AKG285100
Response to Comments
General Permit (GP) for Oil & Gas Exploration in the Federal Waters of Cook Inlet, Alaska

EPA, Region 10
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General Information

On March 22, 2013, EPA proposed to reissue an NPDES General Permit to cover only Oil and Gas Exploration Facilities in the Federal Waters of Cook Inlet (the Permit). The Permit authorizes certain discharges of pollutants into Cook Inlet from oil and gas exploration facilities subject to limits and requirements designed to minimize pollution and protect water quality.

EPA formally published notice of the 60 day comment period in the Federal Register (78 FR 17661). Notices also appeared in the Anchorage Daily News and the Kenai Peninsula Clarion. The draft Permit, fact sheet, and draft Ocean Discharge Criteria Evaluation were posted on EPA's public notice web site. Public hearings were held on the draft Permit on April 29, 2013, at the Kenai Visitor and Cultural Center, Kenai; on April 30, 2013, at the Alaska Islands & Oceans Visitor Center, Homer; and on May 2, 2013, at the University of Alaska Conference Service Center, Anchorage.

Comments were received from the following:

Written Comments	Testified at a public hearing
Trustees for Alaska (Trustees)	Rika Mouw
Cook Inlet RCAC	Will Schlein
Native Village of Port Graham	Candy Rohrer
Jeffrey Lee	Susie Amundson
Cindy Birkhimer	Margo Reveil
Sue Christiansen*	Brenda Dolma
Nina Faust	Bob Shavelson
Nancy Hillstrand*	
DOI/BOEM	

Kachemak Bay Conservation Society (KBCS)/Roberta Highland*

* means also testified at a public hearing

On November 8, 2011, EPA sent letters to both the US Fish & Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) (together the Services) requesting a species list under the Endangered Species Act (ESA) and alerting them to EPA's intent to reissue the Cook Inlet General Permit. EPA prepared a Biological Evaluation (BE) in consultation with the Services and, on October 23, 2013, submitted a determination of *Not Likely to Adversely Affect* (NLAA) the endangered species in Cook Inlet to the Services with the BE. On November 14, 2013, the USFWS concurred with EPA's determination and the NMFS did likewise on January 13, 2014. Since informal ESA consultation was completed, formal consultation was not necessary.

EPA inadvertently omitted a reopener clause required by 40 CFR 125.123(d)(4) from the draft permit. The reopener is now contained in Permit Part I.I. EPA also included the Cooling Water Intake Structure requirements of Appendix E in the Notice of Intent in Appendix D.

General Comments

1. Comment: The Native Village of Port Graham believes that the permit violates Tribal interest under OPA '90 [Oil Pollution Act of 1990]. Clearly there have been and will continue to be damages to the natural resources from the NPDES [National Pollutant Discharge Elimination System] permit which is a direct violation of OPA

   Response: OPA ’90, 33 U.S.C. § 2701 et seq., addresses a number of aspects of oil pollution, including oil spill prevention and preparedness, cleanup authority, liability for cleanup costs, and penalties. The commentor cites to certain sections of OPA ’90 that address liability for cleanup costs. These sections do not apply to NPDES permitting actions. Clean Water Act (CWA) section 311 (CWA § 311), which OPA ’90 amended, prohibits the discharge of oil in harmful quantities. 40 CFR § 110.3 defines harmful quantities as those that (1) cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or (2) violate applicable State water quality standards. The Permit includes conditions to prevent discharges from causing a film or sheen upon or discoloration of the water (e.g. Permit Parts II.A.7 and 8), and State water quality standards do not apply to discharges in federal waters. Furthermore, the term “discharge” under CWA § 311 excludes discharges that are in compliance with an NPDES permit. For these reasons, OPA ’90 does not prohibit the discharges that are authorized by the Permit nor does the Permit conflict with OPA ’90.

2. Comment: Trustees states that the permit almost universally maintains the status quo and EPA took few, if any, steps to eliminate or reduce the discharge of pollutants into Cook Inlet from oil and gas exploration facilities. This is particularly troubling given the renewed interest in oil and gas exploration in Cook Inlet.

   Response: While it is true that the goal of the CWA is to eliminate the discharge of pollutants to waters of the U.S., the Permit complies with the CWA statutory and regulatory requirements applicable to the NPDES permit program. This comment does not provide enough specificity to warrant a change to the Permit.

3. Comment: Trustees comments that the permit and Ocean Discharge Criteria Evaluation (ODCE) are legally and factually flawed. EPA does not have sufficient information about several of the factors related to unreasonable degradation. The permit is also not sufficiently protective of human health and the environment. EPA should accordingly not issue the draft permit as currently written.

   At the Homer hearing, Rohrer commented that she is opposed to the Permit and the toxic dumping in Cook Inlet.

   Response: These comments are too general to respond to specifically and do not provide enough specificity to warrant a change to the Permit or ODCE. Please see the comments and responses in the ODCE section of this document regarding specific comments on the adequacy of the ODCE and to Response #2 above as to the adequacy of the Permit.

4. Comment: The Native Village of Port Graham concurs with the new report "Dishonorable Discharges" (May 2006).

   Response: Comment noted.

5. Comment: The Native Village of Port Graham states that the proposed permit appears to violate the CWA.

   Response: See Response #2.

6. Comment: Lee says that monitoring needs to be accomplished at a hazardous waste facility after fluids muds and cuttings are safely deposited on land to get accurate data. This will create jobs and companies have the technology to dispose of these materials in a proper manner.

   Hillstrand comments that the operators should barge the 360,000 barrels of drill fluids to be analyzed, sorted and sold on land. Can some of these toxic chemicals like mercury or cadmium be centrifuged out and utilized? When I research this the answer is yes. The millions of dollars of incentives to the oil and gas industry in Alaska makes this economically feasible.

   Hillstrand asks: Can the 420,000 barrels of Drill cuttings be barged cleaned and used? There will be close to 10,000 cubic yards of this waste gravel, rock or sediment. The Kenai Peninsula generally has very little gravel. Can this be sold?

   Response: EPA would encourage the reuse of material where it is safe but cannot require facilities to do so if they can meet the requirements of the Permit and have obtained the required discharge authorizations.

7. Comment: Hillstrand would like to know what is the cost of every entire five year NPDES and APDES process to our Federal government coffer?

   Response: EPA considers the cost of the reissuance process as a required regulatory costs, not a discretionary cost, so EPA has not calculated the cost for issuing the original permit or the cost each time the Permit has come up for reissuance.

8. Comment: DOI/BOEM recommends that the EPA use more recent information in support of the reissuance of the NPDES Permit. They attached a bibliography identifying documents that provide more recent information

   Response: EPA thanks BOEM for their diligence and has reviewed the bibliography for references applicable to the reissuance of the Permit.

9. Comment: Christiansen states that the oil and gas industry is an industry that needs to shift, more stringent parameters must be put in place.

Response: See Response #2.

10. Comment: Hillstrand asks why EPA uses the word “sanitary” waste when, quite the contrary, human feces and urine are not sanitary. The term Black water is more appropriate as the State uses.

    Response: EPA uses the definitions found in the CWA and in regulation to define terms in permitting actions. According to the regulations at 40 CFR 435.11(dd) sanitary waste means “the human body waste discharged from toilets and urinals located within facilities subject to this Subpart.” (Subpart A). Neither the CWA nor the regulations define “black water” so it would typically not be used where there is a defined regulatory term that is applicable to the Permit under consideration.

11. Comment: Hillstrand would like to know what is the feces and urine “treated with” what chemical is being discharged with the black water.

    Response: Marine Sanitation Devices (MSDs) utilize either maceration or biological treatment to handle the solid component of the sanitary wastewater. The effluent is required to meet a minimum chlorine effluent limit of 1 mg/L. Chlorine is used to disinfect the effluent (free it from infection) by destroying harmful microorganisms.

12. Comment: Trustees noted that in the Fact Sheet, EPA stated that, “[b]ased on information on EFH [Essential Fish Habitat] presented in the [Biological Evaluation], EPA has determined that the discharge will not adversely affect [Essential Fish Habitat].” However, EPA has not yet issued the Biological Evaluation (BE) and it is unclear whether EPA plans to complete an EFH assessment. For the last permit, the public had the opportunity to comment on the BE and the EFH assessment. EPA should involve the public to ensure that important resources in Cook Inlet are adequately protected

    Response: EPA regrets that the availability of the BE was out of synchronization with the draft Permit but there is no regulatory requirement to provide the BE for public comment. The process involves EPA making a determination and the Services either concurring or not. In this case, the Services concurred on EPA’s determination of not likely to adversely affect endangered species and that discharges would not adversely affect EFH. See the General Information Section, above, for more information.

13. Comment: Christiansen notes that EPA should remember the impact of oil and gas on climate change.

    Response: The discharges from exploration authorized under this Permit are temporary and result in no production of hydrocarbons. Potential discharges from further development and production facilities are subject to the National Environmental Policy Act (NEPA) and climate change would be one of many topics evaluated during that process.

14. Comment: Lee suggests that an electronic monitoring device needs to be installed on all exploration as well as production rigs. This digital cost effective monitoring must

begin running the moment any seacocks are opened or augers, machinery, etc are engaged. These devices are available commonly on fishing vessels to monitor for by catch and can easily be modified to accommodate the needs of the O&G industry

Response: EPA is uncertain as to what concern would be addressed by this comment. Unlike fishing vessels, drill rigs must be in a stationary position to drill an exploration well. Therefore, the discharges will occur when the rig is stationary at the authorized location without the possibility of drifting into an area not covered by the general permit.

15. Comment: KBCS thinks that if you can't safely put the discharges in your eye, bathe in it or drink it, it should not be allowed to be dumped in our precious CI.

    Response: None of the three restrictions stated in the comments are required to be met in discharges to marine waters under the CWA. See Response #2.

16. Comment: At the Homer hearing, Amundson commented, "It's time for Anchorage to stop discharging, it's time for Homer, you know, for all of us cities that put in pollutants. It's totally inappropriate and it needs to -- every single one of those things needs to be cleaned up and we need to do it now. And it's just absolutely not okay."

    Also at the Homer hearing, Dolma asked "that we look and take whatever it is in the political process to make a change to protect our habitat and make our water clean and not allow it to get used as a toilet bowl. It's not acceptable, as we know we have a unique species of belugas that have diminished to very low, low, less than 300, and this is very sad."

    Response: The GP covers a sanitary and domestic wastewater discharge component from applicable exploration facilities. Discharges from municipal wastewater treatment facilities are regulated by other NPDES permits that are issued to the municipal facility. The evaluation of discharges from municipalities is done under their own permitting process.

17. Comment: At the Homer hearing, Shavelson stated that the Endeavor rig was docked in Homer and someone found an oyster shell on it. People asked questions about invasive species. Our state department of Fish & Game did nothing. What they did was say, oh, the industry is going to do a report, and they'll show us the report and it's okay.

    Response: The Permit applies to discharges to waters of the US associated with oil and gas exploration facilities. Vessels that act as a means of transportation and travel to U.S. ports should assess their need for coverage under EPA's Vessel General Permit.

18. Comment: At the Homer hearing, Highland said, "I've got an idea about four Es to be used as a template for all development, and it is environment, economy, energy, and ethics. And if the development that is being considered does not pass all four of those,

then it doesn't get to happen the way that they presented it. They would have to come back and pass all of those templates in order for any development to happen."

Response: Comment noted. See also Response #2.

Permit Requirements

19. Comment: Trustees request that EPA include a limitation on the total discharges and not just the rate of discharge.

    Response: The total volume of drilling fluids used is variable depending on the geology of the hole and other considerations so a total discharge limit could preclude drilling a complete hole to assess the formation. Since drilling fluids are routinely discharged in bulk when changing the type of fluid, the limitation on discharge rate prevents an entire batch from entering the waterbody at once.

20. Comment: Trustees comments that the permit should include additional restrictions on the use and discharge of biocides and other chemicals. Although EPA indicates that it does not want to limit the use of more beneficial treatment chemicals, the permit provides no incentives or parameters for ensuring that facilities use the least-toxic chemical additives. Because there is no disclosure to the public prior to use of these chemicals, EPA should add requirements to the permit to ensure that facilities do not use chemicals that contain ingredients that are suspected or known to cause risks to public health and the environment.

    Response: Some treatment chemicals such as biocides are meant to kill certain living organisms. However, to reduce the risk, the general permit contains requirements to limit the quantity used and contains Whole Effluent Toxicity testing to determine whether the use is harmful to aquatic life and Toxic Reduction Evaluation requirements if triggers are exceeded.

