STATE OF ALASKA

SARAH PALIN, GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION
DIVISION OF SPILL PREVENTION AND RESPONSE
INDUSTRY PREPAREDNESS PROGRAM
EXPLORATION PRODUCTION & REFINERIES

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May 2, 2008

File: 305.30 (CPAI-Kuparuk)

OIL DISCHARGE PREVENTION AND CONTINGENCY PLAN APPROVAL

Ms. Leigh McDaniel
ConocoPhillips Alaska, Inc.
P.O. Box 100360
Anchorage, Alaska 99510-0360

Subject: **ConocoPhillips Alaska, Inc. (CPAI) Oil Discharge Prevention and Contingency Plan for the Kuparuk River Unit, Plan Number 07-CP-4102. Plan Approval**

Dear Ms. McDaniel:

The Alaska Department of Environmental Conservation (ADEC) has completed our review of your application for the above referenced Oil Discharge Prevention and Contingency Plan (plan). ADEC coordinated the State of Alaska's public review for compliance with 18 AAC 75, using the review procedures outlined in 18 AAC 75.455. Based on our review, ADEC has determined that your plan is consistent with the applicable requirements of the referenced statute/regulation and is hereby approved.

This approval applies to the following Oil Discharge Prevention and Contingency Plan (plan):

Plan Title:	**Oil Discharge Prevention and Contingency Plan, Kuparuk River Unit – Kuparuk and Oliktok Pipelines as amended in accordance with 18 AAC 75.415, consisting of one volume.**
Supporting Documents:	**Alaska Clean Seas (ACS) Technical Manuals as revised and updated.**
Plan Holder:	**ConocoPhillips Alaska, Inc.**
Covered Facilities:	**Kuparuk River Unit production facilities and the associated flow lines, Kuparuk crude oil transmission pipeline, Oliktok Pipeline, drill sites, tanks and other production operations.**

PLAN APPROVAL: The referenced plan is hereby approved, **effective May 2, 2008.** This approval supersedes the previous plan Approval and Certificate of Approval, dated February 19, 2008.

A certificate of approval stating that the contingency plan has been approved by ADEC is enclosed.

TERMS AND CONDITIONS
The following items must be completed and/or received as specified to complete the plan in accordance with AS 46.04.030(e).

1. Notice of Changed Relationship with Response Action Contractor. Because the plan relies on the use of response contractors for its implementation, CPAI must immediately notify us in writing of any change in the contractual relationship with the plan holder's response action contractor, and of any event including but not limited to any breach by either party to the response contract that may excuse a response contractor from performing, that indicates a response contractor may fail or refuse to perform, or that may otherwise affect the response, prevention, or preparedness capabilities described in the approved plan.

   This condition is reasonable and necessary because there are certain risks associated with allowing a plan holder to rely in part or total upon a response contractor instead of obtaining its own response capability. The risks arise, in part, because the certainty of the contractor's response is dependent upon the continuation of the legal relationship between the contractor and the plan holder. Given this risk, ADEC must be promptly informed of any change of the contractual relationship between the plan holder and the response contractor, and of any other event that may arguably excuse the response contractor from performing or that would otherwise affect the response, prevention, or preparedness capabilities described in the approved plan. ADEC may seek appropriate modifications to the plan or take other steps to ensure that the plan holder has continuous access to sufficient resources to protect the environment and to contain, cleanup, and mitigate potential oil spills. 18 AAC 75.425(e)(3)(H) and 18 AAC 75.445(i)

2. Updates to Appendix B. CPAI must submit an amendment to ADEC that updates the inspection frequency for tank PGE-86AM within 30 days of the approval of the plan. CPAI must also submit an amendment to ADEC to update the inspection frequency for tank 19-508 once installation of the tank begins.

   This condition is reasonable and necessary because ADEC relies heavily on the data provided in the plan to help verify inspection frequencies for stationary and portable tanks across the North Slope. Also, there are risks involved with operating tanks in an extreme arctic environment, and the best way to verify that the tanks used across the North Slope are adequate is through proper inspection as required by 18 AAC 75.065(a) and 18 AAC 75.066(f). 18 AAC 75.425(e)(3)(A)(i) and (ii)

3. Blowout Contingency Plan. A copy of the Blowout Contingency Plan (BCP) must be maintained at Kuparuk and made available to ADEC upon request.

This condition is necessary to ensure that the plan holder is prepared to control a potential well blowout. ADEC will review the blowout contingency plan when performing site inspections and/or in Anchorage CPAI offices. 18 AAC 75.425(e)(1)(I), 18 AAC.445(d)(2), and 18 AAC 75.480.

4. Final Copy of the Plan. Within 30 days of this letter, the plan holder must submit to ADEC updated versions of the approved plan, including all revisions instituted during the recent plan review. CPAI must send three complete plan copies to the Exploration, Production & Refineries Section. In addition, you must send an updated version of the plan to each reviewer and controlled document holder of your plan.

EXPIRATION: This approval **expires May 2, 2013.** After the approval expires, facility operations are prohibited by Alaska law until an approved plan is once again in effect.

AMENDMENT: Before any change to this plan may take affect, the plan holder must submit an Application for Amendment to the plan with any additional information needed to evaluate the proposed amendment. This is to ensure that changes to the plan do not diminish the plan holder's ability to respond to a discharge and to evaluate any additional environmental considerations that may need to be taken into account (18 AAC 75.415).

RENEWAL: To renew this approval, the plan holder must submit a completed renewal application and plan to ADEC no later than 180 days prior to the expiration of this approval. This is to ensure that the submitted plan is approved before the current plan in effect expires (18 AAC 75.420).

REVOCATION, SUSPENSION OR MODIFICATION: This approval is effective only while the plan holder is in "compliance with the plan" and with all of the terms and conditions described above. ADEC may, after notice and opportunity for a hearing, revoke, suspend or require the modification of an approved plan if the plan holder is not in compliance with it, or for any other reason stated in AS 46.04.030(f). In addition, Alaska law provides that a vessel or facility that is not in "compliance with the plan" may not operate (AS 46.04.030). ADEC may terminate approval prior to the expiration date if deficiencies are identified that would adversely affect spill prevention, response or preparedness capabilities.

