

**Department of Environmental Conservation
Response to Comments**

For

Alaska Pollutant Discharge Elimination System (APDES)

**Individual Permit AK0053690 – Cook Inlet Energy, LLC
Sabre Oil and Gas Exploration Project**

Public Noticed June 23, 2017 – July 24, 2017

April 27, 2018



**Alaska Department of Environmental Conservation
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, AK 99501**

Contents

1	Introduction.....	3
1.1	Summary of Facility / Permit.....	3
1.2	Pending Changes to Antidegradation Regulations.....	3
1.3	Opportunities for Public Participation	3
1.4	Final Permit.....	4
2	General Discussion on Comments Received from Inletkeeper.....	4
2.1	Inletkeeper Comment II.A – Insufficient Information.....	5
2.1.1	DEC Response:	6
2.2	Comment II.B – Site-specific Analysis for Project.....	7
2.2.1	DEC Response:	7
2.3	Comment II.C – DEC must Mitigate Impacts to the Trading Bay SGR.....	9
2.3.1	DEC Response:	9
2.4	Comment III – DEC Failed to Perform Proper Analysis for Zone of Deposit.....	10
2.4.1	DEC Response:	10
2.5	Comment IV.A – DEC Failed to Demonstrate the Mixing Zone is Small as Practicable.....	11
2.5.1	DEC Response:	11
2.6	Comment IV.B – DEC Must Analyze the Project’s Effects on Existing Uses	12
2.6.1	DEC Response:	13
2.7	Comment IV.B – DEC Failed to Analyze the Risks to Passing Organisms	13
2.7.1	DEC Response:	14
2.8	Comment V – Antidegradation Policy.....	14
2.8.1	DEC Response:	15
2.9	Comment VI – Endangered Species	17
2.9.1	DEC Response:	17
2.10	Comment VII – Human Health.....	18
2.10.1	DEC Response:	18
3	General Discussion on Comments Received from CIRCAC.....	20
3.1	CIRCAC Comment – RCAC Review Environmental Monitoring Program Study Plans	20
3.1.1	DEC Response:	20
4	Waiver to Minimum Treatment Standards for the Spartan 151.....	20
5	Promulgation of E-Reporting Requirements.....	21

1 Introduction

1.1 Summary of Facility / Permit

The proposed Alaska Pollutant Discharge Elimination Permit (APDES) individual permit AK0053690 – Cook Inlet Energy (CIE), Sabre Exploration Project (Permit) authorizes the discharge of pollutants from a mobile offshore drilling unit (MODU) operating in Cook Inlet near the Trading Bay State Game Refuge (SGR). Based on discharges applicable to the proposed Spartan 151 MODU, the following wastewater discharges are proposed to be authorized under the Permit at the Sabre Project site:

DISCHARGE NUMBER	DISCHARGES DISCRPTION
001	Drilling Fluids and Drill Cuttings
002	Deck Drainage
003	Domestic Wastewater
004	Graywater
006	Blowout Preventer Fluid
008	Fire Control System Test Water
009	Non-Contact Cooling Water
010	Uncontaminated Ballast Water
012	Excess Cement Slurry
013	Mud, Cuttings, and Cement at the Seafloor
016	Completion Fluids
018	Well Treatment Fluids
019	Test Fluids

The Permit is similar to existing general permit AKG315100 – Mobile Oil and Gas Exploration in State Waters in Cook Inlet (State Exploration GP), which was issued on February 6, 2015. The Sabre APDES Permit is required because the Sabre Project site is located outside the area of coverage identified in the Exploration GP.

1.2 Pending Changes to Antidegradation Regulations

The Department’s approach to implementing the Antidegradation Policy, found in 18 AAC 70.015, is currently based on the Department’s *Policy and Procedure Guidance for Interim Antidegradation Implementation Methods (Interim Methods)*, dated July 14, 2010. Note that the Lieutenant Governor signed and filed Antidegradation Implementation Methods regulations on March 7, 2018 with an effective date of April 6, 2018. The regulations were subsequently submitted to the Environmental Protection Agency (EPA) on March 9, 2018 for review and approval. The new regulations may not be used for Clean Water Act (CWA) purposes (e.g., APDES permits) until EPA approves the regulations for use in such purposes. As such, until the new regulations are approved by EPA for use in APDES permitting, the existing *Interim Methods* will be used in conjunction with the application of the Antidegradation Policy.

1.3 Opportunities for Public Participation

The Department of Environmental Conservation (DEC or Department) proposes to issue the Permit after considering all substantive public comments. To ensure public, agency, and tribal notification and opportunities for participation, the Department:

- Identified the permit on the annual Permit Issuance Plan posted online at: <http://www.dec.state.ak.us/water/wwdp/index.htm>.

- Notified potentially affected tribes and local governments that the Department would be working on this permit via letter, fax and/or email,
- Posted a preliminary draft of the permit on-line for a 10-day applicant review June 6, 2017 and notified tribes, local governments and other agencies,
- posted the public notice on the Department’s public notice web page June 23, 2017 for a 30-day public review on the Draft Permit and Fact Sheet,
- Posted the Proposed Final Permit, Fact Sheet, and Response to Comments (RTC) document on-line for a five-day applicant review, and
- Sent email notifications via the APDES Program List Serve when the Preliminary Draft, Draft, and Proposed Final Permits were available for review.

The Department requested comments on the Preliminary Draft documents from CIE, EPA, National Marine Fishery Services (NMFS), United States Fish and Wildlife Service (USFWS), and State agencies including, but not limited to, the Alaska Departments of Fish and Game and Natural Resources. Only CIE provided comments on the Preliminary Draft Permit and Fact Sheet. For the Draft Permit, the Department also solicited comment from the federal and state agencies as well as the general public and only received comments from two interested parties: Cook Inlet Regional Citizens Advisory Council (RCAC) and Trustees for Alaska (Trustees) on behalf of Cook Inlet Keeper (Inletkeeper).

This document summarizes the comments submitted and the justification for any action taken or not taken by DEC in response to the comments.

1.4 Final Permit

The final permit was adopted by the Department on [TBD]. There were minor changes from the Draft Permit and Fact Sheet after public notice to correct typographical and grammatical errors and to clarify or update information, and some changes resulting from the outgrowth of comments contained in this response to comment (RTC). The changes resulting from comments received are identified in this RTC document and reflected in the Final Permit and Fact Sheet.

2 General Discussion on Comments Received from Inletkeeper

The Department received 10 comments on the Draft Permit and Fact Sheet from Inletkeeper among a list of six general categories of identified deficiencies including the following: an overview of the Permit’s background and the relevance of Inletkeeper’s previous involvement in related rulemakings, zone of deposits, mixing zones, human health, antidegradation, and endangered species. Because permitting action represents the first issuance of an individual permit for the specific site and DEC’s final decisions on the Permit are not based on the relevance of Inletkeeper’s participation in rulemaking outreach, further response on this comment is not necessary for this item given the lack of relevance of the comment. However, DEC appreciates Inletkeeper’s public participation in previous permitting actions and rulemakings.