21. Comment: Trustees believes that EPA should operate under the precautionary principle and impose effluent limitations for whole effluent toxicity to ensure the protection of human health and the environment. The precautionary principle "requires that in . . . light of scientific uncertainty, when credible evidence is put forth that a risk exists, action should be taken to minimize that risk or eliminate it even though absolute proof has not been obtained which quantifies the risk." Given the lack of information on the impacts of these discharges, EPA should operate under the precautionary principle, which directs preemptive action to minimize or eliminate risk to the environment instead of post hoc evaluation of how to implement WET effluent limitations.

    Response: As set forth in the Fact Sheet, EPA did not conduct a reasonable potential analysis to determine whether whole effluent toxicity (WET) effluent limits were necessary for each of the miscellaneous outfalls due to the limited number of discharges from just two of the outfalls under the 2007 Permit. Without additional information, EPA is unable to conduct a reasonable potential analysis. Instead, to

insure that human health and the environment is protected, EPA has set WET triggers in the Permit. EPA sees the inclusion of triggers as a method of collecting information necessary to set a limit in future permit actions. Exceeding a trigger will initiate further testing and studies to determine what substance in the effluent caused the exceedence and lead to a change in the amount or to a different substance being used.

22. Comment: Trustees finds the monitoring requirements for chemically treated sea and fresh water discharges problematic. Entities are only required to provide estimates of their total flow quantities. Permittees are then required to use the estimated flow volume to calculate the concentration of chemicals added to the waste stream. In other words, the concentration calculations turn on uncertain estimates of how many million gallons per day the facilities discharge and not on the actual volume discharged.

    Response: EPA has considered this comment and changed the Sample Type from Estimate to Measured.

23. Comment: Trustees wants EPA to require benthic organism sampling in the vicinity of the mixing zones. Benthic organism sampling would provide a direct method for determining the impacts of the discharges on the environment and aquatic ecology

    Response: The Permit does not contain mixing zones. The only permit requirement that utilizes dilution factors is the toxicity triggers for WET testing. Since WET testing is a type of biologic testing, there is no need to do both. See also Response #25.

24. Comment: Cook Inlet RCAC concurs with the method but suggests that the permit verbiage specify measuring diesel range organics (DRO) by Method 8015C, as otherwise the contract laboratory – unless specifically understanding the goal of the test - might run a standard 8015C test where the standard analyte list does not include diesel oil.

    Response: EPA has made the suggested change.

25. Comment: KBCS notes that there is no requirement to monitor at the edge of the MZ.

    Birkhimer states that there needs to be a required monitoring at the edge of the mixing zones to determine if the discharges do in fact comply with the permits. If these facilities can't comply with their permits, they should not be allowed to continue.

    Trustees comment that EPA should require monitoring at the edge of mixing zones to determine if the discharges actually comply with the permits. Because the CORMIX model is not based on reality, EPA should add a requirement for monitoring at the edge of mixing zones to ensure that public health and the environment are protected as forecasted by the modeling.

Response: The Permit does not authorize/contain any mixing zones (no permit parameter has an effluent limitation based on the dilution of a mixing zone) so there is no need to conduct ambient monitoring. The Permit does utilize dilution factors for the WET triggers; however, WET testing is itself a type of biologic testing. See also Response #23.

26. Comment: Cook Inlet RCAC states that the process is not clear where public review of an NOI is provided, even though the submission can include requests by the permittee for significant changes to what have been identified in the permit, such as a request for mixing zone and effluent modifications or a request for a waiver from minimum treatment requirements.

    Response: Neither the draft Permit nor the final contain public review requirements for the NOIs. The Permit does not contain provisions for a facility to request an effluent limit modification, a mixing zone or a waiver from treatment requirements. NOIs are a request by a facility to obtain coverage under the Permit; they do not change the conditions of the Permit. If a permit change is required in the future, EPA is required to modify the Permit. See 40 CFR 122.62.

27. Comment: Cook Inlet RCAC finds the lack of scientific review or opportunity for review of any environmental study plan or report required for submission with the NOI most perplexing. Extensive comments are provided later on our concerns about the poor study plans submitted to EPA under the GP (which were never allowed public review) that were born out by the poor sampling success and lack of any useful data.

    Response: The NPDES regulations do not require EPA to provide the public a specific time period to review any plans submitted pursuant to an NPDES permit. However, these plans can be released under the Freedom of Information Act (FOIA). To the extent the commentor believes the previous plans were inadequate, those comments are addressed below.

28. Comment: Cook Inlet RCAC requests that, unlike other review processes, EPA should ensure that any changes to the permit between the draft and final permit are reflected in the Fact Sheet. In the past, the Fact Sheet stays on-line with the permit throughout the length of that permit but often does not reflect or accurately describe the permit because of changes made to the permit

    Response: EPA prepares a Fact Sheet to be the technical support document for the draft Permit. See 40 CFR 124.8. This Response to Comments document provides the technical support for any changes made from the draft to the final Permit. All documents stay on EPA's website for the life of the Permit.

29. Comment: Trustees asks that EPA require earlier reporting of chemical use. In the permit, EPA does not require permittees to submit their inventory of chemical additives, chemical concentration determinations, and limitation compliance until they submit their end-of-well report. EPA should require earlier notification and compliance timeframes to ensure that facilities do not exceed the permit requirements.

Response: Facilities cannot exceed permit requirements until after discharges take place so the end-of-well (EOW) Report is the appropriate place for a complete inventory but EPA has added a requirement that any exceedance of the permit requirements be reported under Permit Part V.G., Twenty-four Hour Notice of Noncompliance Reporting.

30. Comment: Cook Inlet RCAC requests that the information from the Chemical Inventory (the quantities and types of potentially toxic substances that are being discharged to Cook Inlet) be provided for public access along with Discharge Monitoring Report (DMR) data.

    Response: The DMR contains parameter specific information and the chemical inventory does not; therefore, it cannot be reported on the DMR. However, to the extent an individual wants to obtain a chemical inventory that is submitted under the Permit, an individual can submit a FOIA request to EPA for that information.

31. Comment: Hillstrand expressed concern about visual sampling. The discharge is below 33 feet. Even at slack tide the speed of our undercurrents, under river currents and some of the largest tidal currents in the world a sheen will not present itself until miles downstream out of the observers view. This is not acceptable science and is not Best Management Practices

    Response: Given the dynamic nature of the waterbody, it would be difficult to attribute a sheen to a facility anywhere but in the vicinity of the platform. Discharges of deck drainage which occur during broken or unstable ice conditions or during stable ice conditions must be sampled and analyzed by the Static Sheen Test. This provision was not clear in Table 6 of the Permit for Miscellaneous Discharges and the final Permit has been changed to reflect this.

32. Comment: At the Homer hearing Hillstrand testified: “But why can we not put in something that's natural like fish, but we can take drilling muds and dump them? I mean it doesn't make sense. And so something is going on and something is broken for sure when you realize that something natural and fresh can be kept, you know, from being dumped into an ocean, but yet you get a permit for something like dumping oil and gas.”

    Response: The Permit authorizes discharges from oil and gas exploration activities that comply with the conditions and requirements of the Permit. For drilling fluids, the requirements include metals testing of the barite used in the drilling fluid and toxicity testing. See Response #2.

Effluent Limitation Guidelines and Zero Discharge

33. Comment: Birkhimer states: The zero discharge policies that apply elsewhere in the country should apply to Cook Inlet Oil and Gas Facilities. Why does the EPA continue to exempt Cook Inlet oil and gas facilities from the zero discharge requirements? The EPA needs to hold accountable the old as well as the new O&G companies exploring

and developing Cook Inlet (CI). It is essential that measures be taken to stop this toxic contamination of CI!

Faust says that toxic waste dumping by industry needs to end, now. Alaska should have the same standards as elsewhere in the country where this sort of pollution is no longer allowed in coastal waters. I want all new drilling operations to be required to meet a “zero discharge” standard. If other coastal areas can require these standards and industry meets them, the same standard should be applied here.

The Native Village of Port Graham maintains the request for zero discharge from existing and all future oil exploration and development in the proposed permit

Lee declares that zero discharge is required

KBCS requests that the permit be denied and demands that all Cook Inlet facilities achieve zero discharge of waste and re-inject all drilling fluids, cuttings and polluted waste water.

Trustees comments that EPA should require operators to demonstrate that zero discharge is not technically feasible for exploration facilities. In American Frozen Food Institute v. Train, the DC Circuit stated that, under Section 402 of the CWA, EPA is “clearly . . . able to employ any limitation it finds appropriate for a specific plant which falls between a ‘range’ of zero pollutant discharge and the nationally set effluent limitations.” EPA similarly recognized in the Technical Support Document for the 2004 Effluent Guidelines Program Plan that the permit writer has “the ability . . . to require an operator to demonstrate that zero discharge is not technically feasible for a specific project.”

At the Homer hearing, Mouw stated, “And I also wonder as you go around to the different cities and the testimony that you hear, I don't think that there is anybody saying, yeah, go ahead with the drilling muds and the toxics. I don't think any private citizen or any fisherman or any businessman other than the gas and oil industry is saying we'd like to have this permit go through. I mean you'll hear thousands of voices, and I guess that's where my cynicism lies is I don't think you're going to hear anybody, anybody in the audience of any city you go to say, yeah, we think this permit ought to go through. I'm against it. I always have been. I'm baffled by it, and I guess I don't need to keep repeating myself that way. And I just would love for you guys to help me with my feelings of cynicism and help me overcome that, because I'm pretty entrenched that way at this point. And I would love to see a difference. We are in the 21st Century, and best practices are, you know, better than they were ten years ago. And I don't want to keep repeating myself, but I'm against the permit. I want zero discharge.”

At the Homer hearing, Schlein testified: “I want zero discharge like the rest of the United States. We're relying on you to protect our Alaskan waters and fisheries for our current and future generations

At the Homer hearing, Reveil commented: “the thing that is discouraging, I have to say, to me is looking through this document trying to understand everything that's in it, is that it's already set in place, that this is going to happen, that this permit is a done deal. And that's pretty discouraging I think for everybody here. I think a lot of people have said. So what are the pieces in place, my question would be, that would assist us in making these changes that we are all wanting to see of zero discharge?

At the Homer hearing, Highland said, “And so my comments are to both of these permits, that Mobil Oil should not be allowed to do this, and the general permit -- the EPA general permit should be completely changed that none of this pollution should be allowed in Cook Inlet, which ends up coming into Kachemak Bay, which also ends up going around the world because all the waters are connected.”

At the Homer hearing, Rohrer stated she would like to see the kind of community where we are state-of-the-art because we're passionate about this place. We protect it, we love it, we are healthy and sustainable and environmentally friendly. We want to be a progressive community and take all your best practices, all the best things that you can bring up from consultants or from the wonderful research that the feds do and that we should be doing in the state of Alaska. It should be put all together and make this the best possible place we possibly can.

KBCS notes that the EPA's exemption from the zero discharge requirements which are applied elsewhere in the country to similar categories of facilities are outdate - almost 20 years old. Exemptions based on outdated information about the ability of Cook Inlet facilities to achieve zero discharge.

Hillstrand states that a lot has changed since the 1996 guidelines that removed Cook Inlet from the safety of the Clean Water Act. We the people of Cook Inlet are begging to be included with the rest of the United States Clean Water Act standards, for a revision to the Effluent Level Guidelines (ELG’s) to provide Cook Inlet the benefits of zero discharge so that we may also possess the National Clean Water Act security preventing cumulative effects jeopardizing our: health, safety, environment, jobs and economy.

Trustees request that EPA reevaluate the Coastal Effluent Limitation Guidelines that exempt Cook Inlet from the zero discharge requirement.

Response: The Offshore Oil and Gas ELGs have specific requirements for Alaskan operators within 3 miles of shore but are the same throughout the country for discharges outside of 3 miles. The Permit covers discharges outside of 3 miles. Therefore, this permit does not include the Cook Inlet exemption. The exemption from the zero discharge requirements for drilling fluids and cuttings is found in the 1996 Coastal Oil and Gas ELG found at 40 CFR 435 Subpart D and are not applicable to the Permit.

34. Comment: Christiansen pleads for EPA not to issue the draft permit as currently written. Over the last 30 years she has witnessed tremendous degradation of this

area and believes EPA holds the key to restore our waters. It is now vital for EPA to make more stringent policies to eliminate and reduce the discharge of pollutants into Cook Inlet from oil and gas exploration facilities. Please take to heart the protection and propagation of fish, shellfish and wildlife so vulnerable to an unbalanced ecosystem. With all the extra pressure the oil and gas industry is placing on this precious habitat she calls on EPA to step up to the plate and redefine the definition of degradation, get better information and documentation of the accumulated affect of bio-accumulation, (especially heavy metal accumulation on ocean species) and a better monitoring program. So many once rich ocean habitats no longer sustain diversity.

Response: EPA has analyzed the discharges through the preparation of the ODCE. It has been determined that the permitting action meets the regulatory requirement of no unreasonable degradation and that the Permit meets all statutory and regulatory requirements of the CWA.

