a greenhouse gas is the concentration of CO<sub>2</sub> that would cause the same level of radiative forcing.

gases. U.S. EPA Region 10, Statement of Basis for Draft Outer Continental Shelf Permit to Construct and Title V Air Quality Operating Permit No. R10OCS030000, Shell Offshore Inc., Conical Drilling Unit Kulluk, Beaufort Sea Exploration Drilling Program at 24 (Jul. 20, 2011) (“Statement of Basis”). At Shell’s request, Region 10 has proposed permit conditions intended to restrict Shell’s potential to emit to levels below the major source threshold (*i.e.*, intended to make the *Kulluk* a “synthetic minor” source). Under the proposed permit conditions, Region 10 pegs the *Kulluk*’s potential to emit NO<sub>x</sub>—the criteria pollutant for which Shell has the greatest potential to emit—at 240 tpy, which is effectively at the major source limit. As for greenhouse gases, Region 10 has determined that Shell’s operations may emit 80,000 tpy of CO<sub>2</sub>e, which would require regulation, were the *Kulluk* deemed a major source. *Id.* However, Region 10’s determination that Shell’s *Kulluk* operations do not constitute a major source is unlawful because the proposed permit conditions are not practically enforceable and Region 10’s assumptions regarding Shell’s operating scenarios are arbitrary.

**a. The draft permit’s limits on Shell’s emissions are not practically enforceable.**

Region 10’s determination that Shell’s operations do not constitute a major source is unlawful because the permit conditions restricting Shell’s potential to emit pollution are not practically enforceable. A source that otherwise would be classified as major and subject to BACT—because its potential to emit a criteria pollutant exceeds 250 tpy—may reduce its potential to emit by including “physical or operational limitation[s] on the capacity of the source to emit a pollutant . . . .” 40 C.F.R. § 52.21(b)(4). Such limitations must be both federally and practicably enforceable. *Weiler v. Chatham Forest Prods.*, 392 F.3d 532, 535 (2nd Cir. 2004). The “federally enforceable” component ensures that the conditions are actually a part of the permit. *See* Memorandum from John S. Seitz, Director, Office of Air Quality Planning and Standards, Options for Limiting the Potential to Emit of a Stationary Source under Section 112 and Title V of the Clean Air Act, at 2 (Jan. 25, 1995). The related, but distinct, “practically enforceable” component ensures that the limitations written into the permit are sufficiently definite and supported by appropriate compliance records. *Id.* at 5.

Region 10’s limits on Shell’s emissions of criteria pollutants are not practically enforceable because Region 10 does not have adequate monitoring in place to ensure that Shell is complying with the limits. For example, Region 10 states that “[c]ompliance with the CO and NO<sub>x</sub> emission limits is determined by multiplying measured fuel by periodically confirmed emissions factors.” Statement of Basis at 38. The agency has authorized the use of “default emission factors that can be used until unit-specific emission factors are determined through testing . . . .” *Id.* For some emission units, however, the agency will never obtain unit-specific factors because it does not plan to test all units. *Id.* at 44.

This failure to obtain unit-specific data for all units is inconsistent with the agency’s own statement that when, as is the case here, a permittee fails to identify the emission units it will use, it creates an “inherent uncertainty” that necessitates “thorough source testing . . . .” *Id.* at 43. This inherent uncertainty remains unresolved here for some equipment Shell will not test, and the permit’s limitations on CO and NO<sub>x</sub> emissions will be unenforceable as a practical matter, because there will be no way of identifying whether the default emission factors are wrong. *See*

Memorandum from Terrell E. Hunt, Associates Enforcement Counsel, Air Enforcement Division, U.S. EPA Office of Enforcement and Compliance Monitoring, and John S. Seitz, Guidance on Limiting Potential to Emit in New Source Permitting at 5-6 (Jun. 13, 1989) (“Hunt Memo”) (stating that some system of verification of compliance is necessary to track compliance with production or operational limits); *see also* 18 A.A.C. 50.225(b)(5) (a request for an owner requested limit shall include “a description of a verifiable method to attain and maintain the limit, including monitoring and recordkeeping requirements”).

The failure to obtain unit-specific data for all units is particularly problematic because the default emission factors that Region 10 is relying upon are notoriously inaccurate and frequently understate true emissions. For instance, Region 10 has relied upon AP-42—EPA’s primary compilation of emission factor information—to develop the emission factors that supposedly define Shell’s operation’s potential to emit. *See, e.g.*, Statement of Basis at 43. However, EPA has specifically stated that it does not recommend this practice because the use of such factors will result in a significant chance of noncompliance:

Use of these [AP-42] factors as source-specific permit limits and/or as emission regulation compliance determinations is not recommended by EPA. Because emission factors essentially represent an average of a range of emission rates, approximately half of the subject sources will have emission rates greater than the emission factor and the other half will have emission rates less than the factor. As such, a permit limit using an AP-42 emission factor would result in half of the sources being in noncompliance.