Although this is the first issuance of the Permit, many of the conditions in the Permit have been implemented in other substantially similar permits authorizing discharges from oil and gas exploration facilities in Cook Inlet. These related permits include:

- State Exploration GP. Currently effective and covers MODUs within the area of coverage in State waters in Cook Inlet (Sabre Project Site is outside the coverage area).
- AKG-28-5100 – General Permit for Oil and Gas Exploration Facilities in Federal Waters of Cook Inlet (EPA Exploration GP). Currently effective and covers exploration in Federal Waters in Cook Inlet.

Many of the conditions that Inletkeeper provided comments on have been vetted through the public process, including response to comments, when these aforementioned permits were issued. In fact, Inletkeeper's comments on the Permit are similar to comments that EPA and/or DEC have adequately responded to during the previous permitting actions. Although these comments appear duplicative, DEC responds to these comments earnestly but calls attention to these repetitive comments when they occur.

Inletkeeper has also provided several comments that seemingly confuse requirements under two separate and distinct federal environmental acts: the National Environmental Protection Act (NEPA) and the CWA. These comments suggest that DEC is required to conduct a NEPA environmental assessment as part of issuing a wastewater discharge permit under 18 AAC 83. DEC points out from the onset of responding to these comments that there is no statutory or regulatory requirements for DEC to conduct NEPA analysis associated with this specific state permitting action. Issuing oil and gas APDES permits under the CWA has a specific focus on regulating wastewater discharges. Whereas, NEPA applies broadly to the activity and, as such, includes assessment of cumulative effects and is only legally triggered when a project requires a federal approval.

In a similar manner, some Inletkeeper comments suggest that DEC is required to conduct consultation with the NMFS and USFWS (commonly referred to as the Services) and the permit cannot be issued until these consultation requirements have been met. Because there is no federal approval with this permitting action and DEC is not a federal agency, there is not a legal requirement for DEC to consult with the Services. Nonetheless, DEC notifies the Services early in development of APDES permits as well as throughout the permit process regarding the upcoming issuance of the permits. Although notified, no indications of concern were raised by either NMFS or USFWS over the Permit during development.

The following sections address each Inletkeeper comment specifically.

2.1 Inletkeeper Comment II.A – Insufficient Information

Inletkeeper commented that there is insufficient information to make the finding of no unreasonable degradation because it is presumed that the Ocean Discharge Criteria Evaluation (ODCE) prepared previously for the State Exploration GP was used as the basis for the Permit. Inletkeeper claims that DEC can only issue an APDES permit if it determines the following: (1) the “discharge will not cause irreparable harm to the marine environment during the period in which monitoring is undertaken”; (2) “[t]here are no reasonable alternatives to the on-site disposal of these materials”; and (3) “[t]he discharge will be in compliance with all permit conditions established pursuant 40 CFR 125.123(d).” Inletkeeper asserts that DEC is required to make all of these findings before issuing the permit. Specifically, Inletkeeper alleges DEC has insufficient information to make this decision in the areas of bioaccumulation or persistence of pollutants discharged, fate and transport of these pollutants, composition and vulnerability of biological communities exposed to the pollutants, and potential impacts

on human health. Inletkeeper also pointed out that EPA retains authority to deny the Permit if DEC does not follow the requirements of the CWA while issuing permits.

In this case, Inletkeeper further claims that DEC also cannot make the second and third ODCE findings. For the second finding, “no reasonable alternatives” means there are either “no land-based disposal sites, discharge point(s) within internal waters, or approved ocean dumping sites within a reasonable distance of the site of the proposed discharge the use of which would not cause unwarranted economic impacts on the discharger,” or even if there are land-based disposal sites, “on-site disposal is environmentally preferable to other alternative means of disposal” when considering the “relative environmental harm of disposal on-site” and the “risk to the environment and human safety posed by the transportation of the pollutants.”

2.1.1 DEC Response:

Background: This comment from Inletkeeper has been provided previously during issuance of the State Exploration GP and the EPA Exploration GP. In each agencies respective responses to the comments brought during earlier permitting actions, DEC and EPA demonstrated sufficient review of an abundant amount of Cook Inlet relevant research and studies used to inform the decisions that there would be no unreasonable degradation of marine water for either of the two similar general permits. Hence, the decisions made were based on the best information available at the time. DEC points out that neither of the permits were appealed and are currently effective and there is no new information DEC is aware of that would suggest that the information available has changed or is insufficient.

Current Response:

During development of the State Exploration GP, DEC and EPA developed general permits for exploration in Cook Inlet simultaneously due to DEC obtaining primacy over wastewater permitting in state waters, which required EPA and DEC to develop permits splitting the area of coverage between Federal and State water jurisdictions. The State ODCE was done, in part, to be consistent with the procedures required by EPA so not to confuse the public as well as consistency with historical DEC permitting practices. However, per 40 CFR 125.122(b), adopted by reference at 18 AAC 83.010(C)(8), discharges in compliance with 18 AAC 70 – Alaska Water Quality Standards (WQS) are presumed not to cause unreasonable degradation of the marine environment. EPA made the connection between the similar protections provided by ODCE requirements and WQS when promulgating ocean discharge criteria rules in 1980, as stated, “the similarity between the objectives and requirements of [State WQS] and those of CWA §403 warrants a presumption that discharges in compliance with these [standards] also satisfy CWA §403.” (Ocean Discharge Criteria, 45 Federal Register 65943.) As such, given the permit requires compliance with Alaska WQS, unreasonable degradation to the marine environment is not expected and further analysis under 40 CFR 125.122 is not warranted for the permitting action.

Although the ODCE was developed to support the State Exploration GP and provided technical support for the issuance of the Permit, it was not the primary consideration to support DEC’s finding that there would be no unreasonable degradation of marine water per 40 CFR 125.122. Like the State Exploration GP, the discharges authorized by the Permit meet WQS requirements. Accordingly, the Permit will not result in discharges to the marine environment that cause unreasonable degradation and ODCE requirements are satisfied.

DEC also points out that EPA revised the Effluent Limitation Guidelines (ELGs) in 40 CFR 435 – Oil and Gas Extraction Point Source Category in 2016 to consider unconventional oil and gas. This revision did not result in modifications to the Coastal Subcategory, specifically concerning discharges of drilling fluids in Cook Inlet coastal waters. Hence, although EPA evaluated the need to revise these ELGs, the agency elected not to, which is indicative that from an industry-wide perspective onshore disposal alternatives remain impracticable with respect to EPA’s recent ELG evaluations based on available technological considerations.

DEC is aware that EPA can object to a draft permit if they have determined that DEC has not followed the requirements of the CWA. Note that DEC did not receive any comments from EPA on the Draft Permit, which DEC provided at the Preliminary Draft and Draft stages of permit development.

Inletkeeper also indicated that DEC did not have sufficient information to determine that the short-term zone of deposit authorized by the Permit would have no reasonable degradation of the marine environment and that DEC failed to analyze whether there are reasonable onshore disposal alternatives available that would be more environmentally preferable to discharging at the Sabre Site. DEC addresses this comment in subsequent comment responses that are interrelated (zone of deposit Comment 2.4). See Comment 2.4.1 for more information on potential impacts to the critical beluga habitat. For additional information on bioaccumulation or persistence, potential fate and transport, and potential impact to human health related to discharges of drilling fluids under the Permit see Comment 2.10.1.