DUTY TO RESPOND: Notwithstanding any other provisions or requirements of this contingency plan, a person causing or permitting the discharge of oil is required by law to immediately contain and cleanup the discharge regardless of the adequacy or inadequacy of a contingency plan (AS 46.04.020).

NOTIFICATION OF NON-READINESS: Within twenty-four (24) hours after any significant response equipment specified in the plan becomes non-operational or is removed from its designated storage location, the plan holder must notify ADEC in writing and provide a schedule for the equipment's substitution, repair, or return to service (18 AAC 75.475[b]).

CIVIL AND CRIMINAL SANCTIONS: Failure to comply with the plan may subject the plan holder to civil liability for damages and to civil and criminal penalties. Civil and criminal sanctions may also be imposed for any violation of AS 46.04, any regulation issued thereunder, or any violation of a lawful order of ADEC.

INSPECTIONS, DRILLS, RIGHTS TO ACCESS, AND VERIFICATION OF EQUIPMENT, SUPPLIES AND PERSONNEL: ADEC has the right to verify the ability of the plan holder to carry out the provisions of its contingency plan and access to inventories of equipment, supplies, and personnel through such means as inspections and discharge exercises, without prior notice to the plan holder. ADEC has the right to enter and inspect the covered vessel or facility in a safe manner at any reasonable time for these purposes and to otherwise ensure compliance with the plan and the terms and conditions (AS 46.04.030[e] and AS 46.04.060). The plan holder shall conduct exercises for the purpose of testing the adequacy of the contingency plan and its implementation (18 AAC 75.480 and 485).

FAILURE TO PERFORM: In granting approval of the plan, ADEC has determined that the plan, as represented to ADEC by the applicant in the plan and application for approval, satisfies the minimum planning standards and other requirements established by applicable statutes and regulations, taking as true all information provided by the applicant. ADEC does not warrant to the applicant, the plan holder, or any other person or entity: (1) the accuracy or validity of the information or assurances relied upon; (2) that the plan is or will be implemented; or (3) that even full compliance and implementation with the plan will result in complete containment, control, or cleanup of any given oil spill, including a spill specifically described in the planning standards.

The plan holder is encouraged to take any additional precautions and obtain any additional response capability it deems appropriate to further guard against the risk of oil spills and to enhance its ability to comply with its duty under AS 46.04.020(a) to immediately contain and clean up an oil discharge.

COMPLIANCE WITH APPLICABLE LAWS: If amendments to the approved plan are necessary to meet the requirements of any new laws or regulations, the plan holder must submit an application for amendment to ADEC at the above address. The plan holder must adhere to all applicable state statutes and regulations as they may be amended from time to time. This approval does not relieve the plan holder of the responsibility for securing other federal, state, or local approvals or permits, and the plan holder is still required to comply with all other applicable laws.

INFORMAL REVIEW OR ADJUDICATORY HEARING: Any person who disagrees with this decision may request an adjudicatory hearing in accordance with 18 AAC 15.195 - 18 AAC 15.340 or an informal review by the Division Director in accordance with 18 AAC 15.185.

Informal review requests must be delivered to the Director of the Division of Spill Prevention and Response, 410 Willoughby Avenue, Suite 303, PO Box 111800, Juneau, Alaska 99811-1800 within 15 days of the permit decision.

Adjudicatory hearing requests must be delivered to the Commissioner of the Department of Environmental Conservation, 410 Willoughby Avenue, Suite 303, PO Box 111800, Juneau, Alaska 99811-1800, within 30 days of the permit decision. If a hearing is not requested within 30 days, the right to appeal is waived. Anyone who submits a request for an informal review or an adjudicatory hearing should also send a copy of the request to the undersigned.

If you have any questions, please contact Graham Wood at 269-7569 or Greg Gould at 269-7680.

Sincerely,

Betty Schorr
Program Manager

Enclosure: Certificate of Approval, 08CER-014

cc: Greg Gould, ADEC, Section Manager
Graham Wood, ADEC
Laurie Silfven, ADEC

cc (w/o enclosure):
Ed Meggert, ADEC, PERP, Fairbanks
Todd Nichols, ADFG, Fairbanks
Carol Fries, ADNR, Anchorage
Mike Thompson, JPO, Anchorage
Pam Miller, NAEC, Fairbanks
Mac McLean/Jack Winters, ADNR Fairbanks
Carl Lautenberger, EPA Anchorage
Capt. Mark DeVries, USCG Sector-Anchorage
Gordon Brower, North Slope Borough
Keith Gordon, USACE, Anchorage
Christy Bohl, MMS, Anchorage
Response Plans Officer, Nuiqsut
Tom Maunder, AOGCC, Anchorage
Melanie Barber, USDOT
Ben Greene, ADNR OPMP
Susan Harvey, Harvey Consulting
Legal Director, Trustees for Alaska

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF SPILL PREVENTION AND RESPONSE
INDUSTRY PREPAREDNESS PROGRAM

CONOCOPHILLIPS ALASKA, INC.
KUPARUK RIVER UNIT, NORTH SLOPE, ALASKA
OIL DISCHARGE PREVENTION AND CONTINGENCY PLAN

PLAN RENEWAL

Summary of Basis for Department Decision
May 2, 2008

Pursuant to 18 AAC 75.460(b)(1), the following is a summary of the basis for the Alaska Department of Environmental Conservation (ADEC) decision to approve the ConocoPhillips Alaska, Inc. (CPAI) Kuparuk River Unit, North Slope, Alaska, Oil Discharge Prevention and Contingency Plan (plan). Our approval includes referenced portions of the Alaska Clean Seas (ACS) Technical Manual, dated March 2007, consisting of three volumes, as revised and updated. This document summarizes key points and discusses issues raised during ADEC's review of the CPAI Kuparuk application for renewal.