35. Comment: Trustees also request that EPA revisit the ELGs for the offshore subcategory, which apply in federal waters. The offshore ELGs exempt all facilities off the Alaskan coast from a zero discharge requirement for drilling fluids and drill cuttings. EPA issued the offshore ELGs in 1993 — prior to EPA's issuance of the coastal ELGs and prior to EPA's decision to expand the Cook Inlet General Permit's coverage into federal waters. As with the coastal ELGs, the offshore exemption relied in part on the difficulties with transporting wastes and the lack of commercial disposal sites. As described above, many of these assumptions no longer hold true for Cook Inlet. EPA should review and update the outdated offshore ELGs, particularly as they relate to Cook Inlet

Response: The Offshore Oil and Gas ELGs establish technology-based standards and conditions for discharges of drilling fluids, drill cuttings, and produced water. The ELGs have specific requirements for Alaskan operators within 3 miles of shore but are the same throughout the country for discharges outside of 3 miles which is the area covered by the federal permit. EPA cannot change the ELGs through this permitting action to set more stringent technology-based standards and conditions and cannot prohibit these discharges within the federal waters of Cook Inlet.

Please see Response #36 on the "outdated" natural of the regulations. See also Response #33.

36. Comment: The Native Village of Port Graham declares that EPA's economic analysis is outdated.

Hillstrand does not want to reach the thresholds of toxicity that tip the scales by using obsolete guidelines and missing data.

Hillstrand notes that the 1996 guidelines did not foresee all the new exploration proposed in Cook Inlet this is non-compatible with life forms including humans and theses discharges must be revoked

Hillstrand requests the removal of the obsolete exemption for Cook Inlet to release us from this bondage of being used as a toxic dumping grounds with little to no oversight

Hillstrand asks what is the cost analysis for them to attain zero discharge and what is the true cost analysis of cumulative effects caused downstream to other industries held hostage when they continue to not include the Best Available Practices in their operations?

Hillstrand states that any additional cumulative impact that can be removed that causes stress like toxicity in the gyres suffocation or thermal shock must be accomplished through revised updated guidelines and not allowed.

Response: CWA § 304(m) requires EPA to biennially publish an Effluent Limitation Guidelines Program Plan (ELG Plan) for public notice and comment. The ELG Plan identifies any new or existing industrial dischargers, both those discharging directly to surface waters and those discharging to publicly owned treatment works (POTWs), selected for ELG rulemaking and provides a schedule for such rulemakings. The commentors could comment on the draft ELG Plan or make a request to the Office of Science and Technology (OST) through a petition for rulemaking. When promulgation of an updated ELG is undertaken, EPA would consider all of the issues cited in the comments above.

37. Comment: Hillstrand believes that the ELGs do not consider the effects on macro or micro invertebrates accurately.

Response: The commentor is correct. The ELGs do not consider the effects on macro or micro invertebrates at all. ELGs are technology-based national standards adopted into regulation. In other words, they are based on the performance of treatment and control technologies. ELGs work in tandem with a wider range of programs, including ocean discharge criteria, to protect and restore the Nation's waters. See also Response #36 regarding the ELG process.

Ocean Discharge Criteria

38. Comment: Trustees states that EPA should not issue the permits because the agency has not properly determined that there will be no unreasonable degradation of the marine environment. Under the Ocean Discharge Criteria Evaluation (ODCE) for the Cook Inlet NPDES Permit, there is insufficient information for EPA to make a reasonable decision on several of the ten factors. EPA also ignored and omitted important information suggesting that unreasonable degradation could occur.

Cook Inlet RCAC believes that the ODCE contains significant misinformation and in many cases does not include information that should be incorporated or discussed. It was confusing to read because in some sections it was clear that significant effort was made to describe in detail some aspect of Cook Inlet's habitat or biota, yet in others the explanations or summaries were lacking detail or included descriptions of areas

that are significantly different from Cook Inlet and missed more relevant existing information for the Inlet.

Response: These comments are too general to provide a specific response. To the extent more specific comments have been provided, EPA has responded to those in subsequent responses. EPA used the best available information to determine that there will be no unreasonable degradation. The responses below are directed toward the claim of insufficient information on several of the ten factors. Human health and the environment are discussed below in responses to more specific comments.

39. Comment: Cook Inlet RCAC states that descriptions of the oceanography of Cook Inlet in the ODCE included numerous inaccuracies or careless language that could lead to misunderstandings by a reader. For example, the ODCE contains the following paragraph: "Sediment in Cook Inlet is generally transported along the Kenai Peninsula into lower Cook Inlet, Kachemak Bay, and Shelikof Strait (MMS 2003). Sediments transported down the west side of Cook Inlet are eventually deposited in the shallows of Kamishak Bay, while sediment is also deposited in Kachemak Bay, deeper portions of outermost Cook Inlet and Shelikof Strait (MMS 2000). Homer Spit is maintained by sediment transported from the north (KPB 2007)." The first sentence is unclear whether they are saying that sediments that come from outside of Cook Inlet, into Cook Inlet, are carried along the Outer Kenai Peninsula and deposited or whether they are talking about sediments that originate in the upper and central Inlet being transported down the east side of the inlet along the Kenai Peninsula and deposited. Either way, neither supply sediments to Kachemak Bay. The second sentence is misleading in that it implies that all sediments carried from upper Cook Inlet down the west side are deposited in Kamishak Bay [yet again implies that these(?) sediments are also deposited in Kachemak Bay]. Upper Inlet sediments transported in the western boundary current are deposited in areas of eddies or slowed currents along the coast (thus, the extensive mudflats throughout much of the upper and central Inlet), some are deposited in Kamishak Bay, and some are swept out to deposit in deep quiescent areas of Shelikof Strait. These distinctions are important since there has been significant confusion by the public on the physical oceanography and sediment transport in Cook Inlet that has led to misrepresentation of contaminant study results.

Response: The language in the final ODCE clarifies that sediment deposition occurs from the east into Kachemak Bay, lower Cook Inlet and Shelikof Strait and from the upper Cook Inlet along the west side to Kamishak Bay, lower Cook Inlet and Shelikof Strait. A diagram from MMS (2003) was included to show this pictorially. The ODCE recognizes that much of upper Cook Inlet sediment is deposited in the extensive tidal flats and is only discussing the fate of the sediment that is transported down the west side. The final ODCE has been appropriately updated to address this comment. [ODCE 4.2]

40. Comment: Cook Inlet RCAC comments that density differences drive the net circulation (baroclinic flow) of Cook Inlet (e.g. the currents that transport much of the sediment from the upper Inlet to the lower Inlet and areas beyond) and so it is important that salinity be described clearly in the ODCE. It is extremely complex; it

varies across the Inlet, varies within a tidal cycle, varies with season, etc. The major influences on salinity in the Inlet are the freshwater inputs (both from rivers within the Inlet and from the Alaska Coastal Current (ACC) entering the Inlet at Kennedy Entrance) and intruding seawater. The paragraph describing salinity was obviously written by someone unfamiliar with the area and its influences on Cook Inlet's circulation: "Salinity of Cook Inlet waters increases steeply and evenly along the inlet, from Point Possession to East and West foreland. Slightly higher salinities are found on the east side. This rapid increase in salinity is due to high concentrations of glacial silt in runoff from the Matanuska, Susitna and Knik rivers and subsequent settling of sediment in upper Cook Inlet. Local areas with less salinity occur near the mouths of large glacially fed streams…" Salinity is a measure of dissolved salts, so suspended or depositing of glacial silt or other sediments is not controlling salinity. In fact, in much of the upper and central Inlet, sediment loads can almost be a proxy for freshwater influence and, thus, salinity. Areas of higher salinity are controlled by the intrusion of saltwater into the upper Inlet. The amount of freshwater varies by season but it also varies significantly by the hour. Any hydrographic measurements at the same location throughout a water column will show variability in salinity over time based on the amount of seawater intruding north with the tide, the position of the high energy convergent zones, and numerous other factors. This one simple paragraph about salinity incorporates such misunderstandings about Cook Inlet hydrography, and it only attempted to describe salinity from Point Possession to the Forelands (a small fraction of the Inlet). These comments may seem trivial, but density driven currents drive the net circulation of the Inlet and, thus, poor descriptions or understandings of salinity can lead to poor understanding of net transport of pollutants.

Response: Review of the existing literature and draft ODCE on which public comments were received indicate that the description of salinity in the Cook Inlet draft ODCE was overly simplistic and additional data are available to better present the physical processes in the Cook Inlet regulating salinity (e.g., Okkonen 2005; Okkonen et al. 2009, etc.). As the commentor indicates, freshwater flow and the resulting density differences caused by temperature and salinity in the waterbody are an important factor driving the net circulation in the Cook Inlet. The final ODCE has been appropriately updated to address this comment. [ODCE 4.2]

EPA acknowledges that the commentor has a valid point that the statement, "This rapid increase in salinity is due to high concentrations of glacial silt in runoff from the Matanuska, Susitna and Knik rivers and subsequent settling of sediment in upper Cook Inlet," gives the wrong impression that silt is an important factor controlling salinity. This statement has been removed in the final ODCE and references to the original statement restructured to focus on salinity changes rather than turbidity and sediment loads.

41. Comment: Cook Inlet RCAC notes that the ODCE made comparisons to Arctic areas (e.g. Beaufort Sea) in several instances (e.g. Mysis growth, nearshore lagoons) followed by a statement such as "Although this study was completed in the Beaufort Sea . . . rates are likely similar ….in the Inlet." Environmental conditions in Beaufort Sea lagoons are very different from areas in Cook Inlet in atmospheric and ocean conditions, coastal influences, tides, currents, sedimentation rates, etc…and there

would be little similarity between the Arctic lagoons studied by Dr. Ken Dunton and any area of Cook Inlet.

Response: Applicable historical and modern Cook Inlet-specific studies (e.g., Larrance and Chester 1979; Redburn et al. 1976; Speckman et al. 2005) have replaced the Beaufort Sea and Simpson Lagoon examples in the primary production and zooplankton sections of the final ODCE. [ODCE 5.1.1.1]

42. Comment: Cook Inlet RCAC comments that the description of attached macroalgae in the ODCE contains numerous inaccuracies and missed data sources that could have provided more detail. This is especially important since there are areas not far from the potential discharge locations within the Cosmopolitan Unit, where Buccaneer has begun drilling, that have shown diverse and lush benthic kelp communities and an abundance of higher trophic levels as evidenced by the heavy sport fishing of halibut and salmon that occur in the area.

    Response: The commentor has not provided a specific description of the inaccuracies in the ODCE nor has the commentor provided any missing data sources. Additional studies (e.g., Redburn et al. 1976; Schoch and Chenolet 2004; Spurkland and Iken 2011), however, have been identified by EPA to supplement the information presented on macroalgae distribution and abundance; growth and production; environmental factors; and habitat sections in the final ODCE. [ODCE 5.1.3.1]

43. Comment: Cook Inlet RCAC request that EPA revisit the ODCE and clean it up since it seems customary for language within one ODCE (or similar evaluation summary documents) to be extensively referenced and used in future ODCE's for the same area. This ODCE states that it "relies extensively on information provided in…" MMS Lease Sale Final Environmental Impact Statements, permit fact sheets, previous permits, and a prior ODCE for Forest Oil. These documents often simplify, summarize, or misrepresent the findings of extensive study reports and manuscripts during the effort to describe some Cook Inlet ecosystem or biotic category in a paragraph or two.

    Response: EPA has clarified and corrected information from comments that provided specific information, updated references (where applicable and available), and thoroughly edited the document.

44. Comment: Cook Inlet RCAC says that the major concern with an ODCE that does not accurately portray the environmental conditions is that it is used to make a decision about the proposed permits and their potential to cause unreasonable degradation of the marine environment…" Without a solid understanding of the physical, chemical, and biological environment, it would be difficult to, for example, consider the required objectives of the ODCE: "the potential transport of such pollutants by biological, physical, or chemical processes" or "the composition and vulnerability of the biological communities that may be exposed to such pollutants, including the presence of unique species or communities of species…"or "the importance of the receiving water area to the surrounding biological community, including the presence of spawning sites, nursery/forage areas…" Yet, the ODCE does just that.

Response: This comment is too general to respond to specifically and does not provide enough specificity to warrant a change to the ODCE. The ODCE devotes entire sections to the Biological [5.0] and Physical Description [4.0] of Cook Inlet while referring to chemical descriptions throughout the document. This comment says the ODCE is inadequate without saying why these sections are deficient. EPA has added details to the ODCE from recent analyses of Cook Inlet circulation studies to evaluate pollutant transport [ODCE 4.2].