No changes to the Fact Sheet and Permit were made based on this comment.

2.2 Comment II.B – Site-specific Analysis for Project

Inletkeeper states that the Fact Sheet appears to rely on the 2007 Cook Inlet General Permit (AKG315000 or 2007 GP) issued by EPA, which is flawed for several reasons. The 2007 GP does not cover activities proposed at the Sabre Project Site and is outdated. Inletkeeper claims that the Permit is required because the 2007 GP covers extended reach drilling that cannot be used at the Sabre Project Site and different drilling technique requires a site-specific environmental assessment (EA) to analyze the individual and cumulative impacts of this unique project. Inletkeeper references the EPA Water Quality Handbook that recommends a site-specific analysis because they come closer to providing the intended level of protection for aquatic life at the site and this is critical given the Sabre Project Site is located in Type II critical habitat for beluga that was determined in 2008 after the effective date of the 2007 GP. Inletkeeper asserts that the Produced Water Study (PWS) required by the 2007 GP is inappropriate for this use because the focus of the study was on produced water and the Permit does not authorize the discharge of produced water but rather drilling fluids and drill cuttings. Inletkeeper also asserts that the impacts of exploration activity must be assessed again given the changed circumstances (drilling techniques) and the likelihood of conducting an activity identified as potentially contributing to the beluga’s threatened status and only NMFS can make this final determination.

2.2.1 DEC Response:

The premise that the Permit is based on the 2007 GP is not accurate. The 2007 GP was reissued by EPA under the National Pollutant Discharge Elimination System (NPDES) Program and not the APDES Program, and included both federal and State waters of Cook Inlet. A more appropriate initial starting point for permit development is the State Exploration GP that superseded the 2007 GP for discharges related to mobile exploration. While there are similarities between the permitting actions, the Permit relies

primarily on the interpretations and decisions made by DEC, which are separate from EPA's 2007 GP, as a starting point for the Permit's analysis.

The Sabre Project Site is located 800 meters inside the 4,000 meter buffer zone to the Trading Bay State Game Refuge (SGR). The Permit is necessary because the applicant is unable to obtain coverage under the State Exploration GP because the site is located beyond the permit-defined area of coverage. However, this does not preclude authorizing discharges under an individual permit if supported by a site-specific analysis and WQS are maintained and protected under permit terms. Appropriately, the applicant submitted site-specific information in the form of an individual permit application necessary for DEC to evaluate potential impacts from the proposed discharges on human health and the environment. DEC conducted a site-specific analysis of the information submitted and determined that many of the limitations in the State Exploration GP were appropriate for the Sabre Project Site given the project site has similar conditions (e.g., effluent characteristics and critical receiving water conditions such as current and water depth) as contemplated by the State Exploration GP. The Department's analysis confirmed the limitations in the Permit are appropriate regardless of the discharges being located within 4,000 meters of the Trading Bay SGR.

In the Fact Sheet, DEC references information from the PWS as the study collected sediment data near the Sabre Project Site. Although the PWS was focused on produced water, the sediment data is relevant to the Permit even though produced water is not authorized by the Permit.

Inletkeeper refers to the EPA Water Quality Handbook while suggesting it should be followed. DEC maintains that APDES permits must be based on laws and regulations as opposed to non-binding guidance (See Comment Response 2.8.1). Inletkeeper's comment presents several inaccuracies and misconceptions and is confusing because it blurs the lines of authority granted under the CWA by interjecting NEPA requirements (alternatives analysis and cumulative impacts) that are not legal requirements for issuing APDES Permits. Neither the APDES Program nor the NPDES Program (from which the APDES Program is framed upon) approves drilling activities; these programs authorize discharges. The approval of drilling activities is by other agencies. Accordingly, the proposed drilling technique is not a consideration for whether or not an authorization under either the State or EPA exploration GP is attainable. And consistently, nor is the drilling technique applicable to NEPA analysis in this DEC APDES permitting action.

The subject permitting action is not applicable to the NEPA process, including evaluating cumulative impacts of the activity (e.g., the overall drilling activity). Instead, the authority granted to DEC under the CWA and by EPA (i.e., APDES Program) requires evaluating impacts of the wastewater discharges from exploration activities to waters of the United States but not the activities themselves (e.g., sound, lighting, spills, or vessel traffic impacts on beluga whale). Although the State is not required to conduct formal consultation as stated earlier, DEC voluntarily seeks input from the Services on permitting actions. Once notified of the intent to issue a permit, the Services may communicate concerns to DEC via numerous means including, but not limited to, direct conversations, written correspondence, or providing comments during the 10-day Preliminary Draft Permit notice of review period or the Draft Permit public notice period. DEC appropriately notified NMFS and USFWS about the discharges that may result from the activity and developed the Fact Sheet based on this recent coordination and coordination previously conducted for the State Exploration GP, which occurred after the 2008 listing of the beluga whale. DEC

has not received comments from the Services indicating concerns on either the State Exploration GP or the Permit.

As discussed in Fact Sheet Section 2.2, fourth paragraph, the Draft of the 2007 GP that was issued for public comment established a 4,000 meter setback to sensitive areas, including the Trading Bay SGR, even though there was no data available to support it. When the 2007 GP was issued, EPA responded to an industry comment that the 4,000 meter buffer did not prevent access to subsurface hydrocarbon reservoirs within the 4,000 meter buffer zone because EPA believed extended reach drilling was possible. Unfortunately, extended reach drilling was determined by the applicant and other authorizing agencies to not be possible for the Sabre Project Site. EPA also responded to the comment that the 4,000 meter buffer supported NMFS determination that the AKG315100 would not result in adverse impacts to Stellar sea lions critical habitat that exists in lower Cook Inlet. There is no critical habitat for Stellar sea lions at the Sabre Project Site that would similarly affect authorization of discharges at this location. Although the area is listed as Type II critical habitat for beluga, all of the coverage area for AKG315100 is in Type II beluga habitat and NFMS previously determined discharges under AKG315100 would not likely result in adverse impacts. DEC acknowledges that NMFS is the appropriate authority for this determination and, to date, has not received subsequent information contrary to their previous determination.

No changes to the Fact Sheet and Permit were made based on this comment.

2.3 Comment II.C – DEC must Mitigate Impacts to the Trading Bay SGR

Inletkeeper points out that the Sabre Project Site is in critical beluga habitat and the existing State and EPA Exploration GPs both include the 4,000 meter buffer to the Trading Bay SGR. The ODCE for the EPA Exploration GP states that drilling within the 4,000 meters can be avoided by using extended reach drilling techniques. Inletkeeper maintains that drilling this close to the Trading Bay SGR and beluga habitat should be prohibited. Inletkeeper states that DEC must supply reasoning as to why infringing upon the previously established buffer zone to the Trading Bay SGR is acceptable and address the inconsistency of allowing another type of drilling technique.

2.3.1 DEC Response:

The issue over authorizing drilling techniques was addressed in Response 2.2.2; DEC does not have the legal authority to approve drilling techniques.