The following summarizes documents and milestones in the review process:

- CPAI sent ADEC three letters dated February 9, March 29, and May 1, 2007 regarding renewal of the Kuparuk plan. CPAI initially intended to combine the Alpine and Kuparuk plans into a single regional plan; however, after weighing various factors, CPAI elected to keep the two plans separate for renewal. Specific response planning standard (RPS) volumes and scenarios related to the Kuparuk plan are described in CPAI's May 1 letter.
- ADEC sent a letter to CPAI on May 14, 2007 confirming CPAI's intent to apply for renewal of the Kuparuk River Unit plan as expressed in their May 1, 2007 letter.
- On October 15, 2007 ADEC received a renewal application for CPAI's Kuparuk River Unit plan, ADEC Plan No. 07-CP-4102.
- On October 23, 2007, ADEC determined the CPAI's Kuparuk plan was sufficient for review.
- On November 5, 2007 ADEC issued a letter for the "Start of the Plan Review" and designated November 9, 2007 as Day 1 of the 30-day public review period.
- On November 9, 2007 a public notice announcing CPAI's application for renewal of the CPAI Kuparuk plan was published in the Arctic Sounder, Fairbanks Daily News Miner, and the Anchorage Daily News. The notice was also published on the ADEC website on November 9, 2007.
- On December 3, 2007 ADEC suspended review of the plan renewal application under 18 AAC 75.455. ADEC determined based upon review

of the plan that additional information and/or plan revisions were required to complete the plan.

- Written comments on the plan were received on December 28, 2007 from the North Slope Borough (NSB).
- ADEC issued a "Request for Additional Information" (RFAI) letter on February 1, 2008 incorporating concerns/comments/questions expressed during the public review period as they related to ADEC regulations 18 AAC 75.
- On March 28, 2008 ADEC met with CPAI representatives to discuss preliminary responses to the ADEC RFAI Letter of February 1, 2008.
- On April 4, 2008 ADEC received CPAI's response to the RFAI letter dated February 1, 2008.
- On April 18, 2008 ADEC determined the plan was complete and issued a letter for the "Restart of Plan Review" which included the final ten days of public review. The final ten-day comment period began April 22, 2008.
- On April 21, 2008 ADEC received confirmation from a CPAI representative that all reviewers of the CPAI plan had received a copy of the response to the ADEC RFAI letter dated February 1, 2008.
- Concerns/comments/questions pertaining to issues not regulated under 18 AAC 75 were not addressed by ADEC.

Plan Summary

CPAI's Kuparuk River Unit is an onshore production facility located west of the Kuparuk River on the North Slope of Alaska. Kuparuk is made up of three generations of wells which encompasses 43 drill pads and three processing facilities. Kuparuk also has a vast infrastructure of in-field flow lines that connect all drill pads to the processing facilities as well as a crude oil transmission pipeline (COTP) that runs 36 miles from CPF-1 to Pump Station 1. The Kuparuk field has been in operation for many years.

The major facilities and operations covered by this plan include:

- Kuparuk Central Processing Facilities
- Kuparuk Drill Sites
- Kuparuk crude oil transmission pipeline and Oliktok Point Pipeline
- Intra-field flow lines
- Transfer operations
- Regulated tanks, secondary containment, and associated facility piping

Response Planning Standard

The response planning standard (RPS) volume for a production facility, as defined at 18 AAC 75.434, is three times the annual average daily oil production volume for the maximum producing well at the facility plus, for wells without assisted lift, an additional volume equal to the annual average daily oil production volume for the maximum producing well at the facility for an additional 12 days. The Alaska Oil and Gas Conservation Commission has verified that the highest producing well is Well 2N-329, which does not use assisted lift to pump oil. The 2006 average annual daily oil production volume for Well 2N-329 is 2,383 barrels of oil per day (bopd). The plan uses 2,400 bopd for 15 days for a total RPS of 36,000 barrels at the Tarn 2-N pad. The plan adequately addresses spill response for a well blowout RPS during production.

The plan adequately addresses response for a tank RPS volume of 22,000 barrels (55,000-barrel tank with 60% reduction for secondary containment). 18 AAC 75.432

The plan adequately addresses the response for a COTP rupture of 12,729 barrels (with an adjusted RPS from 16,593 barrels due to a 5% prevention credit for drug and alcohol testing, 5% prevention credit for on-line leak detection system, and a 15% prevention credit for instrumented in-line cleaning and diagnostic equipment). 18 AAC 75.436

Response Scenarios and Strategies

Pursuant to 18 AAC 75.425(e)(1)(F), the plan must contain a description of the discharge containment, control, and cleanup actions to be taken, which clearly demonstrates the strategies and procedures to conduct and maintain an effective response, presented in the form of a response scenario to a discharge of the RPS volume.

Based on our review, the response scenarios provide a logical plan of action with tactics, equipment, and personnel requirements identified in the ACS Technical Manual or maintained on site sufficient to demonstrate response to discharges equal to the RPS volume for a well blowout (36,000-barrel spill from a production well blowout at Well 2N-329), which is the largest potential spill, the tank RPS, and COTP RPS, in addition to smaller, more probable spills.

It is indicated in the plan that approximately 1800 barrels (5% of the RPS) for a well blowout in typical summer conditions would reach open water. The COTP scenario states that 12,729 barrels will enter open water, or 100% of the RPS. The storage tank scenario indicates that 3,000 barrels (14% of the RPS) would reach open water. 18 AAC 75.425(e)(3)(B)(ii)

Response strategies in the plan adequately describe activities to respond to a spill from a production well blowout in summer conditions in a coastal environment.

North Slope Industry Guidance Planning Assumptions

The planning assumptions previously contained in the Alaska Clean Seas Technical Manual have not been used in this plan.

Public Comments

Written comments were received from the North Slope Borough Planning & Community Services Department:

- Johnny Aiken, NSB Planning Department Director. The comments were quite extensive and varied.

This "Summary of Basis for Department Decision" addresses concerns, comments, and questions from the NSB regarding the Kuparuk River Unit application for renewal. ADEC answers *(in italics)* follow the concern/comment/question from the NSB. ADEC believes all concerns/comments/questions have been fully addressed and thanks the NSB for participating in the public review and providing comments.