U.S. EPA Office of Air Quality Planning and Standards, 1 *Compilation of Air Pollutant Emission Factors* at 2 (Jan. 1995) (emphasis added).

Also, while Region 10 has placed a limit of 80,000 tons per year of CO<sub>2</sub>e in the draft permit, *see* Statement of Basis at 24, this limit is not practically enforceable because Shell’s methane emissions are both uncontrolled and unmonitored. Region 10 has neglected to require monitoring or controls for the *Kulluk*’s emissions of methane. Methane is a powerful greenhouse gas that has a warming potential that is 21 times greater than that of CO<sub>2</sub>. 40 C.F.R. part 98, subpart A. A source’s emissions of methane are included in calculating whether the source is subject to the Clean Air Act’s greenhouse gas controls. When a rig drills into porous, hydrocarbon bearing rock, methane mixes into the drilling muds and is brought to the surface. For Shell’s *Kulluk* operations, some of this methane will be emitted through a vent, and thus, must be counted toward Shell’s potential to emit. Statement of Basis 38-39.

Shell does not have equipment that will limit these methane emissions, and it could exceed the limit on CO<sub>2</sub>e emissions without Region 10 or the public knowing. In particular, Region 10 assumes that the drilling mud system will vent no more than 399 pounds of methane per month (4 tons per month of CO<sub>2</sub>e). Region 10 makes this assumption based on nothing more than assurances from Shell regarding its “past drilling experience,” Statement of Basis at 39, even though Region 10 issued a draft permit for Conoco that estimated 183 tons per month of CO<sub>2</sub>e for methane, or close to 46 times Shell’s estimate. *See* U.S. EPA Region 10, Statement of Basis for Draft Outer Continental Shelf Title V Air Quality Operating Permit No. R10OCS020000, ConocoPhillips Company, Jackup Drill Rig, Chukchi Sea Exploration Drilling Program at 35

(Jul. 22, 2011). Remarkably, despite the obvious risk of relying upon Shell's unsubstantiated appraisal when Conoco's estimate was so much larger, Region 10 determined that there is no need for Shell to control, monitor, or report these emissions. This lack of monitoring or reporting renders the greenhouse gas owner requested limit unenforceable as a practical matter. *See* Hunt Memo at 5-6; *see also* 18 A.A.C. 50.225(b)(5).

Thus, the draft permit limits for criteria pollutant and greenhouse gas emissions are not practically enforceable and are not sufficient to define Shell's operations as a minor source.

**b. Region 10 should require Shell to apply for a major source permit as Shell's "synthetic minor" status is premised on arbitrary assumptions concerning Shell's operations.**

The draft permit places limitations on the operation of Shell's icebreakers and support vessels that are intended to keep Shell's emissions just below the major source threshold. But these limitations, in fact, may not be realistic or feasible. Region 10's reliance upon operational limits for the icebreakers, in particular, is problematic because such restrictions will be difficult to enforce and may limit Shell's ability to respond to unpredictable Arctic conditions. As a result, Region 10 cannot reasonably rely on the proposed operating conditions to justify a minor source permit for Shell's operations.

For example, in order to prevent Shell's operations from being a major source, the draft permit limits Shell to emitting 240 tons per year of NO<sub>x</sub>. This limit prevents Shell from operating its icebreakers for more than about 38 percent of the drilling season, or roughly 46 days. *See* Shell Offshore Inc., Supplement to EPA Outer Continental Shelf (OCS) Operating Permit Application, Shell Beaufort Sea, Alaska Exploratory Drilling Program: Conical Drilling Unit Kulluk at 21 (Feb. 28, 2011) ("Shell, February 28, 2011, App."). However, Shell concedes that the "frequency and intensity of ice conditions is unpredictable and could range from no ice to ice sufficiently dense that the ice management vessels have insufficient capacity to push it out of the way." *Id.* at 20-21. Thus, Arctic conditions may demand that much more than 46 days of icebreaking per season are necessary. In particular, Shell may not be able to quickly end its operations, and the few extra days of icebreaker activity necessary to protect the drill rig and ensure safety could force Shell to exceed the major source threshold. In the face of this variability, it is arbitrary for Region 10 to assume that Shell will be able to pack up and leave once their emissions approach the permit limitations.

Thus, in order to ensure that Shell will comply with the terms of its permit and the Clean Air Act, Region 10 should require Shell to apply for a major source permit and apply PSD program requirements as necessary.

**II. The draft permit's 540 meter ambient air boundary is unlawful.**

Region 10's decision to set the ambient air quality boundary at 540 meters from the center of the *Kulluk* is inconsistent with the Clean Air Act and EPA's policy regarding where the ambient air begins. In order to comply with EPA's longstanding policy, Region 10 must set the ambient air boundary at the hull of the *Kulluk*.