DEC understands that the Sabre Project Site is located in Type II Critical Beluga Habitat as is the coverage area for the State Exploration GP. Discharges from MODUs in Type II Critical Habitat can be conducted as coordinated with NFMS under their respective authorities (See Response 2.2.2). The 4,000 meter buffer zone for the SGR in the general permits was imposed to provide broad protection to these potentially sensitive areas until a site-specific evaluation for a specific potentially sensitive area could be completed to determine if discharges at the location are appropriate under an individual permit. Based on the site-specific evaluation of the Sabre Project Site, DEC has determined that discharges similar to those authorized by the State Exploration GP are appropriate at the Sabre Project Site and meet CWA requirements including complying with WQS. For more information on this site-specific evaluation, see the remaining comment responses that detail various aspects of this evaluation.

No changes to the Fact Sheet and Permit were made based on this comment.

2.4 Comment III – DEC Failed to Perform Proper Analysis for Zone of Deposit

Inletkeeper comments that DEC has failed to properly perform the regulatory analysis required to authorize the zone of deposit for three discharges: drilling fluids and drill cuttings; excess cement slurry; and muds, cuttings, and cement at the seafloor. Inletkeeper points out that 18 AAC 70.210(a) requires that WQS may not be violated in the water column outside the zone of deposit and prior to authorizing a zone of deposit, DEC must consider the following six factors:

1. Alternatives that would eliminate, or reduce, any adverse effects of the deposit,
2. The potential direct or indirect impacts on human health,
3. The potential impacts on aquatic life and other wildlife, including the potential for bioaccumulation and persistence,
4. The potential impacts on other uses of the waterbody,
5. The expected duration of the deposit and any adverse effects, and
6. The potential transport of pollutants by biological, physical and chemical processes.

Inletkeeper states that DEC merely included a blanket conclusory statement without sufficient reasoning that the deposit would have no negative impacts and claims that DEC violated WQS by failing to analyze these factors.

2.4.1 DEC Response:

DEC disagrees that the Fact Sheet does not provide adequate basis covering the six factors. These factors were covered in various related sections of the Fact Sheet that ultimately informed the decision to authorize the zone of deposit. For each of the factors listed above, DEC provides the following discussion and cross-reference to applicable Fact Sheet sections.

1. Factors number one and five are interrelated and were appropriately addressed in Fact Sheet Section 5.4. The zone of deposit is anticipated to have a short-term duration due to the strong tidal currents at the Sabre Project Site that will suspend fine-grain components in the discharge (drilling fluids) and mix the coarser-grain components (drill cuttings) into the shifting bedforms of the seafloor over a tidal cycle or two such that no adverse effects are expected to occur. Accordingly, the deposit is not expected to have a duration that results in adverse effects.
2. As discussed in Fact Sheet Section 4.1.1 and again in Section 5.3.6, the discharge of drilling fluids and drill cuttings are not expected to result in impacts on human health.
3. Per Fact Sheet Sections 4.1.1 and 5.3.6, the discharge of drilling fluids is not expected to bioaccumulate or persist in the environment. Furthermore, per Fact Sheet Section 5.3.7, there are no known shellfish beds in the vicinity nor other benthic communities that are anticipated to be impacted by the short-term zone of deposit at the Sabre Project Site.
4. Per Fact Sheet Section 5.1, DEC has evaluated the discharge of drilling fluids and drill cuttings assuming all uses are applicable and have applied the most stringent water quality criteria for all uses per 18 AAC 70.040(1). Therefore, all uses of the waterbody are protected.
5. See factor one above.
6. The ultimate fate and transport of drilling fluids and drill cuttings discharged to the zone of deposit is discussed in Fact Sheet Sections 4.1.1 and 5.3.1.1. Section 4.1.1 describes areas where there are known net depositional marine environments in Cook Inlet where drilling fluids may be

transported and deposited. Sediment samples collected from these areas do not indicate potential for adverse impacts. Section 5.3.1.1 discusses the initial short-term deposit, resuspension of the drilling fluids, and mixing of drill cuttings with native seabed material.

Although DEC believes that the Fact Sheet contains adequate discussion to support the decision to authorize a zone of deposit and restating information from other sections is unnecessary, DEC has modified Fact Sheet Section 5.4 to include connecting statements and the references provided in the discussion points for this response.

2.5 Comment IV.A – DEC Failed to Demonstrate the Mixing Zone is Small as Practicable

Inletkeeper asserts that DEC failed to demonstrate, as required by regulation, that the mixing zones are as small as practicable. DEC provided no information about the modeling used for the mixing zone authorization or any other grounds for making the determination about the size of the mixing zones, except to say that the Department authorized a standard, 100-meter mixing zone. In the mixing zone authorization checklist, DEC refers to several Fact Sheet sections and appendices that either do not exist or do not provide any support for whether the mixing zones are as small as practicable. DEC also referred to the Technical Support Document for Water Quality Based Toxics Control, DEC's RPA (Reasonable Potential Analysis) Guidance, and the EPA Permit Writers' Manual, but at no point did DEC provide a factual, scientific, or model-based analysis for its 100-meter length decisions. The 100-meter mixing zone lengths are also far more lenient than the mixing zone lengths authorized in the 2007 GP for chemically treated miscellaneous discharges. In the 2007 GP, the DEC adopted mixing zone lengths for chemically treated miscellaneous discharges from production platforms (with significantly higher-volume discharges) that, with one exception, ranged from three to ten meters. DEC appears to have significantly relaxed the length requirements with regard to chemically treated miscellaneous discharges, and has failed to provide any justification for the conclusion that any of the mixing zones are as small as practicable. This will increase the resulting discharge allowed in Cook Inlet without justification.

2.5.1 DEC Response:

Background: This comment from Inletkeeper has been provided previously during issuance of the State and EPA Exploration GPs. Except for modifying one sentence for discharge types and adding a sentence at the end, this comment is verbatim the same as previously submitted comments on other completed permitting actions. As stated previously, both DEC and EPA provided appropriate responses previously and neither general permit was appealed.

Current Response: Inletkeeper's comment contains reference to an incorrect version of mixing zone regulations for APDES permits. Inletkeeper references the most recent WQS (2016) but the version approved by EPA for use in APDES permits is currently the 2003 version of WQS. Inletkeeper claims that the "Mixing Zone Checklist refers to several Fact Sheet sections and appendices that either do not exist or do not provide any support for whether the mixing zones are as small as practicable." DEC reviewed the Checklist and verified the accuracy of the references. DEC believes that this comment may either be due to reusing the comment provided on the State Exploration GP, not referencing the current mixing zone regulations, or both.

Inletkeeper is correct in that the same size mixing zones for drilling fluid and drill cutting discharges and various miscellaneous discharges (e.g., chemically treated seawater) for MODUs in the 2007 GP are the same size as authorized in the Permit. This is due to the site-specific conditions at the Sabre Project Site being equivalent to those used in the 2007 GP (See Fact Sheet Section 5.3.1). Stated another way, the site-specific conditions at the Sabre Project Site are essentially the same as the critical conditions used in the 2007 GP, resulting in the same mixing zone authorizations. In addition, DEC conducted site-specific modeling using new abilities in CORMIX to validate the 100-meter mixing zone for drilling fluids and drill cuttings that are based on empirical studies in Cook Inlet (See Fact Sheet Section 5.3.1.1). This confirmation modeling demonstrated that the 100-meter mixing zone for drilling fluids and drill cuttings is appropriate for the Sabre Project Site. Given that DEC provided factual scientific basis concerning the validation of the 100 using new capabilities in CORMIX, DEC suspects Inletkeeper's comment on this matter is a result of reusing comments provided previously on the State Exploration GP when such capabilities for modeling drilling fluids in CORMIX were not available.