45. Comment: Cook Inlet RCAC notes that the ODCE states that "If the Regional Administrator has insufficient information to determine, prior to permit issuance, that there will be no unreasonable degradation to the marine environment, an NPDES permit will not be issued unless the Regional Administrator, on the basis of the best available information, determines that all of the following are true: such discharges will not cause irreparable harm…, there are no reasonable alternatives to the onsite disposal…., and the discharge will be in compliance…" Cook Inlet RCAC believes that in some areas of Cook Inlet, EPA and ADEC have insufficient information to determine whether there will be unreasonable degradation to the marine environment.

    Response: EPA developed this ODCE with the best available scientific information and incorporated additional information received from public comments. EPA has concluded that the information presented is adequate to make the determination that there will be no unreasonable degradation to the marine environment.

46. Comment: KBCS voices concern that EPA has not shown that the discharges are protective of human health and the environment. The Ocean Discharge Criteria Evaluation indicates that discharged substances, such as drill cuttings, contain toxics that are dangerous to the environment as well as human health. These dangerous substances include mercury, cadmium, arsenic, chromium, copper, lead, nickel, and zinc.

    The Native Village of Port Graham says the ODCE indicates that discharged substances contain toxics that are dangerous to the environment and human health. Studies performed to date on the effects of muds and cuttings provide little information about what level of exposure is safe and whether there is a risk of bioaccumulation in the species eaten by CI residents.

    Response: Pursuant to 40 CFR Part 125, Subpart M, EPA is required to conduct an ODCE prior to issuing a NPDES permit for discharges into federal waters to determine whether the discharges will cause an unreasonable degradation to the receiving waters. Here, the ODCE states that "The presence of potentially toxic trace elements in drilling fluids and adherence to cuttings is a concern. Barite is known to contain trace contaminants of several toxic heavy metals such as mercury, cadmium, arsenic, chromium, copper, lead, nickel, and zinc." EPA's analysis, however, indicates that the discharge of drilling fluids and cuttings into Cook Inlet is expected to result in no unreasonable degradation to the environment and human health. [ODCE 3.1.2.2.1]

Barite is a major component of drilling fluids, which are also referred to as muds or water-based muds (WBMs) in some comments and source documents. Barite has been shown to contain varying concentrations of metals of toxic concern, particularly cadmium and mercury. Barite ore, the natural source of barium sulfate, has also been shown to contain varying concentrations of metals depending on the characteristics of the deposit from which the barite was mined. EPA's statistical analysis of the American Petroleum Institute/USEPA Metals Database described in the ELG Development Document (EPA 821-R-93-003, January 1993 [USEPA 1993]) for the Offshore Category indicated that there was some correlation between cadmium and mercury and other trace metals in the barite. [ODCE 3.1.2.2.1]

Specifically, EPA's evaluation showed a correlation between the concentration of mercury and the concentration of arsenic, chromium, copper, lead, molybdenum, sodium, tin, titanium and zinc; and the concentration of cadmium and concentrations of arsenic, boron, calcium, sodium, tin, titanium and zinc. Thus, by EPA regulating the concentration of cadmium and mercury in stock barite to 1 mg/L and 3 mg/L, respectively, it indirectly regulates all other metals present in barite. [ODCE 3.1.2.2.1]

Neff (2010) found that WBMs have become less toxic since 1989 because operators have replaced toxic ingredients with less-toxic ingredients (e.g., replacing chrome lignosulfonate with chrome-free flocculants). The metals that sometimes were present in water-based drilling fluids used before 1993 at concentrations substantially (> 100-fold) greater than natural concentrations in marine sediments are barium, chromium, lead, and zinc (PERF 2005). With wider use of low-trace-metal barite for drilling muds, average mercury and cadmium concentrations in water-based drilling fluids have declined, though concentrations sometimes are slightly higher than natural concentrations in clean marine sediment (Neff 2010). Neff (2010) also noted that some of the concentrations of copper, lead, and zinc detected in older WBM could have been attributed to corrosion inhibitors/sulfide scavengers (e.g., zinc carbonate, zinc sulfonate) that had been intentionally added to the drilling muds. These compounds could have also come from drill pipe dope and drill collar compound used to lubricate the joints in the drill pipe (Ayers et al. 1980b). Neff (2010) also notes that older types of pipe dope and pipe thread compound contained percent concentrations of metallic copper, lead, and zinc, to ensure electrical conductivity between lengths of drill pipe. These metal-containing components in WBM for offshore drilling have largely been replaced with additives that do not contain elevated concentrations of metals (Neff 2010). As a result, it is expected that concentrations of copper, lead, and zinc in WBM would be lower than the concentrations evaluated in the ELG Development Document (USEPA 1993).There have been several surveys of the concentrations of metals in tissues of marine animals from the vicinity of offshore WBM and cuttings discharges in temperate and cold-water marine environments near drilling operations (Neff 2010). In nearly all cases, these surveys have shown that metals and hydrocarbon concentrations in tissues of marine animals near drilling operations are similar to concentrations in tissues of the same or similar species well away from and out of the influence of the drilling operations. [ODCE 3.1.2]

There is no known direct exposure pathway to humans from the discharges associated with oil and gas exploration in Alaska; indirect exposure is primarily from

consumption of species exposed to discharges. Increases in metal body burdens of animals consumed by humans that are attributable to drilling mud discharges are expected to be minor, but metal content of drilling muds and other discharges from oil and gas exploration should be minimized through adherence to the effluent limitations in the Permit to decrease the amount of heavy metals discharged to Cook Inlet. [ODCE 6.1.6]

Contaminant concentrations detected in fish in Cook Inlet are similar to those in fish collected throughout Alaska (ATSDR 2009). The Alaska Department of Health and Social Services (DHSS) recommends that the majority of Alaskans continue unrestricted consumption of all fish from Alaskan waters, including those from Cook Inlet (DHSS 2014). Potential impacts from oil and gas exploration activities covered under the Permit addressed by this ODCE are expected to be similar to those covered under previous Cook Inlet General Permits for these activities; therefore, adverse human health effects are unlikely to result from oil and gas exploration activities covered under the Cook Inlet General Permit. [ODCE 6.1.6]

47. Comment: Trustees states that the ODCE estimation of the potential discharge volumes is arbitrary. The ODCE determined the potential discharge volumes for exploration facilities by averaging the discharge quantities provided in Furie's Notice of Intent (NOI) and choosing an arbitrary number of wells — 12. To ensure that no unreasonable degradation will occur, the ODCE cannot underestimate the potential discharge quantity under the permit

    Response: EPA does not believe the potential discharge volume was underestimated. EPA utilized the maximum number of exploration and delineation wells projected by BOEM 2012 (Table 4.1.4.1-3). This document stated that 12 wells could be drilled over the next 40 years. BOEM estimated that each well would produce 500 barrels (bbls) of fluid and 600 bbls of cuttings. Whereas the draft ODCE, using Furie's NOI, considered 30,000 bbls per well for fluids and 35,000 bbls per well for cuttings over a 5-year period. Thus, EPA was conservative in using the higher number for the draft Permit.

    Since the close of the public comment period, as a result of this comment, EPA reviewed the End of Well Reports and requested information from Furie to provide estimates based on their actual drilling experience. EPA also reviewed Furie's authorized waste streams to derive updated volume estimates based on the observed average length of time that a rig spends at a location to drill a well. The previous estimates did not adequately account for rig up, drilling downtime, or well testing. The ODCE now contains updated volumes for most discharges in Table 3-4. Due to the significant decrease in the drilling discharges (fluids are ⅛ of those estimated in the draft ODCE while cuttings are almost half) and the treatability of the routine daily non-drilling discharges (deck drainage and sanitary/domestic wastewater), these updated estimates have not affected EPA's determination of no unreasonable degradation to marine waters [ODCE 3.3].

48. Comment: Trustees says that although permittees are generally limited to drilling no more than five exploratory wells at a single drilling site, EPA can authorize the drilling

of additional wells per site on a case-by-case basis. The ODCE does not analyze whether allowing the drilling of additional wells in a drilling site could result in unreasonable degradation, even though such an activity is possible under the permit. This exception means that there is no real ceiling on how much heavy metal and other contaminants could be released at a single drilling site.

Response: In the Beaufort and Chukchi Oil and Gas Exploration General Permits, EPA decided that if sidetracks were not considered new wells then five should be the maximum number of wells drilled per lease block. The Cook Inlet General Permit will contain this same restriction to avoid confusion on this point in the future. If an operator expects to drill more than five exploration wells per lease block, the operator should contact EPA. EPA will request additional information from the operator, including number of additional wells; technical analysis of additional impacts to the receiving waters, drilling fluid category and group for each well and information for each additional well, including well name, number, latitude, longitude, beginning drill date, and hole diameter. EPA will then use this information to determine whether the General Permit applies or whether an individual permit is required.

49. Comment: Trustees comments that the ODCE for the draft permits also provides insufficient information about the risk of bioaccumulation. In the few instances where EPA actually discusses the risks of bioaccumulation, EPA notes that little is known about the risk of toxicity or bioaccumulation of contaminants and pollutants. It is particularly disturbing to see that the ODCE did not include the discussion regarding metal accumulation potential that was originally included in the 2006 ODCE. EPA also did not provide an explanation for why it omitted this important information, and EPA should not be allowed to rely on the omission of key information to avoid showing that there is a lack of sufficient information on bioaccumulation and the health impacts of heavy metals.

    Because EPA provided only a bare-bones discussion about the actual risk of bioaccumulation elsewhere in the ODCE and failed to acknowledge the lack of information about the long-term effects of substances such as heavy metals, EPA's conclusion on this criterion is arbitrary and EPA does not have sufficient information on which to base a determination of no significant degradation under this factor

    Response: EPA added the section on metals accumulation to the ODCE at section 3.1.2.2.1 which is based on more current information

50. Comment: Trustees notes that the ODCE concludes that "there is little potential for discharges to exceed marine water quality criteria." The ODCE statement that dischargers will meet human health and water quality criteria at the end of the pipe is inaccurate. The criteria are required to be met at the edge of the mixing zones. The ODCE analysis must be performed based on actual discharges, which will exceed water quality criteria within the mixing zones and will not meet water quality standards at the end of the pipe. There is insufficient information on this ground to support a finding of no unreasonable degradation to the marine environment.

Response: The draft ODCE was written to apply to both federal waters and to those State waters outside of the baseline which need an ODCE. This duality caused confusion because in State waters, water quality standards apply and in the State permit, mixing zones for some discharges were included. In federal waters, state water quality standards do not apply and any water quality based conditions result from the analysis done in the ODCE. EPA did not propose a mixing zone for any limited pollutant in the Permit but has utilized dilution values to set the WET trigger levels that would initiate additional WET testing which, depending on the results of the accelerated testing, could result in the completion of a Toxicity Reduction Evaluation (TRE) and Toxicity Identification Evaluation (TIE).

EPA has also reviewed sections on the composition and vulnerability of biological communities and updated these sections in cases where more recent information is available. [ODCE 6.1.3]

51. Comment: Trustees acknowledge that although the ODCE recognizes that at least some of the particles that remain suspended will be transported out of Cook Inlet, the ODCE does not discuss whether contaminated drill cuttings and other materials that settle to the seafloor will be transported out of Cook Inlet, even though the ODCE recognizes that there are significant, unknown long-term risks to benthic and possibly other organisms. Because the ODCE does not provide any indication of how long pollutants and discharges are likely to persist on the seafloor, there is insufficient information in the ODCE on which to base an unreasonable degradation finding for this criterion.

Response: The final ODCE has been updated to address this comment with additional information regarding the content of discharged drill cuttings (e.g., Neff 2008, 2010); the fate of discharged materials (e.g., Neff 1987 and 2010; PERF 2005; Thibodeaux et al.1986); and the persistence, resuspension, and redistribution of discharged materials (e.g., Rye et al.1998; Snyder-Conn et al. 1990; Thibodeaux et al.1986; Yunker et al.1990).

How long the settled material remains at the site of deposition and transport of resuspended particles depends on environmental factors that govern sediment resuspension, transport, and dispersion. The redistribution of settled drilling solids depends on the shear between the bottom forms and the flowing seawater. If the sinking velocity of the particle is lower than 10^{-3} meters per second (m/s), the particle is expected to be brought into resuspension. This number is probably dependent on the sizes of the current velocities close to the bottom. A sinking velocity equal to 10^{-3} m/s corresponds to a particle size diameter equal to 35 µm (barite) or 50 µm (drill cuttings) [ODCE 3.2.11]. Most of the metals in drilling muds and cuttings on the sea floor are associated with drilling mud barite. These metals are relatively immobile and non-bioavailable to bottom-living animals because of the low solubility of barite in seawater and even in anoxic marine sediments [ODCE 6.1.1.2]. It is important to note that any observed effects from drill cuttings discharge and possible potential burial of benthic organisms would occur over a relatively small area of benthic habitat. For drill cuttings that remain in place for longer than one year, recruitment of new colonists occurs from planktonic larvae and immigration from adjacent undisturbed sediments.