Concerns/Comments/Questions Identified in NSB Public Comments

C-Plan Distribution
The NSB requests a copy of the final oil spill plan to be distributed to NSB representatives as follows:

1. Gordon Brower, North Slope Planning Department, Barrow
2. Gordon Matumeak, North Slope Planning Department, Nuiqsut
3. City of Nuiqsut
4. Kuukpik Corporation
5. Harvey Consulting, LLC. (NSB Consultant)

This was addressed in the ADEC RFAI letter dated February 1, 2008. ADEC included the NSB's request for final plan distribution.

Part 1 Response Plan

Page 1-28, Section 1.6.1, Procedures to Stop a Discharge
CPAI has deleted the entire section describing procedures to stop a discharge. This section is required by 18 AAC 75.425(e)(1)(F)(i). Please return this section to the C-plan, or explain where this information is provided elsewhere in the plan.

Response scenarios are descriptions of hypothetical spill incidents that require a plan holder to demonstrate the capability to respond to a discharge of any size up to and including a discharge that is equal to the applicable response planning standard. Each scenario must address regulation 18 AAC 75.425(e)(1)(F)(i-xii). Each scenario in the plan demonstrates the plan holder's ability to respond to a RPS discharge within the required timeframes using the resources described. The information previously included

would be supplemental and is not required by our regulations. The information included in the current plan renewal meets the regulatory requirements of 18 AAC 75.425(e)(1)(F)(i-xii).

Page 1-29, Section 1.6.2, Fire and Gas Detection and Control
CPAI has deleted the entire section describing general fire and gas detection and control procedures. This section is required by 18 AAC 75.425 (e)(1)(F)(ii). Please return this section to the C-plan, or explain where this information is provided elsewhere in the plan.

Response scenarios are descriptions of hypothetical spill incidents that require a plan holder to demonstrate capability to respond to a discharge of each applicable planning standard volume within the required timeframes using resources described in the contingency plan. Each scenario must address regulation 18 AAC 75.425(e)(1)(F)(i-xii). Each scenario in the plan addresses methods to control a potential fire hazard. The information included in the plan meets regulatory requirements of 18 AAC 75.425(e)(1)(F)(ii) .

Page 1-30, Section 1.6.3, Blowout Control/Relief Well Plan
CPAI has deleted the entire section describing general blowout control and relief well plan procedures. The list of required well capping equipment was deleted. This section is required by 18 AAC 75.425 (e)(1)(F)(iii). Please return this section to the C-plan, or explain where this information is provided elsewhere in the plan.

18 AAC 75.425 (e)(1)(F)(iii) was repealed May 26, 2004. CPAI's description of blowout control (well capping) has been inserted in Section 1.9 in accordance with 18.AAC 75.425(e)(1)(I). The plan meets regulatory requirements.

Page 1-35, Section 1.6.4, Discharge Tracking
CPAI has deleted the entire section describing general discharge tracking procedures. This section is required by 18 AAC 75.425(e)(1)(F)(iv). Please return this section to the C-plan, or explain where this information is provided elsewhere in the plan.

Response scenarios are descriptions of hypothetical spill incidents that require a plan holder to demonstrate capability to respond to a discharge of each applicable planning standard volume within the required timeframes using resources described in the contingency plan. Each scenario must address regulation 18 AAC 75.425(e)(1)(F)(i-xii). Each scenario in the plan addresses surveillance and tracking a discharge. The information included in the plan meets regulatory requirements of 18 AAC 75.425(e)(1)(F)(iv) .

Page 1-35, Section 1.6.5, Protection of Sensitive Areas
CPAI has deleted the entire section describing protection of sensitive area procedures. This section is required by 18 AAC 75.425 (e)(1)(F)(v). Please return this section to the C-plan, or explain where this information is provided elsewhere in the plan.

Response scenarios are descriptions of hypothetical spill incidents that require a plan holder to demonstrate capability to respond to a discharge of each applicable planning standard volume within the required timeframes using resources described in the contingency plan. Each scenario must address regulation 18 AAC 75.425(e)(1)(F)(i-xii). Each scenario in the plan addresses protection of environmentally sensitive areas, including wildlife protection and exclusion techniques. CPAI has inserted references to the applicable ACS Technical Manual Map Atlas pages in section 1.6.1. The information included in the plan meets regulatory requirements of 18 AAC 75.425(e)(1)(F)(v) .

Page 1-47, Section 1.6.13, Response Scenarios, Table 1-8, Drillsite 2N Blowout
The response scenario for a Drillsite 2N well blowout uses a maximum well rate of 2,400 bbls of oil per day (bopd). Please provide information in the C-Plan to verify that this well rate is representative of the maximum producing well at the facility as required by 18 AAC 75.434(e).

The department contacted the AOGCC in May 2007 and the AOGCC confirmed that the Tarn 2N-329 well was the maximum producing well in 2006 and had an average production rate of 2,383 barrels of oil per day in accordance with 18 AAC 75.434.

Please provide a copy of the technical report or basis for the 1.67 emulsification factor.

The ACS Technical Manual tactics are based on an emulsification factor of 1.67. CPAI asserted in their RFAI response that a review of North Slope plan scenarios indicates that they have used one of the most conservative emulsification factors on the North Slope.

The oil spill trajectory for this scenario shows a large amount of oil retained on the drillsite. For example, blowout plume section A shows 12,135 bbls being retained in a 0.1 acre location, resulting in oil building to a depth of 11 feet. Is this realistic? Is it physically possible for an 11' pool of oil to be retained on the Drillsite, next to the well? Please review your oil spill trajectory and drillsite topography and ensure that they provide a realistic estimate of the volume of oil that will be released off the pad and into the environment. We are concerned that unrealistic assumptions about how much oil will be retained on the pad, will result in insufficient personnel and resources to address larger volumes of oil which will more realistically end up off-pad.

Response scenarios are descriptions of hypothetical spill incidents that require a plan holder to demonstrate capability to respond to a discharge of each applicable planning standard volume within the required timeframes using resources described in the contingency plan. ADEC contacted ACS during the plan review because of similar concerns. ACS indicated that response personnel could work in the vicinity of the fallout plume and collect oil during the entire 15 days that the well is not under control. These actions would not let 11 feet of oil accumulate on the pad. CPAI indicated in their RFAI response that conservative recovery capacities are used in the scenario. For planning

purposes, the response resources, tactics, and recovery rates included in scenario tables support containment and recovery in accordance with our regulations.