Inletkeeper makes an inappropriate comparison between mixing zones for chemically treated seawater established for fixed platforms operating in Cook Inlet with mixing zones for chemically treated seawater for various potential MODUs while stating that DEC is applying more lenient conditions in the Permit. However, the State Exploration GP also established 100-meter mixing zones for MODUs because they are substantially different from fixed production facilities. Discharges and resulting mixing zones from production platforms where mixing zones are based on a long history of operating at a fixed location using the same chemical additives are not directly comparable to discharges and mixing zones from various possible MODUs that could have different chemical treatment requirements.

No changes to the Fact Sheet and Permit were made based on this comment.

2.6 Comment IV.B – DEC Must Analyze the Project's Effects on Existing Uses

Per Inletkeeper, DEC regulations indicate that, when determining the size and appropriateness of a mixing zone, the Department should ensure that existing uses of the waterbody outside the mixing zone are maintained and fully protected. The discharge cannot compromise the "designated and existing uses of the waterbody as a whole," these must be maintained and protected, and cannot impair "the overall biological integrity of the waterbody." In making this determination, the Department considers several factors, including: (1) the characteristics of the receiving water, including biological, chemical, and physical characteristics such as volume, flow rate, and flushing and mixing characteristics; (2) the characteristics of the effluent, including volume, flow rate, dispersion, and quality after treatment; (3) the effects, if any of multiple discharges and diffuse, nonpoint source inputs, that the discharge will have on the uses of the receiving water; (4) any additional measures that would mitigate potential adverse effects to the aquatic resources present; and, (5) any other factors the Department finds must be considered to determine whether a mixing zone will comply with this section.

DEC's analysis of whether existing uses will be protected is flawed. DEC provided almost no analysis or justification for its conclusions on the various factors for determining whether a discharge will impair the waterbody or partially or completely eliminate an existing use of the waterbody. When "an agency does not consider an important factor, its decision is regarded as arbitrary, and those important factors which it did consider, must be discussed in the decisional document." Additionally, DEC is required to "cogently

explain why it has exercised its discretion in a given manner.” There have been few exploration facilities in Cook Inlet over the past several years, but the issuance of this permit and the increasing interest in Cook Inlet exploration recognizes the revitalization of this field that was once thought to be in decline. DEC also only provides conclusory statements about its determination that existing uses will be maintained and fully protected. DEC provides no indication of the process or reasoning behind this conclusion, and the statement fails to recognize the cumulative impact of these additional discharges to Cook Inlet. DEC has failed to explain how it reached its conclusions.

2.6.1 DEC Response:

Background: Except for deleting two sentences and modifying the last sentence, this comment is verbatim the same comment submitted by Inletkeeper on the State and EPA Exploration GPs. In addition, the comment incorrectly references the 2016 WQS rather than 2003 and again suggests that a cumulative effects analysis (NEPA requirement) must be conducted.

Current Response: The Department’s evaluation of protecting existing uses is not flawed per the requirements for authorizing mixing zones. While Inletkeeper may desire DEC to conduct a NEPA evaluation considering cumulative effects over the entire Cook Inlet region outside the mixing zone, the mixing zone regulations are based on a discharge meeting water quality criteria at, and beyond, the boundary of an authorized mixing zone per 18 AAC 70.255(c), 2003 version. Hence, because criteria is met at the boundary of the chronic mixing zone and the criteria is developed to protect uses of the waterbody, then the uses are protected beyond the boundary of an appropriately sized chronic mixing zone. Further analysis is not necessary per WQS. DEC’s analysis appropriately included: 1) the critical conditions of the receiving water (See Fact Sheet Section 5.3.1); 2) effluent characteristics and flow rates; 3) full consideration of multiple discharges, diffused or nonpoint source inputs that could have impacts on receiving water uses (ambient receiving water meets water quality criteria for pollutants in the discharges); 4) DEC imposed requirements for the Permittee to coordinate effectively with the mobile setnet fishery to ensure resource harvesting is not impacted during discharges; and 5) DEC imposed restrictions on the rate of discharge relative to water depth to ensure adequate dispersion. DEC authorizes the mixing zones in the Permit compliantly with WQS (2003 EPA-approved version of mixing zone regulations) and 18 AAC 83 – APDES Program.

No changes to the Fact Sheet and Permit were made based on this comment.

2.7 Comment IV.B – DEC Failed to Analyze the Risks to Passing Organisms

Under 18 AAC 70.240, available evidence must reasonably demonstrate that within the mixing zone the pollutants discharged will not “cause lethality to passing organisms,” or “result in an acute or chronic toxic effect in the water column, sediments, or biota outside the boundaries of the mixing zone.” The acute aquatic life criteria also may not be exceeded “at and beyond the boundaries of a smaller initial mixing zone surrounding the outfall “that will be sized using methods determined by the department.” Per Inletkeeper, DEC has not provided sufficient scientific or technical reasoning on how the mixing zones will prevent lethality to passing organisms. “EPA recommends mixing zones be defined on a case-by-case basis after it has been determined that the assimilative capacity of the receiving system can safely accommodate the discharge” and should be prohibited where they “may” endanger critical areas such as breeding grounds. EPA takes a holistic approach to determining whether a mixing zone is tolerable, and

therefore the analysis should incorporate findings regarding upstream and downstream water bodies as well as present and future discharges. Estuaries should be considered particularly carefully, because tidal movements can have widespread unanticipated ecological consequences. DEC has not meaningfully considered, and Sabre has not adequately proven, that any of these factors have been met.

2.7.1 DEC Response:

Background: This comment has content that is verbatim as a comment submitted by Inletkeeper on the State Exploration GP pertaining to properly sizing acute mixing zones to ensure there is no lethality to passing organisms.

Current Response: The Department appropriately considered lethality to passing organisms for the one acute mixing zone authorized via the Permit for the discharge of graywater. Only the graywater discharge included a parameter that has acute aquatic life criteria (i.e., total residual chlorine). None of the remaining mixing zones required an acute mixing zone given the absence of pollutants with acute water quality criteria being in the discharges. See Fact Sheet Section 5.3.1.2 for content relating to DEC's passing organism assessment.

DEC uses site-specific hydrodynamic information to determine the appropriate methods for modeling mixing zone sizes. Although Cook Inlet can be generally classified as an estuary, the mixing zone analysis depends on the site-specific hydrodynamic conditions present at the Sabre Project Site rather than a generalized definition. The hydrodynamic conditions at the Sabre Project Site are sometimes representative of estuary and at other times representative of open ocean conditions. Regardless, DEC evaluated the critical conditions, whether estuarine or oceanic, and appropriately used CORMIX to determine the mixing zones for the Permit. DEC considered the salinity profiles and tidal currents that dictate the appropriate use of CORMIX when used for modeling the discharges regardless of how one may classify Cook Inlet (See Fact Sheet Section 5.3.1). In addition, DEC determined there is adequate assimilative capacity and no known overlap with "breeding grounds" in the vicinity of the discharges. DEC has conducted an appropriate evaluation of site-specific conditions in authorizing mixing zones in the Permit, which is supported by documentation provided in Fact Sheet Section 5.3.