Ecological recovery usually begins shortly after completion of drilling and often is well advanced within a year. Full recovery may be delayed until concentrations of biodegradable organic matter decrease through microbial biodegradation to the point where surface layers of sediment are oxygenated. [ODCE 6.3.2]

52. Comment: Trustees states that EPA has failed to show that the discharge of drilling fluids and drill cuttings will not cause unreasonable degradation. Studies performed to date on the effects of drilling fluids and drill cuttings on the environment and various species provide little information about what level of exposure is safe. Recent studies indicate that the toxicity of drill cuttings can harm the environment. One water-based drill cutting study found that there were no adverse effects from natural sedimentation, but there was a "significant reduction in [the] number of taxa, abundance, biomass and diversity . . . with increasing layer thickness of water-based drill cuttings."

EPA similarly acknowledged the uncertainty and risks associated with drill cutting discharges. The ODCE explains that the "presence of potentially toxic trace elements in drilling fluids and adherence to cuttings is a concern." Even water-based fluids and cuttings contain dangerous substances like mercury, cadmium, arsenic, chromium, copper, lead, nickel, and zinc. The ODCE states that drill cuttings, even in small quantities, can have severe impacts on benthic organisms: "Exposure to mixtures as low as 10 percent cuttings and 90 percent sand were found to affect the survival of the benthic organisms, with 100 percent mortality occurring within days in some test cases." EPA also recognized that there is a lack of information about longterm impacts of exposure and that, even to the extent that there have been studies, testing to date has only been on invertebrates. EPA does not have sufficient information on which to base its determination about whether the discharge of drill cuttings and drilling fluids will cause unreasonable degradation.

Response: EPA has indicated that the presence of potentially toxic trace elements in drilling fluids and adherence to cuttings is a concern since barite is known to contain trace contaminants of several toxic heavy metals such as mercury, cadmium, arsenic, chromium, copper, lead, nickel, and zinc (USEPA 2000). EPA analyzed the American Petroleum Institute/USEPA Metals Database (described in the ELG Development Document - EPA 821-R-93-003, January 1993 [USEPA 1993] for the Offshore Category) which indicated that there was some correlation between cadmium and mercury and other trace metals in the barite. Specifically, EPA's evaluation showed a correlation between the concentration of mercury with the concentration of arsenic, chromium, copper, lead, molybdenum, sodium, tin, titanium and zinc; and the concentration of cadmium with concentrations of arsenic, boron, calcium, sodium, tin, titanium and zinc. In order to control the concentration of heavy metals in drilling fluids, EPA promulgated regulations applicable to the offshore subcategory of the oil and gas industry in 1993 (40 CFR Part 435, Subpart A) requiring that stock barite meet the criteria limits of 3 milligrams per kilogram (mg/kg) for cadmium and 1 mg/kg for mercury thus alleviating the concern about the levels of trace toxic metals in the drilling fluid [ODCE 3.1.2.2.1]. With wider use of low-trace-metal barite for drilling muds, average mercury and cadmium concentrations in water based fluids, including the fluids adhering to drill cuttings, have declined, though concentrations sometimes are slightly higher than natural concentrations in clean marine sediment. Water based

fluids have become less toxic since 1989 because operators have replaced toxic ingredients with less-toxic ingredients [ODCE 3.1.2].

Please see the Response #51 for information on drill cuttings.

53. Comment: Trustees comments that the ODCE fails to discuss or recognize the potential link between benthic organisms and effects on other species. The ODCE recognizes that drilling fluid discharges could alter prey available to species such as the northern sea otter "through burial of benthic organisms or changing bottom habitat characteristics," but fails to analyze the potential impacts that contaminated benthic organisms are likely to have on sea otters that rely on benthic organisms for their food source.

    Response: The literature (e.g., Leuterman et al. 1997; Neff 1987; PERF 2005; Schaanning et al 1996; URS 2002) does not suggest that a link occurs between benthic organisms potentially contaminated by drilling fluid discharges and accumulation in higher tropic levels. The metals in cuttings piles are present primarily as insoluble inclusions in barite, clay, and cuttings particles (PERF 2005). Solid metals and metal salts associated with barite, clay, and cuttings particles are not readily bioaccumulated by animals living in close association to the cuttings pile, and the metals are not passed efficiently through marine food chains (Leuterman et al. 1997; Neff 1987; URS 2002).

    As described in the Response #46, metals in WBM, including muds adhering to drill cuttings used before 1993 were in concentrations substantially (> 100-fold) greater than natural concentrations in marine sediments are barium, chromium, lead, and zinc (PERF 2005). With wider use of low-trace-metal barite for drilling muds, average mercury and cadmium concentrations in WBM have declined, though concentrations sometimes are slightly higher than natural concentrations in clean marine sediment (Neff 2010). EPA expects that concentrations of copper, lead, and zinc in WBM would be lower than the concentrations evaluated in the ELG Development Document (USEPA 1993).

    The final ODCE has been updated, as set forth above, to address this comment. [ODCE 6.1.1.2]

54. Comment: Trustees notes that the ODCE identifies several vulnerable, endangered or threatened species in Cook Inlet, including Steller sea lions, beluga whales, and northern sea otters. However, during the long history of oil and gas development in Cook Inlet, little has been done by either EPA or industry to understand the impacts of oil and gas pollution, noise, and other impacts on these species. Until there is more ambient water quality data, significantly more rigorous monitoring data, biological studies, and other information, there is insufficient information on which to base a finding of no unreasonable degradation under this factor (The Composition and Vulnerability of the Biological Communities That May Be Exposed to Such Pollutants).

    Response: EPA developed a Biological Evaluation (BE) to provide to the Services to aid in their ESA decisions on the Permit. In the BE, EPA made a determination that

the authorized discharges were not likely to adversely affect endangered species. Since both the USFWS and the NMFS concurred with this determination (see General Information Section), EPA considers this factor addressed. It should be noted that the BE and the ODCE only evaluate the discharge of pollutants under an NPDES general permit and not all impacts from oil/gas exploration activities such as noise. The National Environmental Policy Act (NEPA) document associated with any lease sale conducted by BOEM should address these additional factors.

55. Comment: Trustees believes that EPA does not have sufficient information on which to base its determination about human health. The ODCE finds that there is no direct exposure pathway to humans from the permitted discharges, but there are indirect impacts from direct consumption of species exposed to the discharges. There is insufficient information to determine whether there is unreasonable degradation of the marine environment under this factor because no comprehensive study has been undertaken to evaluate exposures from eating subsistence species.

    Response: Increases in metal body burdens of animals consumed by humans that are attributable to drilling fluid discharges are expected to be minor since research on other discharges containing the same metals suggests that the metals commonly found in drilling discharges are not biomagnified and the metal accumulation observed in both laboratory and field investigations from drilling discharge suggests that the biological effects of this accumulation are minimal (National Research Council 1983). Contaminant concentrations detected in fish in Cook Inlet are similar to those in fish collected throughout Alaska (ATSDR 2009) and DHSS recommends that the majority of Alaskans continue unrestricted consumption of all fish from Alaskan waters, including those from Cook Inlet (DHSS 2014). This indicates that impacts from oil and gas exploration activities that adhere to the effluent limitations the Permit are minimal and should not cause unreasonable degradation under Criterion 6: The potential impacts on human health through direct and indirect pathways [ODCE 6.1.6].

56. Comment: Trustees states that the ODCE relies on the 2009 Health Consultation report published by the Agency for Toxic Substances and Disease Registry (ATSDR). The report did not present new information; instead the report evaluated data from a number of other flawed reports, including two 2000 and 2003 reports by EPA, a report based on a 2005 fish fillet analysis by DEC, and 1999 and 2001 reports by the Cook Inlet Regional Citizens Advisory Council on clam and mussel samples. Inletkeeper is disturbed to see that EPA based its determination on outdated and flawed information. The latest collection of data reviewed in the report was from 2005, and even that information was limited to only fish fillet samples and is now approximately eight years old. Because of the risks of bioaccumulation and changing conditions in Cook Inlet, EPA should not rely on stale information when making a determination about human health impacts. The methodologies, study designs, and analyses in the underlying reports have also been questioned by EPA and others for various reasons. EPA does not have sufficient information on current contaminant levels and the risk to human health on which to base the unreasonable degradation finding.

    Response: EPA identified potential uncertainties associated with the 2003 report (in section 4), including sampled species, age/size of specimens, timing of sample

collection, sample type, analytes, chemical speciation of inorganic chemicals, concentrations reported as not detected, and the effects of cooking and preparation. The report clearly stated that:

- The biota species which were sampled, the size of the biota, and the harvest locations were intended to represent those traditionally used by members of the four Alaskan tribal villages of Tyonek, Seldovia, Port Graham, and Nanwalek.

- All possible harvest sites were not evaluated and not all fish, invertebrate, and plant species consumed in a traditional diet were included in the survey.

- It is unlikely that the one-time sampling is representative of contaminant concentrations in these species over the entire lifetime of a human who consumes these species.

The ATSDR document considered seafood and plant data collected by EPA, the Alaska Department of Environmental Conservation (ADEC), and the Environmental Monitoring Program (EMP). The published document is from a federal public health agency of the U.S. Department of Health and Human Services.

This ODCE was developed using best available scientific information. As described in Response #55, contaminant concentrations detected in fish in Cook Inlet are similar to those in fish collected throughout Alaska (ATSDR 2009). DHSS recommends that the majority of Alaskans continue unrestricted consumption of all fish from Alaskan waters, including those from Cook Inlet (DHSS 2014).

57. Comment: Trustees say that the Health Consultation is based on flawed and limited information. Sampling was conducted on only a limited range of species and was not done at all for some key subsistence species, such as Dolly Varden. The studies did not analyze contaminant levels in marine mammals, which potentially have the highest concentrations of any contaminants having a tendency to bioaccumulate. It is also unclear from the report whether the samples collected were from small specimens or whether the study took into consideration variations in sizes. This is particularly important in species such as halibut, where contaminant concentrations will tend to be higher in larger specimens.

    Response: As described in the Response #55, contaminant concentrations detected in fish in Cook Inlet are similar to those in fish collected throughout Alaska (ATSDR 2009). DHSS recommends that the majority of Alaskans continue unrestricted consumption of all fish from Alaskan waters, including those from Cook Inlet (DHSS 2014).

58. Comment: Trustees notes that the studies relied on in the Health Consultation, such as the 2003 EPA study, in part relied on whole animal and composite samples. The use of whole animal or composite samples skews results by making it difficult to determine the levels of contaminants in the parts of the animal that people actually consume. Whole animal samples do not accurately project the actual level of contaminant exposure and do not provide a basis for making a finding of no

unreasonable degradation. It is also unclear from the Health Consultation and studies what impacts and risks there will be from mixed seafood diets.

Response: The 2003 EPA report states that the contaminant concentrations presented in this report are based on analyses of uncooked whole-body, unscaled fish samples. For the purposes of a contaminant survey, whole-body samples are representative of exposures to the fish or predators that consume the whole fish. However, chemical concentrations derived from a whole-body measurement may not be representative of exposures resulting from consumption of individual body parts. For some contaminants, whole-body levels may exceed those in edible fillets. While species potentially consumed by humans other than fish were not overlooked in the 2003 report (it includes data for mussels, clams, chiton, octopus, snails, and three plants), the 2003 report only included the collected data and a brief comparison with fish from another watershed but did not analyze the information to determine what varying ratios of seafood could safely be consumed based on their respective body burdens.

Contaminant concentrations detected in fish in Cook Inlet are similar to those in fish collected throughout Alaska (ATSDR 2009). DHSS recommends that the majority of Alaskans continue unrestricted consumption of all fish from Alaskan waters, including those from Cook Inlet (DHSS 2014). DHSS 2014 included fish, shellfish and mollusks in their sampling. DHSS has a calculator (http://www.epi.alaska.gov/eh/fish/fishconsumptioncalc.pdf) that can be utilized by the at-risk population, women of child bearing years and young children, to determine the amount and type of fish that can be eaten but the information on other types of seafood is limited.

59. Comment: Trustees acknowledges that the Health Consultation identified a wide array of contaminants present in a variety of Cook Inlet subsistence foods. The existing contaminants, such as lead levels in chiton, have already reached disturbing levels that pose a threat to human health. Where there is a “[t]hreat to human health through direct exposure to pollutants or through consumption of exposed aquatic organisms,” that threat meets the definition of “unreasonable degradation of the marine environment.” Despite the survey’s flaws, the data exposes a “threat” to human health, especially in light of the heavy reliance on subsistence foods by local Alaska Natives, and as a result constitutes “unreasonable degradation of the marine environment.”