One of the primary response tactics is to use vacuum trucks to remove oil from the Drillsite, prior to it draining off pad. This scenario only uses three (3) vacuum trucks. Additional trucks should be allocated to rapidly remove large volumes of oil to avoid release into the environment.

The tactics listed in the scenarios have an adequate number of vacuum trucks to satisfy recovery rates that meet the requirements of 18 AAC 75.425(e)(1)(F).

Page 1-115, Section 1.6.13, Response Scenarios, Table 1-32, Drillsite 3R Blowout
The response scenario for a Drillsite 3R well blowout does not describe the quantity of oil spilled, the emulsion factor, or the oil type. Please provide this information.

The DS 3R information, included to address response strategies for a well blowout in a coastal environment, is supplemental to the required scenarios in addressing 18 AAC 75.425(e)(1)(F). ADEC regulation 18 AAC 75.445(d) does not require CPAI to list the quantity of oil spilled, emulsification factors, or the oil type in response strategies. CPAI has demonstrated in the scenarios that they can clean up the entire RPS for a well blowout with the tactics that are listed in the response strategy.

Protection of environmentally sensitive areas describe protection of waterfowl, but does not address fish in the region. Please add information to show how CPAI will protect whitefish and other local fish in the Ugnuravik River.

The ACS Map sheets were incorporated by reference in section 1.6.1 of the plan. These map sheets show all environmentally sensitive areas as well as pre-staged equipment that is available in the event of a spill. The information in the plan meets regulatory requirements.

Master Equipment List
The Response Action Plan does not include a Master Equipment List showing the equipment required to respond to the Response Planning Standard (RPS). Please include a Master Equipment List, and show whether CPAI owns this equipment or whether it is provided by a response contractor.

This issue was addressed in the ADEC RFAI letter. The ACS Technical Manual lists all contractor-owned equipment as well as all CPAI-owned equipment. This was validated by ACS.

Personnel
The Response Action Plan does not show where personnel resources will come from to meet the RPS. Please describe whether CPAI will provide this personnel or whether it will be provided by a response contractor.

The plan includes references to the ACS Technical Manual. These tactics include lists of personnel that would be required should these tactics be deployed. The information included in the plan meets our regulatory requirements.

Contracts for Equipment and Personnel Resources
The Response Action Plan lists equipment and resources which may not be owned or operated by CPAI. The narrative states that CPAI has contracts in place for this equipment, but Statements of Contractual Terms could not be found for all the contracted equipment and personnel; please add this documentation. Later in the C-Plan (Part 3) a Statement of Contractual Terms is provided for Alaska Clean Seas, however it is not clear that ACS is the only contractor necessary to meet the equipment and personnel needs for the RPS (e.g. well control contractors, heavy equipment contractors, personnel resource, etc).

ACS is the Primary Response Action Contractor (PRAC) listed in this plan. ACS is a registered PRAC. No other PRACS have been identified. Response action contracts are not required to be in the plan. Contractors that provide ancillary services, such as hotel or flight services, marine contractors, or security services are not required to be registered as a PRAC. Well control and capping services are ancillary services not specifically intended for oil spill containment, control, or cleanup. The information included in the plan meets our regulatory requirements.

Please also include a copy of any agreements required for use of facilities on the North Slope outside of the Kuparuk River Unit.

Copies of additional agreements are not required by ADEC regulation. The information included in the plan meets our regulatory requirements.

Pre-staged Equipment for Protection of Environmentally Sensitive Areas
The Response Action Plan does not provide a list of pre-staged equipment for protection of environmentally sensitive areas. Please provide a map showing all the locations of pre-staged equipment, and a list of the equipment in each location.

The plan incorporates the ACS Technical Manual by reference into section 3.6. All pre-staged equipment is listed on the ACS Technical Manual Map Sheets. The information included in the plan meets our regulatory requirements.

Part 2, Prevention Plan

Page 2-1, Section 2.1.1, Prevention Training Program
The Prevention Training Program description lacks sufficient information to determine compliance with training program requirements of 18 AAC 75.020. CPAI refers to a document called "CPAI Training Requirements Manual," however, this document was

not provided to the NSB for review. Therefore, the contents are unknown. Please provide a copy of this document for review, or describe the program in detail as required by regulation in the C-plan. A matrix listing each position and the required training classes and the frequency should be added. This information is found in most high quality C-plans around the state.

Please provide information on how CPAI ensures contractors are trained on oil spill prevention. The C-plan states that contractors are required to have their own prevention training programs, but the C-plan does not describe the type of training, courses, certifications or frequency. CPAI employs a large number of contractors at the Kuparuk facilities. A better understanding CPAI's contractor's oil spill prevention training program is needed.

This was addressed in the ADEC RFAI letter dated February 1, 2008.

CPAI included Table 2-1, Summary of Key Positions and Prevention Training" of CPAI personnel to the Kuparuk plan and has adequately revised Section 2.1.1. CPAI's Primary Response Action Contractor (ACS), maintains its own database of trained personnel which is available to ADEC upon request. The information included in the plan meets regulatory requirements of 18 AAC 75.425(e)(2)(A) for inclusion of 18 AAC 75.020.

Page 2-3, Section 2.1.5, Fuel Transfer Procedures
Why was the section on fuel transfer procedures deleted?

This issue was addressed in the RFAI letter dated February 1, 2008. CPAI responded by indicating that the section pertaining to fuel transfers was moved to Section 3.1.2. The information included in the plan meets our regulatory requirements.

Page 2-3, Section 2.1.5, Blowout Prevention and Emergency Shutdown
Why was the section on blowout prevention and emergency shutdown deleted? Large sections on well prevention and control have been deleted from this C-plan with no explanation. Please return this information to the C-plan or provide an explanation as to why it is not required for the facility. If this information is contained in a reference document, such as a CPAI well control plan, please provide this document to the NSB for review. Without a copy of this reference document the contents are unknown to the NSB.