No changes to the Fact Sheet and Permit were made based on this comment.

2.8 Comment V – Antidegradation Policy

Inletkeeper comments that DEC did not adequately demonstrate that lowering of water quality under the State Antidegradation Policy is necessary per the first finding, the Permit conditions do not ensure compliance with WQS per the second finding, and DEC did not provide sufficient scientific basis nor do the Permit conditions result in protection of existing uses of the waterbody per the second finding of the antidegradation analysis.

Finding 1: Referencing the Water Quality Standards Handbook, EPA 823-B-94-005a, August 1994 Inletkeeper states that DEC has not met the "very high burden" to demonstrate that drilling is an "extraordinary circumstance" where the exploration project "clearly outweighs" the drawbacks of degrading the water. DEC did not adequately compare the negative aspects of allowing lower water quality and must compare the negative impacts to the positive economic benefits to satisfy the State's Antidegradation Policy.

Finding 2: Inletkeeper states that in the case of chronic whole effluent toxicity (WET) testing requirements there is no guarantee that the criteria will be met at the boundary of the 100-meter chronic mixing zone because instream monitoring has not been specified in the Permit and the WET sampling frequency is too infrequent to capture variations in toxicity. Therefore, DEC's conclusion that WQS will be met if the terms and conditions of the Permit are adhered to is flawed.

Finding 3: Inletkeeper claims that DEC did not adequately demonstrate that the existing uses of Cook Inlet are protected by the Permit because DEC did not cite any report or scientific basis and does not require monitoring to ensure this protection. While declaring the 2015 ODCE for the State Exploration GP was apparently used as a technical basis for the Permit, the ODCE acknowledges that little is known about the acute and lasting effects from discharges such as drill cuttings, especially how increased levels of mercury and other contaminants have already impacted existing uses such as subsistence, recreational, and commercial fishing. To support the assertion that there is insufficient information, Inletkeeper references an opinion in a letter from the Marine Mammal Commission (MMC) to NFMS concerning an application for an Incident Harassment Authorization (IHA) for exploration in the Chukchi Sea whereby MMC attempted to refute an assertion by the applicant that significant research has been conducted on exposures of drilling fluid toxins on marine mammals. The MMC disagreed based on their opinion that there is insufficient information on the impacts of drilling fluids and drill cuttings on marine mammals and recommended zero discharge of drilling fluids and drill cuttings be part of the mitigation measures for the IHA.

2.8.1 DEC Response:

Background: These comments have similar components to those provided on the State Exploration GP pertaining to a general statement contained in the Draft ODCE with respect to little is known about the impacts from drilling fluids and drill cuttings in the environment. DEC previously responded and added, or emphasized, multiple studies and observations from Environmental Monitoring Program (EMP) Reports for discharges of drilling fluids and drill cuttings in Cook Inlet to the Final ODCE. Inletkeeper has also previously commented that instream monitoring at the mixing zone boundary is necessary but DEC responded that the effluent limits are based on the wasteload allocation, which is based on meeting water quality criteria at the boundary of the mixing zone but enforced at the point of discharge into the receiving water.

Current Response: Inletkeeper introduces a letter from MMC that states an opinion that “studies done to date regarding impacts on marine mammals from exposure to polycyclic aromatic hydrocarbons are informative, yet do not provide a sufficient basis for predicting, with full confidence, the severity of either short- or long-term effects of exposure.” Although presenting a supporting opinion, Inletkeeper has not presented any new scientific information or reports that indicate DEC has insufficient information to make a determination that existing uses are being protected (See Comment Response 2.1.1). Consistent with State WQS, protection of existing uses is based on meeting water quality criteria in the waterbody at, and beyond, the boundary of the authorized chronic mixing zone as discussed in the subsequent paragraphs rather than on hypothetical cumulative effects that are not currently supported by available scientific studies or applicable to Cook Inlet assimilative capacity.

Findings 1 and 3: As appropriately stated in the Fact Sheet, instream water quality criteria set forth in WQS establish the level of receiving water quality that protects and supports the existing uses of Cook Inlet (e.g., propagation of fish, shellfish, and wildlife and recreation in or on the water). Although the EPA Handbook is informative, it is only guidance and not legally binding; the applicable legal requirements are statutes and regulations pertaining to the State’s Antidegradation Policy. EPA updated the Handbook in 2014 to include this opening disclaimer:

“This document does not substitute for EPA regulations; nor is it a regulation itself. Thus, it does not and cannot impose legally binding requirements on the EPA, the states, tribes, or the regulated community, and may not apply to a particular situation based on the circumstances. If there are any differences between this web document and the statute or regulations related to this document, the statute and/or regulations govern.”

Per 40 CFR 131.12(a)(2), where the quality of receiving water exceed the criteria (i.e., pollutant parameters in the receiving water are less than the criteria for that parameter), the State shall maintain and protect this receiving water quality unless the State finds, after satisfying administrative procedures, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the receiving waters are located. Consistent with the federal regulation, the State’s Antidegradation Policy does not require the State to compare the economic benefits to perceived negative impacts. Therefore, if the receiving water meets applicable water quality criteria that serve to protect existing uses and the State finds that lower water quality supports important economic or social development then those components of the Antidegradation Policy are met and the waterbody as a whole is protected.

Finding 2: The limitations established in the Permit for miscellaneous discharges consisting of chemically treated freshwater or sea water are similar to limitations in other permits for exploration MODUs in Cook Inlet (i.e., the State and EPA Exploration GPs). Permittees are allowed to select chemicals that are the most appropriate for their facility while also considering environmental aspects such as chronic toxicity. Because the permittee has the flexibility to use various chemicals, establishing effluent limits is not practicable as this would require all facilities to use the same chemicals and possibly prevent the use of new chemicals that could be more effective at lower concentrations and/or environmentally friendly. This flexibility results in a tiered methodology to control chemical concentrations that help ensure WQS are met at the boundary of the 100-meter mixing zones for these discharges. The Permit establishes limitations on chemical concentrations per Permit Section 2.2.4.3. The intent of the permit condition is to limit the amount of toxicity based on which chemical is selected for a given purpose (e.g., corrosion control or biocides). Permittees must also submit an annual chemical report that describes the types and volumes of chemicals used. However, as Inletkeeper points out the Permit and Fact Sheet do not provide adequate clarity as to how these limitations ensure compliance with WQS, specifically chronic WET. Therefore, DEC will impose additional limitations to provide this clarity.