Response: 40 CFR 125.122(a)(6) requires the ODCE to assess the direct and indirect impacts to human health from discharges. The evaluation of risk components unrelated to the authorized discharges are beyond the scope of the ODCE requirement. However, lead could have been from drill pipe dope and drill collar compound used to lubricate the joints in the drill pipe or to ensure electrical conductivity between lengths of drill pipe. These metal-containing components in WBF for offshore drilling have largely been replaced with additives that do not contain elevated concentrations of metals (Neff 2010). Therefore, it is expected that concentrations of copper, lead, and zinc in WBF would be lower than the concentrations evaluated in the ELG Development Document (USEPA 1993). EPA’s

1993 evaluation showed a correlation between the concentration of mercury in barite with the concentration of arsenic, chromium, copper, lead, molybdenum, sodium, tin, titanium and zinc therefore, mercury is limited in the Permit.

Even so, the literature (e.g., Leuterman et al., 1997; Neff, 1987a; Neff et al., 1989b and 1989c; PERF, 2005; Schaanning et al., 1996; URS, 2002) does not suggest that a link occurs between benthic organisms potentially impacted by drilling fluid discharges and accumulation in higher tropic levels. The metals in cuttings piles are present primarily as insoluble inclusions in barite, clay, and cuttings particles (PERF 2005). Solid metals and metal salts associated with barite, clay, and cuttings particles are not readily bioaccumulated by animals living in close association to the cuttings pile, and the metals are not passed efficiently through marine food chains (Leuterman et al., 1997; Neff, 1987a; Neff et al., 1989b and 1989c; URS, 2002).

60. Comment: Trustees indicate that in addressing bioaccumulation, the Health Consultation failed to consider the existing levels of exposure in members of the population. When individuals consume fish or other species that have been exposed to contaminants, the additional contaminants are added to their background level of exposure. However, the Health Consultation and underlying studies did not consider the background levels of exposure in tandem with the contaminant levels in the samples.

    Response: Baseline exposure levels were not addressed in the ODCE. 40 CFR 125.122(a)(6) requires the ODCE to assess the direct and indirect impacts to human health from discharges. The evaluation of risk components unrelated to the authorized discharges are beyond the scope of the ODCE requirement. However, contaminant concentrations detected in fish in Cook Inlet are similar to those in fish collected throughout Alaska (ATSDR 2009). DHSS recommends that the majority of Alaskans continue unrestricted consumption of all fish from Alaskan waters, including those from Cook Inlet (DHSS 2014). DHSS 2014 also discusses the potential of bioaccumulation due to fish consumption, and reports that mercury values present in hair samples (from 1148 women in 148 Alaskan communities) were below levels of concern.

61. Comment: Trustees state that there are also several gaps in information about fish consumption. Without accurate information about the quantity of fish consumed by subsistence users in Cook Inlet, and particularly the maximum quantities consumed by members of the population and the corresponding risk associated with those consumption rates, EPA does not have sufficient information on which to base its finding that there will not be unreasonable degradation.

    KBSC notes that the EPA acknowledges that there are gaps in its understanding of even the basic information such as how much fish residents of CI region consume which is crucial to determining impacts to HH. The EPA should not rely on unclear and inconclusive evidence when making determinations that could have severe impacts on human health.

Response: Contaminant concentrations detected in fish in Cook Inlet are similar to those in fish collected throughout Alaska (ATSDR 2009). DHSS recommends that the majority of Alaskans continue unrestricted consumption of all fish from Alaskan waters, including those from Cook Inlet (DHSS 2014). So while fish consumption is an important indicator for determining human exposure to pollutants via subsistence sources, published (e.g., Fall et al. 2004) and unpublished data (e.g., Seldovia Village Tribe, 2013) are available that assess fish consumption in the Cook Inlet communities of Cooper Landing, Hope, Nikolaevsk, Ninilchik, Seldovia, Port Graham, Nanwalek, and Tyonek. EPA utilized these resources in the ODCE.

The final ODCE in section 6.1.6 has been updated to include this information and to address this comment.

62. Comment: Trustees states that EPA cannot show that it meets the requirements of 40 C.F.R. § 125.123(c)(3), which provides that all permits authorizing the discharge of pollutants under 40 C.F.R. §125.123(c) "[s]pecify a monitoring program, which is sufficient to assess the impact of the discharge on water, sediment, and biological quality including, where appropriate, analysis of the bioaccumulative and/or persistent impact on aquatic life of the discharge." EPA has failed to provide a monitoring program that is sufficient to assess the impacts of the discharges on water, sediment, and biological quality.

Response: 40 CFR 125.123(c) states "If the director has insufficient information to determine prior to permit issuance that there will be no unreasonable degradation of the marine environment . . ." Since EPA has concluded that adequate information exists to make a determination of no unreasonable degradation in the ODCE, the permit requirements of this regulations are not applicable.

63. Comment: Cook Inlet RCAC finds it frustrating that the ODCE evaluates permits and their potential to cause unreasonable degradation of the marine environment within the territorial seas, contiguous zones, and the oceans, but not coastal areas. Discharges that are allowed in Cook Inlet coastal areas are not allowed in other coastal subcategory areas due to their being "typically highly sensitive to pollutant discharges." Since the ELGs allow discharges into coastal waters in Cook Inlet (only), it is reasonable to expect that the evaluation of discharges that occurs in an ODCE also include coastal waters of Cook Inlet, unless another mechanism is identified for an ecosystem-perspective evaluation.

Response: CWA § 403(a) does not require ocean discharge evaluations for coastal waters.

64. Comment: DOI/BOEM request that a reference be provided in the Final ODCE for the following statement: "In addition, Kamishak Bay is a known net depositional environment where drilling fluid solids, cuttings, and other pollutants would likely accumulate if discharges are authorized in that area."

Response: EPA attributes the quotation to the sources of MMS (2000) and Atlas et al. (1983). The final ODCE has been updated to address this comment. [ODCE 1.2.2]

65. Comment: DOI/BOEM states that while a list of "…eight generic types of WBFs (USEPA, 1993)" is provided, the Final ODCE needs to specify what changes, if any, have occurred in water-based drilling fluids since 1993. If new information is available, this may affect the analyses of discharges and the permit, which should then be revised, as appropriate.

    Response: For the ODCE, EPA utilized the premise that the composition and formulation of water-based drilling fluids is generally similar now to what they were in 1993; but notes that, Neff (2010) found that WBM have become less toxic since 1989 because operators have replaced toxic ingredients with less-toxic ingredients (e.g., replacing chrome lignosulfonate with chrome-free flocculants). The metals that sometimes were present in WBM used before 1993 at concentrations substantially (> 100-fold) greater than natural concentrations in marine sediments are barium, chromium, lead, and zinc (PERF 2005). With wider use of low-trace-metal barite for drilling muds, average mercury and cadmium concentrations in WBM have declined, though concentrations sometimes are slightly higher than natural concentrations in clean marine sediment (Neff 2010).

    Neff (2010) also noted that some of the concentrations of copper, lead, and zinc detected in some older WBM could have been attributed to corrosion inhibitors/sulfide scavengers (e.g., zinc carbonate, zinc sulfonate) that had been intentionally added to the drilling muds. These compounds could also have been from drill pipe dope and drill collar compound used to lubricate the joints in the drill pipe (Ayers et al. 1980b). Neff (2010) also notes that older types of pipe dope and pipe thread compound contained percent concentrations of metallic copper, lead, and zinc, to ensure electrical conductivity between lengths of drill pipe. These metal-containing components in WBM for offshore drilling have largely been replaced with additives that do not contain elevated concentrations of metals (Neff 2010). For these reasons, EPA expects that concentrations of copper, lead, and zinc currently used in water-based drilling fluids are lower than the concentrations evaluated in the ELG Development Document (USEPA 1993).

    A factor to consider regarding changes meant to reduce the discharge of drilling fluids since 1993 is the increased use of synthetic drilling fluids, which are not allowed to be discharged under the current Cook Inlet General Permit, although discharge of associated cuttings is allowed if they meet the applicable effluent limitation for Base fluid retained on drill cuttings.

    The final ODCE has been updated to include this information and to address this comment. [ODCE 3.1.2]

66. Comment: DOI/BOEM notes that the ODCE further lists "…some of the more common additives… (USEPA, 1987)" for water-based drilling fluids. The Final ODCE needs to identify what changes, if any, have occurred in additives to water-based drilling fluids since 1987. If new information is available, this may affect the analyses of discharges and the permit, which should then be revised, as appropriate.

Response: Neff (2010) found that water-based drilling fluids have become less toxic since 1989 because operators have replaced toxic ingredients with less-toxic ingredients (e.g., replacing chrome lignosulfonate with chrome-free flocculants. The metals that sometimes were present in water-based drilling fluids used before 1993 at concentrations substantially (>100-fold) greater than natural concentrations in marine sediments are barium, chromium, lead, and zinc (PERF 2005). With wider use of low-trace-metal barite for drilling muds, average mercury and cadmium concentrations in water-based drilling fluids have declined, though concentrations sometimes are slightly higher than natural concentrations in clean marine sediment (Neff 2010).

Neff (2010) also noted that some of the concentrations of copper, lead, and zinc detected in some older WBM could have been attributed to corrosion inhibitors/sulfide scavengers (e.g., zinc carbonate, zinc sulfonate) that had been intentionally added to the drilling muds. These compounds could also have been from drill pipe dope and drill collar compound used to lubricate the joints in the drill pipe (Ayers et al. 1980b). Neff (2010) also notes that older types of pipe dope and pipe thread compound contained percent concentrations of metallic copper, lead, and zinc, to ensure electrical conductivity between lengths of drill pipe. These metal-containing components in WBM for offshore drilling have largely been replaced with additives that do not contain elevated concentrations of metals (Neff 2010). For these reasons, EPA expects that concentrations of copper, lead, and zinc currently used in water-based drilling fluids are lower than the concentrations evaluated in the ELG Development Document (USEPA 1993).

As mentioned above, a factor to consider is the increased use of synthetic drilling fluids, which are not allowed to be discharged under the current Cook Inlet General Permit, although discharge of associated cuttings is allowed if the applicable effluent limitation for Base fluid retained on drill cuttings are met.

The final ODCE has been updated to include this information and to address this comment. [ODCE 3.1.2]

67. Comment: DOI/BOEM requests more information in the Final ODCE on the following statement: “The concentrate is similar to sea water in chemical composition; however, anion and cation concentrations are higher.” If the concentration of the desalination unit waste discharge could be further refined to provide an estimated range expected, the Final ODCE needs to specify this information; e.g., 1-4 psu above ambient water salinity.

Response: Desalination concentrate may be twice as saline as ambient seawater (USEPA 1994), although a desalination concentrate management and piloting study conducted by Carollo Engineers (2009) measuring total dissolved solids (TDS) reported a range of desalination unit concentrates from 4,200 to 52,562 mg/L, with any TDS concentration above 35,000 mg/L considered brine. Thus, the salinity (using TDS) of the concentrate in the Carollo study ranged from about 8 percent as high as ambient seawater to approximately 67 percent more saline than ambient seawater.

The final ODCE has been updated to include this information and to address this comment. [ODCE 3.2.3]

Quality Assurance Project Plan (QAPP)

68. Comment: Cook Inlet RCAC recommends that development and implementation of a QAPP also be included as a requirement in EPA's draft permit.

    Response: EPA has included a QAPP requirement in the final Permit.

69. Comment: Since this is a GP, Cook Inlet RCAC recommends tying the QAPP implementation date to the NOI or to implementing it prior to any discharge since a Permittee should not have to develop a QAPP until they have plans to perform exploration

    Response: EPA appreciates this comment but believes that the QAPP should be in place prior to exploration but not as soon as filing the NOI. As such, a Permittee is required to submit a notice of completion for the QAPP at least 30 days before starting exploration activities.

Baseline & Environmental Monitoring Plan

70. Comment: Inletkeeper supports EPA's decision to retain the baseline monitoring requirement, but asks that EPA expand the requirements to encompass both existing and new facilities. Because there are significant gaps in understanding about the impacts of oil and gas discharges in Cook Inlet, EPA should expand this program to maximize the ability of EPA to fully understand the changes and impacts to Cook Inlet from the permitted discharges.

    Response: There are no existing facilities in the federal waters of Cook Inlet. Therefore, no change has been made to the Permit.

71. Comment: Trustees request specific requirements to ensure that the baseline monitoring leads to the collection of statistically valid samples and information. The existing baseline monitoring requirements are too open-ended to be effective.

    Response: The objectives of the Environmental Monitoring Plan (EMP) are to 1) monitor for discharge-related impacts, 2) determine statistically significant changes in sediment pollutant concentrations and sediment toxicity with time and distance from the discharge, and 3) monitor for discharge related impacts to the benthic community. EPA has concluded that the monitoring requirements included in the Permit are adequate to achieve the objectives. It should be noted that in a net erosional environment, even a monitoring effort that finds no sediment or benthic communities at the site provides information with which to compare future monitoring results.