This was addressed in the ADEC RFAI letter dated February 1, 2008. CPAI has reinserted the text regarding blowout prevention during drilling. Additional blowout control information is now also located in Section 1.9. The information included in the plan meets our regulatory requirements.

Page 2-10, Section 2.1.7, Flowline and Facility Piping Requirements, Line Marking
18 AAC 75.047(f) requires line markers to be installed no later than July 1, 2007 and maintained over each onshore flow line at each road crossing and at one mile intervals along the remainder of the pipe to identify and properly locate each flowline. CPAI has

requested a waiver from the requirement to mark flowlines at one mile intervals. During development of these regulations North Slope companies recommended that this requirement be revised to exempt the requirement for marking the pipeline for locations away from the road system. The department disagreed, in their formal response to comments, noting that the requirement is very similar to both the ASME B31 standards and federal pipeline marking requirements. It is not clear why ADEC would pass a new requirement and then waive it a year later.

The purpose of the line marker regulation is to readily identify the location of a spill or flow line in need of repair. A review of CPAI's waiver request and subsequent discussion indicated that since many flow lines are cross country without road access the mile maker intervals did not serve the intended purpose. Additionally, certain types of pipeline inspection equipment could be hindered during the inspection process by the location of the makers. As a matter of policy, a waiver can be approved by ADEC if an equivalent level of protection is maintained. CPAI has mapped flow lines so they are readily identifiable. Each of the "vertical support members" (VSM's) that support the flow lines and pipeline are numbered sequentially and referenced on maps held by the plan holder. The numbered VSM(s) provide a higher level of location information since the VSM's are approximately 50-75 feet apart for the entire length of pipeline(s). Thus the location of any release or needed repair can be further narrowed down. The waiver for CPAI from the requirement to mark flow lines at one-mile intervals was deemed to be warranted. The description included in the plan adequately addresses our regulations.

Page 2-12, Section 2.1.7, Flowline and Facility Piping Requirements, Corrosion Control Program.

CPAI's C-Plan provides a very generic, non-specific description of its corrosion control program for pipelines. From the very generic description provided it is not possible to determine what corrosion control method is actually in place on specific sections of piping at the Kuparuk facility.

Appendix A contains maps of the piping at Kuparuk, however, this section does not provide local, state or federal governments with any information to correlate each section of piping with what corrosion control program is actually in place for that section of piping. For example, if we were to inspect the facility piping out at drill site 3M, what corrosion control program is in place for this piping? Is the pipe coated? Is monitoring equipment is installed? What chemical additives are injected? How frequently is this piping inspected? What inspection methods are used? The same problem exists at each Central Processing Facility (CPF) and each Drillsite. There is insufficient information to be able to know what corrosion prevention and monitoring program is actually in place for each facility component. This information is provided for each tank, but not for each pipeline. Why?

The program should be specific enough for the agencies to be able to audit the program, and ensure a quality program is in place. The limited information provided in this C-plan is insufficient to determine if CPAI's program is consistent with Chapter VIII of Pipeline

Transportation Systems for Liquid Hydrocarbons and Other Liquids (ASME B31.4-2002) or with NACE International's Standard Recommended Practice: Control of External Corrosion on Underground or Submerged Metallic Piping Systems, 2002 edition (NACE RP0169-2002). Please revise this section, especially in light of the recent corrosion related pipeline spill at Kuparuk.

This was addressed in the RFAI letter dated February 1, 2008. CPAI responded by adding language to section 2.1.6. The level of detail of information provided in the plan adequately addresses our regulatory requirements.

Page 2-14, Section 2.1.8, Leak Detection for Crude Oil Transmission Pipelines
This section does not demonstrate that the Kuparuk Crude Oil Transmission Pipelines have the continuous capability to detect a daily discharge equal to not more than one percent of daily throughput as required by 18 AAC 75.055. Please describe the system accuracy. Please report the accuracy of the last test, and describe how this system is maintained and routinely tested to ensure operability and accuracy.

This issue was addressed in the RFAI letter dated February 1, 2008. CPAI responded by adding previously deleted language in section 2.5.2. CPAI also provided the results of the last leak detection test which was performed on March 23, 2007. The information included in the plan meets our regulatory requirements.

Page 2-27, Section 2.1.9, Secondary Containment for ADEC Oil Storage Tanks
Please improve this section to include the procedures CPAI uses to verify the Kuparuk secondary containment liners meet the local, state and federal impermeability requirements, after being in place for a number of years in arctic conditions. What inspection, maintenance and repair procedures are in place?

Secondary containment areas are inspected during normal routine facility inspections for areas where impermeability may be an issue. If areas are found, deficiencies are addressed and the secondary containment areas are repaired. ADEC does not have a requirement for addressing these items in the contents of the plan. The information included in the plan meets our regulatory requirements.

The NSB reminds CPAI that there are local requirements for storage tank secondary containment. These requirements are listed in your NSB permits. The NSB Municipal code at 19.70.050(I)(11) requires impermeable lining and diking for fuel storage facilities with a capacity greater than 660 gallons. Fuel storage must also be set back away from water bodies, as required by your specific permits. Please ensure NSB's tank requirements are being met.

This NSB request is not required by our regulations. ADEC does not enforce local NSB regulations.

Please add a section describing secondary containment installation requirements for portable tanks used at Kuparuk Facilities. How do contractors verify 110% containment is installed prior to operating the tank? How do contractors verify the containment meets the impermeable standard prior to operating the tank? Please revise the tank list in Appendix B to show the minimum dimensions of an adequate secondary containment structure for each tank to be used as a field guide.

This item was addressed in the February 1, 2008 RFAI letter. CPAI responded by providing ADEC with a copy of the ASRC Standard Operating Procedure (SOP) that is used when setting up portable tank secondary containment areas on the Kuparuk field. CPAI also included a reference to this SOP in section 2.1.9 of the plan.