To help ensure chronic WET criteria will be met at the boundary of the authorized chronic mixing zone, DEC is adding another limiting condition on the concentration of chemicals used. This limiting concentration is tied to the mixing zone via authorized dilution based on the mixing zone modeling provided by the applicant for the discharge of noncontact cooling water. At the maximum effluent flow rate of 132,240 gallons per day discharged into the receiving water at critical conditions resulted in a

minimum dilution factor at the chronic mixing zone boundary of 189. Given that the chronic WET criteria is one chronic toxicity unit (TU_c), the maximum allowable effluent chronic toxicity should also be 189. Therefore, DEC is adding another bullet to Fact Sheet Section 7.4.3 and Permit Section 2.2.4.3 that reads:

The estimated chronic toxicity based on the mixed concentration of the chemical(s) in the waste stream may not be greater than 189 TU_c based on the most limiting 25 % effect concentration listed from the aquatic toxicological information obtained in material data sheet (MDS) for the chemical, if available. Note that when only acute toxicity data is provided on an MDS, the permittee must use a reported acute to chronic ratio (ACR) for that chemical and species, or a default ACR of 10, to estimate the TU_c of the mixture.

The first sentence in Permit Section 2.2.4.4 has been modified to include:

“...with a dilution factor of 189 has been authorized for chronic toxicity and temperature.”

Similarly, Permit Section 3.1.4 has been modified to include a new last sentence that reads:

“The applicable dilution factor at the boundary of the chronic mixing zone is 189 (See Section 2.2.4.3 and 2.2.4.4).”

In addition, DEC adds the following sentence at the end of Fact Sheet Section 5.3.1.4:

“The chronic dilution factor applicable at the boundary of the authorized chronic mixing zone is 189 and represents the minimum dilution at the maximum effluent discharge and critical receiving water conditions.”

After including the new limitation above and reviewing Standard Conditions Section 3.1 – Representative Sampling, DEC reevaluated the WET monitoring frequency of once per term of the Permit while considering the potential for different chemicals to be used over the Permit term. DEC concluded that once per term is not frequent enough to evaluate varying toxicity based on changes in chemical use that could occur on an annual basis. Therefore, DEC is modifying the Permit and Fact Sheet to specify a frequency of once per year based on the understanding that chemical substitutions are not likely to occur on a more frequent basis given typical MODU operations. These modifications affect frequency listed in Fact Sheet Table 9 and Permit Table 5 and Permit Section 2.3.2.

2.9 Comment VI – Endangered Species

Inletkeeper comments that DEC lacks the authority to independently determine whether any adverse effect or no adverse effect would occur to endangered species as this is the authority of the services. Any adverse effects allowed as incidental take must be approved through consultation under Endangered Species Act (ESA) Section 7 or Section 10 and DEC cannot issue the Permit before this is accomplished. Furthermore, Inletkeeper suggests DEC should establish mitigation measures in the Permit that protects local endangered species that include beluga whales, northern sea otter, and Steller’s eiders regardless of whether the discharge location is outside boundaries of critical habitat.

2.9.1 DEC Response:

DEC understands that the Services have sole authority for making determinations of no adverse effects under ESA. During issuance of the State Exploration GP, DEC met with NFMS to discuss potential

impacts of discharges from MODUs on the Steller's eiders, northern sea otter, and beluga whale. NFMS indicated during this coordination effort that discharges from MODUs are not likely to result in adverse effects to any of the listed species. Since that meeting, DEC has not received indication there are any new concerns or determinations.

During development of the Permit, DEC notified the services about the proposed permit prior to issuing the Preliminary Draft Permit and Fact Sheet for a 10-day applicant and agency review and did not receive indication there were any new concerns from the Services. Although provided an opportunity to comment on the Preliminary Draft Permit and Fact Sheet, none were submitted by the zservices. Nor did DEC receive comments from the services during the public notice of the Draft Permit and Fact Sheet.

While some of the interrelated activities associated with a drilling program could result in incidental takes, the permittee is responsible for consulting with the Services directly in order to gain their approval prior to conducting the exploration project. As Inletkeeper points out, DEC lacks authority under ESA and, accordingly, it is legally inappropriate to tie the APDES permit to ESA consultation with the Services. Similarly, it would also be inappropriate to include mitigation measures to protect endangered species or requirements for incidental take as these are not applicable to APDES authority and are being handled appropriately by the permittee through direct consultation with the Services.

No changes to the Fact Sheet and Permit were made based on this comment.

2.10 Comment VII – Human Health

Inletkeeper claims that DEC failed to address whether discharges are expected to cause carcinogenic effects or present an unacceptable risk to human health. Because discharges by the oil and gas industry could contain bioaccumulative parameters or known or suspected carcinogenic compounds, DEC must provide a meaningful and detailed discussion about human health risks. This factor is particularly important because there is a seasonal, mobile fishery that operates in proximity to the proposed discharges. DEC merely claimed that there is an insufficient exposure period to allow for bioaccumulation and failed to adequately address these concerns by providing meaningful discussions, citations to studies, and did not provide any basis for their determination that biocumulative chemicals will not persist in the environment.

Inletkeeper makes a similar claim with respect to unspecified carcinogens that DEC must evaluate to ensure there is no unacceptable risks to human health. Inletkeeper references the 2006 version of 18 AAC 70.240(d)(2) and the *2009 Implementation Guidance: 2006 Mixing Zone Regulation Revisions (2006 Mixing Zone Guidance)* and cites verbatim a paragraph in the 2006 Mixing Zone Guidance describing the highest level of site-specific risk analysis that could be required, if necessary, and asserts that DEC must address the adequacy of the analysis provided in the Fact Sheet that did not apply this level of analysis.

2.10.1 DEC Response:

DEC disagrees that the Fact Sheet fails to adequately discuss risk to human health due to potential bioaccumulative and carcinogenic parameters in the discharge pertaining to the mixing zone evaluation. Further, Inletkeeper is not citing the appropriate EPA-approved mixing zone regulations and *2006 Mixing Zone Implementation Guidance* (2003 version as discussed in Comment Response 2.5.1). DEC's legal authority for determination of risk to human health due to bioaccumulative or carcinogenic pollutants in

mixing zones resides in the 2003 version of 18 AAC 70.250(a)(1)(A) and 18 AAC 70.250(a)(1)(B), respectively. The following sections demonstrate how DEC complied with the applicable 2003 mixing zone regulations.

Bioaccumulation: Per 18 AAC 70.250(a)(1)(A), the Department will not authorize a mixing zone if the Department finds that available evidence reasonably demonstrates the pollutants in the discharge could bioaccumulate, bioconcentrate, or persist above natural levels in sediments, water, or biota to significantly adverse levels, based on consideration of bioaccumulation and bioconcentration factors, toxicity, and exposure.

DEC is confused by the comment that a basis for determining bioaccumulation or bioconcentration was not provided. DEC provided meaningful discussions in Fact Sheet Section 4.1.1 concerning the metals in drilling fluids, the primary pollutant parameters of concern for exploration drilling. In addition, DEC provided more detailed discussion on the lack of adequate exposure time within the mixing zone and of the fate and transport outside the mixing zone within Fact Sheet Sections 4.1.1 and 5.3.6. In Fact Sheet Section 4.1.1 while discussing barite, DEC referenced several studies supporting this determination. As discussed in Fact Sheet Section 4.1.1 and repeated here, “In general, heavy metals within drilling fluids have a very limited bioavailability to marine animals due to their insolubility (EPA 1982). However, if mercury is reduced to Methyl mercury in deep sediment deposits, it can become bioavailable to marine animals (Neff 2010). Trefry and Smith (2003) have examined the relationship between barite concentrations in sediments near drilling platforms in the Gulf of Mexico and the methyl mercury concentrations in sediments and concluded there was no relationship. Results from Trefry and Smith (2003) suggest that mercury concentrations in barite are not toxic to marine organisms, as transformation to methyl mercury was not observed.”