72. Comment: Trustees comments that because of the broad, undefined authority for EPA to exempt facilities when the discharge will not have "significant impacts," this

exemption process could allow all exploration facilities to bypass the environmental monitoring requirements. The permit also does not provide any parameters for what constitutes "no impact" for purposes of the post-drilling monitoring exemption. EPA should remove these exemptions from the environmental monitoring provisions.

Response: EPA has revised this requirement to allow an exemption only if the permittee can satisfactorily demonstrate that information on the fate and effects of the discharge is available and the discharge will not have significant impacts on the receiving environment.

73. Comment: Birkhimer states that since the EPA has never performed baseline studies, it is impossible to know the amount of devastation these toxins have caused CI (Although declining Beluga whales may be an indication). The EPA or DEC needs to obtain data as to the present condition of CI in order to ascertain the future negative effects this toxic dumping will have on the water quality in CI

Response: Several studies have been done and these are documented in the ODCE. EPA is striving to attain new information for locations where discharges will occur through the EMP requirement.

As for the status of beluga whales, the report *Concentrations of Polychlorinated Biphenyls (PCB's), Chlorinated Pesticides, and Heavy Metals and Other Elements in Tissues of Belugas, Delphinapterus leucas, from Cook Inlet, Alaska* (Becker, et.al, 2000 cited in the ODCE) states*:*

> "Although occurring in what one might consider a region under substantially more anthropogenic influence than belugas from other locations in Alaska, the Cook Inlet animals had lower concentrations of PCB's and chlorinated pesticides than have been reported for other Alaska belugas . . ." and
>
> "In addition to having relatively low concentrations of persistent organic contaminants in their blubber, the Cook Inlet belugas also had relatively low levels of mercury, selenium, and cadmium in their livers relative to other North American belugas . . ."

EPA consulted with NMFS as required by the Endangered Species Act. NMFS concurred with EPA's determination that the discharges covered by the Permit were not likely to adversely affect endangered species, including beluga whales.

74. Comment: DOI/BOEM recommends that EPA fund water quality studies in Lower Cook Inlet in support of the analyses for the reissuance of the NPDES Permit.

KBSC requests additional baseline and evaluation studies to evaluate existing conditions in CI because without it, it is impossible to understand water quality impacts from these facilities and how to better regulate them to ensure that they are having the minimum impact on CI water quality.

Response: EPA does not have the funding to conduct further water quality studies nor is EPA required to do so prior to reissuing an NPDES permit. Moreover, there are several studies that currently exist that are discussed in detail in the ODCE.

75. Comment: Cook Inlet RCAC strongly supports the environmental monitoring requirements and believes that if the objectives of the draft permits are implemented correctly, this monitoring will provide valuable information on the fate of oil and gas exploration discharges and their effect on the marine ecosystem in Cook Inlet but EPA should in no way lessen the requirements of an environmental monitoring program and should do everything possible to ensure that any study plan obtains review by scientists familiar and experienced with Cook Inlet physical, chemical, and biological environment.

    Response: If EPA intended to change the EMP requirements, the Permit would require a modification which would open the proposed conditions for public comment.

76. Comment: Cook Inlet RCAC suggests adding sediment toxicity and benthic biological community to this section in order to be consistent with and to address the objectives of the program

    Response: Both the Objectives and the Reporting sections contain requirements to address sediment toxicity and impacts to the benthic community. EPA does not see the need to reiterate these in a section which contains a requirement to meet the Objectives of the EMP.

77. Comment: Cook Inlet RCAC suggests changing “sediment quality” to read “sediment toxicity” since sediment pollutant concentrations are already covered.

    Response: In Permit Part II.B.5.d.i., “sediment quality” has been changed to “sediment toxicity.”

78. Comment: Cook Inlet RCAC says it is unclear what is wanted for the hydrographic and/or water quality component of the study. There is one mention of collecting hydrographic data under Requirements/Plan of Study and another mention of water quality data under the Reporting sections, and no mention of collecting water samples or hydrographic information under the Objectives section of the monitoring. Cook Inlet RCAC recommends clarifying the environmental monitoring requirements to address the collection of hydrographic and/or water quality data under both the objectives of the study and under the Requirements/Plan of Study

    Response: It is not an objective of the EMP to collect hydrographic data but to determine statistically significant changes in sediment pollutant concentrations and sediment toxicity with time and distance from the discharge. Hydrographic data is necessary to meet this objective and is required to be reported. The GP now clarifies that water quality data, if taken, is also required to be reported.

79. Comment: Cook Inlet RCAC supports the requirement that water quality (chemical pollutant concentrations) be conducted by the program. If implemented, the water

quality sampling plan should include the analysis of both total recoverable and dissolved metals. The analysis of TSS should also be included in the environmental monitoring program which will allow better interpretation of any metals monitoring data

Response: Because of the dynamic nature of Cook Inlet, it is unlikely that drilling fluids and cuttings will accumulate on the seafloor in the area subject to monitoring so water quality sampling would not provide information as to the fate and effects of this discharge. If new information becomes available during this permit cycle that indicates drilling fluids and cuttings are accumulating on the seafloor in the study area and water quality may be effected, EPA will consider adding water quality sampling to the next permit.

80. Comment: Cook Inlet RCAC states that exploration monitoring that has been and is being conducted under the existing Cook Inlet permit clearly does not address the Environmental Monitoring Requirements and appear to be in violation of permit conditions since neither the Environmental Study Plans (Furie 2011 & Buccaneer 2012) nor Environmental Sampling Efforts (Furie 2012a and 2012b) address all of the Permit objectives. The existing requirements are identical to those contained in the draft permit and for this reason alone, Cook Inlet RCAC feels that these sections in the draft permits should be strengthened and clarified where necessary to ensure future studies address permit requirements

Response: The requirements of the Permit do not seem to be at issue here except where they could be strengthened and clarified in order to assure implementation. EPA determined that the existing requirements are adequate and will ensure that future EMPs address all objectives or clearly justify anything excluded.

81. Comment: Cook Inlet RCAC has a concern that the Environmental Monitoring Study Plans are not (for the existing GP) and might not be (for draft permits) adequately reviewed by EPA prior to studies being conducted and discharges occurring.

Cook Inlet RCAC requests that EPA develop a process for reviewing future significant components of the permit. These future components should be provided for outside review as we believe that, currently, the oversight of that program is inadequate. Recently, we were able to obtain copies of the sampling plans submitted to EPA by Furie and Buccaneer under the existing GP for their exploration facilities and were (1) disappointed that they had not selected contractors with extensive, proven experience sampling and interpreting data from those environments and (2) appalled at how poorly their study plan addressed the objectives listed by EPA in the permit and the results of the Kitchen Lights sampling program proved the futility of their sampling methods and the lack of data provided to inform future decisions by EPA and ADEC

Response: EPA has committed to the following actions within the Permit: 1) to provide input into the study plan (required by Permit Part II.B.5.a.) prior to the permittee implementing the plan; 2) review the draft report for compliance with the requirements of the Permit (Permit Part II.B.5.d.ii); and 3) if EPA determines that modifications are appropriate to meet EMP objectives, the monitoring plan may be modified according to Permit Part II.B.5.e.

82. Comment: Cook Inlet RCAC believes that the provision stated in the permit: "The permittee will be required to correct, repeat, and/or expand environmental monitoring programs which have not fulfilled the requirements of the permit." should be exercised by EPA and that a serious effort be made to incorporate recommendations by those experienced in sampling Cook Inlet's sediment and water column environment

    Response: There are no existing permittees in the area of coverage for the Permit so there are no EMPs requiring correction or expansion. It is beneficial to have a robust EMP that fulfills the requirements of the GP but it is beyond EPA's authority to direct a permittee to use specific people or companies to help them accomplish these tasks.

83. Comment: Cook Inlet RCAC believes that it is absolutely inappropriate at this time to grant exemptions to the environmental monitoring since very little information exists on the fate and effect of drilling muds and cuttings discharges in Cook Inlet and it would be impossible to predict whether any significant impacts would occur in advance of drilling operations since the chemical composition of drilling muds may be adjusted during actual operations

    Response: The composition of the drilling fluid has very little impact on the dispersal of the material that is meant to be measured under the EMP. See Response #72 for changes to the exemption requirements.

84. Comment: Cook Inlet RCAC comments that in the event that sediment sampling is not possible (net erosional environment), the permittee should be required to specify an alternative method to address the permit objectives. Past work by Cook Inlet RCAC on the Integrated Cook Inlet Environmental Monitoring and Assessment Program (ICIEMAP) study in Cook Inlet showed that the collection of water column chemistry (hydrocarbons & metals) was very effective for examining the potential effects as a function of both time and distance from the discharge

    Response: The historic intent of the EMP is to measure sediment fate and transport therefore, if no sediment is found, water column chemistry could not be linked to effects caused by sedimentation. Please see Response #79 for potential requirements in future permits.

85. Comment: Cook Inlet RCAC notes that it is clear from some of the vague and even wrong descriptors in the Ocean Discharge Criteria Evaluation, that there are a lot of misunderstandings about the abundance, diversity and potentially unique species occurring throughout Cook Inlet. Without the assurance of peer and public review, exemptions could be potentially granted based on misinformed applications.

    Response: The Final ODCE incorporates additional information specifically brought up in comments and attempts to clarify parts where misinterpretations were evident from the comments received. However, this comment is too broad and too general for any specific issues to be addressed. There is no attempt in the comment to describe what misinformation is included, what information is not included, or which sections did not include adequate detail. However, EPA has added details to several sections

of the Final ODCE in response to other, more specific public comments, thereby addressing this comment.

Compliance

86. Comment: Birkhimer feels that allowing these polluters to be self-monitoring is outrageous.

At the Homer hearing, Amundson stated, “The one part, as a social science researcher, that we need to know is that self-reporting doesn't work. It's not valid, it's not reliable, and if we are asking industry -- oil industry -- if we are basing our data on their self-reporting, we know that they are underreporting. And so one of the ways to have more health -- and when we think about public health is through policy and enforcement. And the EPA, the DEC, if there are policies in place, they need to be enforced. They need to be on platforms, they need to be checking and seeing what's going on, not listening to self-reports.

Response: CWA § 308(a)(4)(A) requires that permits contain self-monitoring requirements:

> “the Administrator shall require the owner or operator of any point source to (i) establish and maintain such records, (ii) make such reports, (iii) install, use, and maintain such monitoring equipment or methods (including, where appropriate, biological monitoring methods), (iv) sample such effluents (in accordance with such methods, at such locations, at such intervals, and in such manner as the Administrator shall prescribe), and (v) provide such other information as he may reasonably require”

Note that the Permittee must certify the validity of its sampling results with each DMR submitted to EPA. In addition, EPA conducts periodic NPDES compliance inspections of the platform facilities.

87. Comment: Birkhimer notes that since neither the EPA nor the DEC inspects these facilities, there is no information on how frequently they are dumping these toxins into CI.

KBCS observes that the permit does not indicate how frequently inspections will take place and there is no indication that the EPA will even inspect these short-term exploration facilities before they finish their operations. The enforcement mechanisms in these permits cannot protect WQ when violations occur, if the agencies are not regularly (and on a surprise basis) inspecting these facilities

Response: Permits do not contain information on inspection frequency. Since 2008, EPA has conducted 24 inspections of facilities covered under the 2007 Permit including both the Furie and Buchaneer operations. Currently there are no facilities in the federal waters of Cook Inlet

88. Comment: KBCS comments that if facilities can't comply with their permits, they should not be allowed to continue polluting. It's essential that measures be taken to stop the violations

Response: EPA agrees that non-compliance should be dealt with and that measures should be taken to stop violations. When facilities are authorized under the Permit, EPA will evaluate each incidence of non-compliance and determine the appropriate response.

89. Comment: Trustees submitted several comments that were asked at the Public Hearing for EPA response in this document: (1) How many inspections of exploration facilities have been conducted in the past twenty years? Of those inspections, how many were unannounced inspections? (2) How many samples were drawn and tested during those inspections? (3) How many violations were found for Cook Inlet exploration facilities? How many fines did EPA assess? (4) How many employees and hours will be dedicated to inspections in the next five years?

Response: (1) In the time period of 1993-2012, EPA's Integrated Compliance Information System (ICIS) indicates there were 37 inspections of Cook Inlet offshore oil and gas facilities covered under NPDES general permit numbers AKG-28-5000 and AKG-31-5000. ICIS does not identify whether the inspection was announced or unannounced. Based on discussions with senior inspectors and recent practice, it is likely that the inspections were announced. Region 10 does not maintain its own helicopter fleet or helicopter pilots qualified to land on offshore facilities. Accordingly, inspectors must work out pre-inspection access logistics with facility operators to gain authorized access to platforms and drill rigs using authorized helicopter services qualified to land on and take off from offshore helipads.