Page 2-16, Section 2.1.9, Storage Tanks, Corrosion Control Program.
CPAI's C-Plan provides a very generic, non-specific description of its corrosion control program for storage tanks. From the very generic description provided it is not possible to determine what corrosion control method is actually in place on each tank at the Kuparuk facility. There is insufficient information in the C-Plan to determine what corrosion control program is actually in place. For example, if we were to inspect a storage tanks out at drill site CPF-1, what corrosion control program is in place for these tanks? Is cathodic protecting installed? Is the tank coated? What monitoring equipment is installed? What chemical additives are injected? The program should be specific enough for the agencies to be able to audit the program, and ensure a quality program is in place. Please revise this section to provide the specificity necessary to understand your program.

This item is sufficiently addressed in section 2.1.8 of the plan. The information included in the plan adequately addresses our regulatory requirements.

Please describe what procedures CPAI has in place to ensure contractor tanks comply with the state design and inspection standards when used at Kuparuk facilities.

CPAI has a tank program in place that addresses management of contractor tanks. The plan includes a description of their tank program in adequate detail. All ADEC-regulated tanks are required to be listed in the plan. ADEC uses this list to ensure compliance with the appropriate Alaska State law and industry standard. If tanks are found on the field and not listed in the plan, appropriate enforcement action will take place.

Page 2-32, Section 2.2, Discharge History
Please add two plots to this section: (1) plot showing the number of spills each year, and (2) a plot showing the volume of spills by type each year. This information will aide to evaluating performance improvements over time. Please include all 2007 data in this analysis, including recent spills. The plots in this section do not address the frequency requirement required by 18 AAC 75.

This was addressed in ADEC's February 1, 2008 RFAI letter. Figure 2-1 of the plan was updated with new graphs that better illustrate the overall trend of number of incidents

and spill volume over the Kuparuk 20+ year history. Figure 2-2 has been replaced with bar graphs that show the relationship between source, volume, and frequency. The information included in the plan adequately addresses our regulatory requirements.

Figures 2-1, and 2-2 show the largest spill volume comes from pipes/flowlines and hardlines. Please provide a description of the specific actions CPAI is taking to reduce this volume as required by 18 AAC 75.425.

CPAI has included additional description of how future discharges will be prevented in section 2.2 of the plan. The information included in the plan adequately addresses our regulatory requirements.

Page 2-74, Section 2.4, Conditions Increasing Risk of Discharge
Please expand this section to describe your repair and replacement program for aging facilities. Some of the Kuparuk facility components are reaching their design life. What is CPAI's replacement program to ensure facilities are not run past their design life resulting in spills?

This was addressed in the February 1, 2008 RFAI letter. CPAI responded by updating the language in section 2.4 to be more specific on how aging facilities are managed to prevent discharges. The information included in the plan adequately addresses our regulatory requirements.

Page 2-76, Section 2.5.2 Crude Oil Transmission Pipelines
Please provide information showing the last time the Kuparuk crude oil transmission pipelines were tested and the testing results. Please confirm that state and federal leak detection standards have been met.

The last leak detection test on the Kuparuk Pipeline was conducted on March 28, 2007. The results of the test were provided to ADEC with the RFAI response. The results were verified by ADEC's engineer, and were found to be satisfactory.

Page 2-79, Section 2.6, Compliance Waivers
Section 2.6 of the C-plan contains 10 waivers to the state's oil spill prevention standards; (3) for waivers of piping oil spill prevention, and (7) for waivers of storage tank oil spill prevention. The NSB is concerned that the state has issued too many waivers of oil spill prevention requirements at this facility. CPAI is reminded that although the state may have issued a waiver, the NSB has not. The NSB Municipal Code and your NSB permits include oil spill prevention requirements which must be met to be in compliance. These facilities are located near the village of Nuiqsut and a very sensitive environmental habitat for our subsistence food. Oil spill prevention measures are critical.

We are concerned about waivers to buried pipeline oil spill prevention regulations that were approved in 1999. Are these still appropriate in 2007, in light of the state's new oil spill prevention regulations for facility piping? Is the 1998 Below Grade Piping Program

that this waiver was based on still in place? Does it meet the new state requirements? Previous waivers should not serve to exempt facilities from future regulatory changes. This should be reviewed to ensure buried pipelines at the Kuparuk facilities are meeting the same standards as required as other operators in the state.

We are concerned about waivers to secondary containment requirements for seven (7) large storage tanks at the Kuparuk facility. The waivers cite safety issues as the reason for not installing adequate containment; however, the secondary containment requirements have been in place at a local, state and federal level for decades. These facilities should have been original designed to be both safe and provide for containment. Requesting waivers for facility design flaws is not an acceptable method. Waiving oil spill prevention requirements years after the facility was installed also sets a very unfavorable precedent.

Furthermore, state regulations only allow waivers an equivalent level of oil spill prevention is achieved by using an alternate technology. These waivers do not demonstrate an equivalent level of oil spill prevention is in place.

Did the state take any enforcement action for failure to install secondary containment to meet local, state and federal standards? Or were the waivers just issued?

There is not a minimum or maximum number of waivers that can or cannot be issued by the State. The State has authority to issue a waiver on a case by case basis if the plan holder demonstrates to ADEC an equivalent level of protection. The department determined the plan holders' capability to respond to and clean up a spill is not diminished in each case. The State performed "due diligence" for each waiver request before issuing the waiver in determining whether it was warranted at the time it was requested. Each waiver request was researched on a case by case basis and the State determined that an "equivalent level of protection" was achieved by using a technology or procedure other than that required by 18 AAC 75.005-18 AAC 75.080. The waivers have been considered as part of this review and ADEC will further evaluate as we see necessary outside of this plan renewal review. The information included in the plan meets our regulatory requirements.

Later in Part 4 of the C-Plan, CPAI proposes visual observation as the best available technology (BAT) for several of the storage tanks that have secondary containment waivers. Visual observation is not BAT for tanks that are operating under a construction standard waiver.

All but two of the tanks that were issued waivers for secondary containment have a series of high level alarms built into the tank. The other two tanks are located at manned facilities and are observed every day in normal operations. Visual observation is BAT for portable tanks. As part of their RFAI response, CPAI included a table addressing BAT for liquid level determination in stationary tanks.