Carcinogens: Per 18 AAC 70.250(a)(1)(B), The Department will not authorize a mixing zone if the Department finds that available evidence reasonably demonstrates the pollutants in the discharge could be expected to cause carcinogenic, mutagenic, or teratogenic effects on, or otherwise present a risk to, human health; when evaluating a discharge under this paragraph, the Department will, in its discretion, require the application to perform a Department-approved, site-specific analysis based on exposure pathways, including exposure duration of affected aquatic organisms in the proposed mixing zone and patterns of fisheries use and consumption of water, fish, or shellfish in the area.

In Fact Sheet Section 5.3.6, DEC correctly concluded that there is insignificant risk to a human receptor over a 35 to 70 year exposure period given the discharges authorized by the permit will occur intermittently over a period of a weeks or months during the exploration program. This determination is also based on the lack of exposure to marine species during active discharging that could result in exposure to human through consumption of organisms. This aspect is further diminished by the requirement for the permittee to effectively coordinate with a known setnet entity to reduce the potential for minimal exposure even further (See Permit Section 3.2). The detailed risk assessment method proposed by Inletkeeper is not necessary given the underlying factor of insufficient exposure. Hence, DEC reasonably demonstrated the risk to human health is insignificant for the authorized discharges consistent with the 2003 WQS mixing zone regulations, 18 AAC 70.250(a)(1).

No changes to the Fact Sheet and Permit were made based on this comment.

3 General Discussion on Comments Received from CIRCAC

CIRCAC general opposes issuing the Permit based on their position that additional pollution discharged to Cook Inlet should not be allowed. Although stopping short of requesting zero discharge, CIRCAC's believes that every effort should be made to eliminate discharges to Cook Inlet. DEC notes CIRCAC's position.

3.1 CIRCAC Comment – RCAC Review Environmental Monitoring Program Study Plans

Per CIRCAC, having conducted numerous studies in Cook Inlet, CIRCAC is recognized as an expert resource on how to conduct meaningful monitoring and are thus requesting the opportunity to provide formal review of the Environmental Monitoring Program (EMP) Study Plan that the draft permit requires be submitted by Cook Inlet Energy, LLC. In order to provide meaningful information, it is imperative that the study incorporate a sampling and statistical design that considers Cook Inlet's unique physical environment and that will accurately capture mixing zone and background concentrations of permitted contaminants.

3.1.1 DEC Response:

Background: This comment from CIRCAC concerning review of EMP Study Plans was provided previously during issuance of the State Exploration GP. DEC responded that the Department has the legal authority as well as the technical expertise to conduct reviews of EMP Study Plans without third party assistance.

Current Response: DEC acknowledges the wealth of knowledge CIRCAC has with respect to the Cook Inlet environment and appreciates a willingness to provide expert input. However, CIRCAC does not have a legal requirement under 18 AAC 83 to act on behalf of the Department. Because DEC has both the legal authority and the expertise to appropriately evaluate EMP Study Plans, the Department is the appropriate entity to review and comment on EMP Study Plans required by the Permit.

No changes to the Fact Sheet and Permit were made based on this comment.

4 Waiver to Minimum Treatment Standards for the Spartan 151

When the Draft Permit and Fact Sheet were public noticed for 30-days, the Spartan 151 was in the process of submitting a request for a waiver to minimum treatment standards (secondary treatment) per 18 AAC 72.050 that is necessary to discharge graywater under the Permit. On February 20, 2018 the Spartan 151 successfully obtained a waiver from DEC after submitting information required per 18 AAC 72.060. Accordingly, the Fact Sheet and Permit was reviewed to determine where modifications to reflect this accomplishment by Spartan 151 would be appropriate. No text was modified in the Permit. However, the following Fact Sheet Sections have been modified:

Fact Sheet Section 4.3, second to last sentence now reads:

“The treatment of graywater using the MSDs on the Spartan 151 has been demonstrated to exceed primary treatment requirements and the operator has successfully obtained a waiver to secondary

treatment standards from DEC and, thereby, obtaining final approval to discharge treated graywater under the Permit.”

Fact Sheet Section 5.3.2, fourth paragraph, last sentence now reads:

“The permittee has satisfactorily demonstrated attainment of better than primary treatment using the MSDs and has obtained a waiver to secondary treatment from DEC (See Section 6.5).”

Fact Sheet Section 6.5, third paragraph, third sentence now reads:

“The operator of Spartan 151 has successfully submit a request to DEC and has obtained a waiver to minimum treatment and can discharge graywater under the Permit.”

Fact Sheet Section 7.3, a new last sentence is added that reads:

“The Spartan 151 has successfully obtained a waiver for secondary treatment from DEC.”

Fact Sheet Section 9.0, finding E, fifth paragraph, a new last sentence is added that reads:

“The Spartan 151 has successfully obtained a waiver for secondary treatment from DEC.”

5 Promulgation of E-Reporting Requirements

After the public notice of the Draft Permit and Fact Sheet, electronic submittals of DMRs per 40 CFR 127 (e-Reporting Rule) became effective. The Draft Permit and Fact Sheet included reference to this requirement based on the information available at that time. Since promulgation of the e-Reporting Rule DEC has additional information for compliance with this requirement. Accordingly Permit Section 2.6.4 and Fact Sheet Section 7.7.2 have been modified to include this updated information to be consistent with other APDES permits being issued under the rule. Each of these sections have the same text split into two subsections as illustrated for the Permit Sections 2.6.4.1 and 2.6.4.2 shown below.

“2.6.4.1 E-Reporting Rule - Phase I (DMRs).

The permittee must submit a DMR for each month by the 28th day of the following month. DMRs shall be submitted electronically through NetDMR per Phase I of the E Reporting Rule (40 CFR 127). For access to the NetDMR Portal, go to <https://cdxnodengn.epa.gov/oeca-netdmr-web/action/login>. DMRs submitted in compliance with the E-Reporting Rule are not required to be submitted as described in Appendix A – Standard Conditions unless requested or approved by the Department. Any DMR data required by the Permit that cannot be reported in a NetDMR field (e.g. mixing zone receiving water data, etc...), shall be included as an attachment to the NetDMR submittal. DEC has established an e-Reporting Information website at <http://dec.alaska.gov/water/Compliance/EReportingRule.htm> which contains general information about this new reporting format. Training modules and webinars for NetDMR can be found at <https://netdmr.zendesk.com/home>.

2.6.4.2 E-Reporting Rule - Phase II (Other Reports).

Phase II of the E-Reporting rule will integrate electronic reporting for all other reports required by the Permit (e.g., Annual Reports and Certifications) and implementation is expected to begin around December 2020 during the permit cycle. Permittees should monitor DEC’s E-Reporting

website at <http://dec.alaska.gov/water/Compliance/EReportingRule.htm> for updates on Phase II of the E-Reporting Rule and will be notified when they must begin submitting all other reports electronically. Until such time, other reports required by the Permit may be submitted in accordance with Appendix A – Standard Conditions.”