(2) EPA and state-approved NPDES programs have discretion to use various inspection types (e.g. compliance evaluation inspection, compliance sampling inspection, reconnaissance inspection, etc.) for compliance monitoring efforts at NPDES permitted facilities. The majority of Region 10 inspections of traditional minor industrial NPDES-permitted facilities are compliance evaluation inspections (i.e. non-sampling). The Cook Inlet offshore exploration facilities are categorized as minor facilities. The ICIS data for the 37 inspections did not expressly identify any compliance sampling inspections.

(3) The ICIS data for the 37 inspections did not quantify the exact number of violations identified at particular Cook Inlet offshore oil and gas facilities. However, ICIS indicates that there were 27 formal enforcement actions that assessed civil penalties during the 1993-2012 time period.

(4) Compliance monitoring is a cornerstone of EPA's compliance and enforcement program to achieve clean water but it is not EPA's policy to broadcast or divulge its NPDES inspection plans for various reasons (e.g. to maintain the integrity of unannounced inspections). The amount of inspection resources allocated to any particular permit sector is dependent on many factors including available inspector resources and travel budget. Such plans are typically prepared on an annual basis

reflecting congressionally authorized fiscal federal budget allocations. At this time, Region 10 is not specifically aware of any entity that is proposing to submit an NOI under this general permit so it is not possible to determine, with any level of reasonable certainty, the potential inspection resources (e.g. staff numbers and hours) that might be dedicated to inspections over the next five years. Region 10 will continue to make these types of inspection resource decisions in its typical, internal annual inspection planning process taking into account various factors, including facilities that are permitted and conduct exploratory activities under the Permit.

Mixing Zones

90. Comment: KBCS states that EPA has not provided adequate information to show that the allowed MZ safeguard human health and the environment. EPA has provided only the very basic details about its assumptions and the outcomes of the MZ modeling. Because these MZ sizes are not determined from real-world info, it is essential that the public be made aware of the assumptions used in the modeling. If not, it is unclear that the MZ are actually as small as possible or whether they take into consideration key info such as: the existing pollution, the contaminate levels in CI where the discharges occur, the dynamic tidal fluctuations.

    Trustees states that EPA has provided insufficient information to show that the allowed mixing zones protect human health and the environment.

    Response: The Permit does not contain any permit limitations based on dilution from a mixing zone. As explained in Response ## 23, 25, and 50, dilution from mixing zone modelling was utilized to develop WET Triggers which if exceeded will prompt accelerated monitoring and possibly TIE and TRE requirements.

91. Comment: Trustees expressed concern that EPA did not provide any information about whether the modeling indicated that certain mixing zones could be smaller than 100 meters

    Response: As explained in Response #90, this permit does not authorize any mixing zones. EPA has not incorporated dilution into any effluent limitation in the Permit. It has used dilution to set the WET triggers for chemically treated miscellaneous discharges. Dye studies and modeling of the discharge plume, conducted in conjunction with the drilling of a well, indicated rapid dilution to a minimum value of 10,000:1 within 100 meters of the drilling vessel (MMS 2003) so it is reasonable to take the time to collect the data necessary to determine whether limitations are necessary and if so, the appropriate mixing zone size.

92. Comment: Trustees is also concerned that there is no indication that EPA independently verified the CORMIX modeling results. The 2007 modeling was done by Parametrix, a consultant for the dischargers, and the Alaska Department of Environmental Conservation. EPA should have independently verified the accuracy of the 2007 modeling, particularly as it relates to exploration facility discharges, for purposes of the draft permit.

Response: As set forth in Response #90, the Permit does not authorize any mixing zone. EPA did utilize dilution factors in establishing the WET trigger levels in the Permit. Since neither the models nor the methods of dilution modeling to determine the WET trigger levels have changed, EPA saw no reason to discard the work completed for the previous permit which was reasonable and incorporated into the 2007 Permit after public review. See Response #21.

93. Comment: Trustees notes that EPA explained in the fact sheet that it has the authority to redefine the size of the mixing zones. EPA should not expand the mixing zone sizes beyond that considered in the permit because the implications from expanded mixing zones were not considered in the permit and ODCE.

Response: As set forth in Response #90, the Permit does not authorize mixing zones. EPA does not intend nor is there a mechanism in the Permit to redefine the information utilized in setting the WET triggers or implementing WET limitations without modifying or reissuing the Permit. The WET triggers are unchanged from the 2007 Permit.

Whole Effluent Toxicity

94. Comment: Trustees observes that EPA requires whole effluent toxicity (WET) testing once per quarter unless chronic toxicity is detected above the Permit trigger values. If facilities do not exceed the trigger values for a year, then the permit allows a reduction in toxicity monitoring to once every six months. EPA should increase the testing frequency for exploration facilities. Exploratory drilling operations do not involve constant, regular activities, and there can be many starts, stops, and variations in conditions that can impact effluent toxicity. One test every quarter and then every six months may be insufficient to address changes in operating conditions and could miss toxic discharges. EPA should require more frequent WET testing to ensure that facilities do not miss variations in toxicity

Response: The limitations and monitoring requirements in Tables 5 and 6 of the Permit apply to each of the Discharges 005 – 013 except WET which only applies to Discharges 005 – 011 when chemical additives have been used. Since each discharge is subject to the requirements and, as the commentor points out, the discharges are intermittent, it is unlikely that many opportunities for sampling will be missed. Because of the intermittent nature of the discharges, EPA is clarifying the intent of the 4 quarters of sampling to decrease monitoring frequency to specifying that 4 actual sampling events cannot exceed the triggers. This change has been made to Permit Part F.1. Table 6, Footnote 5.

95. Comment: Trustees requests that although EPA indicates that discharges of less than 10,000 gallons per day are “not likely” to exhibit toxic effects, EPA should provide toxicity triggers for these discharges to ensure that they will not exceed the toxicity triggers.

Response: The critical dilution for a 10,000 gallon discharge for both discharging scenarios is already very low and is the equivalent of 2½ teaspoons of effluent per gallon of receiving water (10,000 gallons/303 x 10,000 gallons converted to tsp/gal). Smaller discharges that meet the other requirements of the Permit will be even more dilute. Therefore, EPA has not included WET testing for smaller volume discharges.

96. Comment: Cook Inlet RCAC recommends using a serial dilution for those concentrations below the critical dilution to provide the most useful information concerning toxicity of the discharge.

Response: The calculation of the chronic Toxicity Unit (TU_C) value to compare to the trigger value in the Permit is dependent on being able to extrapolate the Inhibition Concentration where 25% of the organisms are affected (IC_{25}). If the serial dilution uses concentrations at or below the critical dilution and the IC_{25} is a higher value then the only information garnered is that the effluent did not exceed the trigger. With the critical dilutions being very low (all less than 1% effluent), having one value between it and the control (0%) should provide adequate extrapolation if the IC_{25} falls in that range but having the higher dilutions in the series will provide IC_{25} information that could be utilized to determine the need for effluent limitations and the size of any mixing zone authorized in future permits.

97. Comment: Cook Inlet RCAC recommend that verbiage be added to clarify that testing would resume at the normal schedule specified in the permit if no chronic toxicity is seen in the accelerated testing.

Response: This was the intent as is evidenced by the language contained in the Fact Sheet: *"After accelerated testing is complete, sample collection and analysis will return to quarterly until either monitoring can be reduced or accelerated testing is triggered again."* This language has been added to Permit Part III.7.

Miscellaneous Comments

98. Comment: The Native Village of Port Graham is concerned about the expansion of the existing area of the permit which will increase produced water discharges.

There are many uncertainties and EPA should gain a better understanding of the potential impacts of the discharges before they propose to expand the coverage area.

Response: EPA did not propose to expand the coverage area from the area covered in the 2007 Permit. EPA has revised the general permit language to ensure that the coverage area maps shown in the Fact Sheet, draft permit and draft ODCE and Permit Part I.C.2.d. are consistent regarding the Port Graham/Nanwalek Area Meriting Special Attention (AMSA). The Permit does not cover produced water discharges.

99. Comment: The Native Village of Port Graham comments that during development of the Environmental Assessment and draft permit, there is Traditional Knowledge that

acknowledges the decline in the population of our important food species and the quality of the species being harvested.

Response: EPA has a responsibility to balance a variety of concerns and perspectives. TEK is a mechanism by which EPA can collect and evaluate information from non-traditional sources. The information and concerns identified through the TEK report developed for the 2007 Permit were considered in developing permit conditions and additional monitoring requirements; however, it was not the only justification for additional permit requirements (also see Responses #1 and #2). EPA believes that this permit balances the variety of concerns raised during permit reissuance and meets EPA's regulatory requirements.

100. Comment: The Native Village of Port Graham notes that EPA proposes to include a new study that will involve collecting ambient data to determine the effect of large volumes produced water discharges in CI.

Response: The Permit does not cover the discharge of produced water thus no study of produced water was proposed.

101. Comment: Hillstrand asks what are the treatment chemicals used?

Response: The treatment chemicals used are mainly biocides and scale inhibitors.

102. Comment: Hillstrand states that 500 mg/L seems high and asks what the maximum manufacturer's recommended concentration is?

Response: The draft Permit proposed and the final Permit limits discharges of seawater or freshwater with chemical additives to the most stringent of the following:

1) the maximum concentrations and any other conditions specified in the EPA product registration labeling if the chemical additive is an EPA registered product;

2) the maximum manufacturer's recommended concentration; or

3) 500 mg/l

The limitation would be 500 mg/L only if there were no maximum concentrations pursuant to the other two requirements. This is the equivalent of 500 parts per million parts of water or 1 teaspoon for every 2.6 gallons of water.

103. Comment: At the Homer hearing, Hillstrand commented: "And the one thing that is disappearing around here is amphipods and the tiny little creatures that you see in the -- along the coastline. If you lift up some of the kelp and things 30 years ago, it was just jumping with life. If you lift it up now, there's nothing there. And it makes you wonder, because you go down to Kodiak where there's -- and they're still jumping down there. So I wonder what the problem is" and

"It's really dangerous to have all this stuff coming down getting caught in our gyres. We've got two big gyres out here, and that's where all the larva from all the sea creatures grow. And so when you have the gyres swirling around with all these toxic chemicals and our little larva out there circulating around with it, I mean we're just -- you know, that's probably where all the amphipods have gone."

Response: The ODCE indicates that the majority of Alaskan organisms apparently show high tolerance to acute exposure to drilling fluid. Houghton et al. (1981) conducted a study on several species of crustaceans, including an amphipod (*Eogammarus confervicolus*). The species were exposed to used high-density lignosulfonate drilling fluid obtained from lower Cook Inlet, Alaska. The lowest (most toxic) crustacean concentration was 30,000 ppm for SSP (Neff 1981). The Permit requires SSP toxicity to be above 30,000 ppm so it is unlikely that the authorized discharges would cause the amphipods to disappear.

Comments of Support

104. Comment: The draft permit requires that the notice of intent (NOI) to discharge be submitted at least 45 days prior to initiation of discharge rather than the 30 days contained in the existing permit. Cook Inlet RCAC supports this change since it will allow additional time for EPA/ADEC to review documents.

    Response: Thank you for your comment.

105. Comment: The permit requires that a Drilling Fluids Plan be developed and submitted with the NOI. The goal of the plan as stated in the fact sheet is to ensure personnel on-site are knowledgeable in the information and methods required to formulate the drilling fluids/chemical additives, to meet the permit's toxicity requirements, and to minimize addition of toxic substances. In the absence of requiring zero discharge in the permit, Cook Inlet RCAC strongly supports this new requirement since it will hopefully minimize the introduction of additional toxic chemicals to the Cook Inlet marine ecosystem.

    Response: Thank you for your comment.

106. Comment: Cook Inlet RCAC supports the new requirement for the Chemical Inventory.

    Response: Thank you for your comment.

107. Comment: Cook Inlet RCAC supports requiring the Best Management Practices (BMP) Plan be submitted with the NOI.

    Response: Thank you for your comment.

108. Comment: Cook Inlet RCAC supports digital reporting of DMR data and recommends that the ADEC allow digital submittals in their draft permit.

Response: Thank you for your comment.

109. Comment: Cook Inlet RCAC supports how EPA included implementation procedures for the CWIS requirements in the draft permit that require Permittees to detail their implementation technologies or operational measures in their BMP Plan to minimize impingement and entrainment of fish and shellfish.

Response: Thank you for your comment.

110. Comment: Cook Inlet RCAC supports the static sheen testing requirement for bilge water.

Response: Thank you for your comment.

References

In addition to those found in the ODCE:

40 CFR 125
40 CFR 435
Clean Water Act
EPA Method 8015C
USEPA 1994