Drilling Operations

Please provide more information on oil spill prevention training programs for drilling rig staff. What is the training curriculum, frequency and who is trained?

Training is adequately addressed in section 2.1 of the plan. The information included in the plan meets our regulatory requirements.

Surface and Subsurface Safety Valves
Please provide information on type of Surface Safety Valves and Subsurface Safety Valve installed in Kuparuk wells, and how they are used to prevent spills. Which wells have subsurface safety valves installed? Please describe the testing and maintenance program in place for these important spill prevention tools. Please provide information on the testing statistics for the Kuparuk safety valves. Are all the valves functioning and reliable for their intended service?

Section 2.5 of the plan reads that, "Every oil producing well at Kuparuk is equipped with pressure sensing pilot valves attached to the wells flow line to its drill site. These pilot valves are part of a system designed to shut in the well production automatically when a certain pressure is reached." Additionally, the level of detail requested is not required ADEC regulation; the plan adequately addresses regulatory requirements.

Remotely Operated Valves on the Kuparuk Pipelines
Please provide information on how often the remotely operated valves are tested. Please describe the maintenance and inspection programs for these valves. The operability and reliability of these valves is critical to reducing the spill volume to our waters.

Section 2.5 of the plan states that, "Quarterly inspections are conducted of all over tundra produced-crude pipeline valves." This section also states that "All cross country produced-crude pipeline valves between drillsite facilities and production facilities are inspected and lubricated annually." The information included in the plan adequately addresses our regulatory requirements.

Part 3, Supplemental Information

Logistical Support
The Logistics Support section consists of 4 lines of text and does not meet the requirements of 18 AAC 75.425. Logistics is one of the most critical elements of an oil spill response. This section of the plan should provide the Logistics Chief will a comprehensive list of contractors, phone numbers and description of capabilities to expedite the spill response. This section should describe air, ground, and water response capabilities and options. Please revise this section to make it useful to the Logistics Chief.

This was addressed in ADEC's February 1, 2008 RFAI letter. CPAI incorporated ACS tactics L-3, L-4, and L-8 through L-10 by reference into section 3.5 of the plan. This language satisfies the requirement found in 18 AAC 75.425(e)(3)(E).

Page 3-54, Section 3.9, Training and Drills
Training requirement for skilled technicians and team leaders has been deleted with no explanation. These are critical positions in spill response and require specialized, hands-on training. These requirements should not be removed.

There is no regulatory requirement for CPAI to include these descriptions in the plan. This same information can be found in the ACS Technical Manual Volume 1 Tactic A-4. The plan meets the regulations.

The IMT training description is incomplete. This section does not list the required courses, a description of each course, or the required minimum frequency. These requirements should be listed by position, so they can be audited. A matrix should be included summarizing this information.

There is no regulatory requirement for CPAI to include the individual training courses for each ICS position. The frequency portion of the training was addressed in ADEC's RFAI letter dated February 1, 2008. CPAI amended the language in section 3.9.2 of the plan to read, "ICS training is provided to members of the Kuparuk IMT as frequently as quarterly and no less than annually." The information in the plan includes an adequate level of detail.

Please add information to show how personnel are trained to protect environmentally sensitive areas (frequency, course content, field deployment practice, etc.).

There is no regulatory requirement for this type of training. The information in the plan includes an adequate level of detail.

Part 4, Best Available Technology (BAT)

Page 4-1, Section 4.2.1, Well Source Control
The NSB recommends that well control equipment be located at the Kuparuk location. If well capping equipment is not pre-staged at the Kuparuk location, please provide more information on how well capping equipment will be mobilized to the Kuparuk location for immediate well control response.

An extensive inventory of well capping equipment is located on the slope and is available in less than 8 hours. A list of well capping equipment is located in Section 1.9 of the plan. The information included in the plan meets our regulatory requirements.

Page 4-11, Section 4.2.4, Tank Source Control
The BAT determination for Oil Storage Tank Liquid Level Determination concluded that manual valves and visual inspection is BAT for many tanks at Kuparuk. More advanced automated liquid level monitoring is ruled out due to cost and technical challenges in the arctic, but no information is provided to support this analysis. More advanced automated

liquid level monitoring is feasible in arctic conditions. Please provide cost data to support the claim that it is not cost effective to install this technology.

ADEC noted during our review that Table 4.6 applied to portable tanks. Based on our request, CPAI added a BAT table addressing liquid level determination for stationary tanks.

Additionally, liquid level determination was addressed in the February 1, 2008 RFAI letter. ADEC asked why each tank was not manually gauged. CPAI responded by indicating that each portable tank is equipped with a gauging device, and that manually operated gauging devices do not work in the extreme arctic climate. ADEC agrees with this procedure, and that visual observation is BAT for portable tanks..

CPAI proposes visual observation as the best available technology (BAT) for the storage tanks that have secondary containment waivers. Visual observation is not BAT for tanks that are operating under a secondary containment waiver.

This was addressed above in Section 2 comments. The information included in the plan meets our regulatory requirements.

Page 4-21, Section 4.11, Corrosion Surveys
The corrosion survey BAT analysis is incomplete. This section references a document which is almost ten years old. There is no demonstration that this 1998 plan is representative of the best corrosion prevention technology in 2007. This section does not meet the requirement to evaluate the availability of better systems. This section does not address the other required BAT assessment components (transferability, effectiveness, costs, age and condition or compatibility, feasibility, environmental impacts).

The referenced BAT regulation, 18 AAC 75.425(e)(4)(A)(ii) has a typographic error (which will be corrected in a subsequent update) in referencing corrosion survey rather than cathodic protection survey. Corrosion surveys are no longer required by 18 AAC 75, Article 1; nor is a BAT analysis required by Article 4. Rather, requirements for corrosion control and references to applicable standards have been defined in 18 AAC 75.080 and .047. CPAI has removed the outdated text.

Appendix B

5000 bbl Diesel Storage Tank (CPF-1, No. 19-508): Please add an internal and external inspection date for this tank.

ADEC contacted CPAI regarding this tank. ADEC approved an amendment to add this tank, but has not yet installed this tank. ADEC will require an amendment to update the inspection frequencies once the tank is installed.

400 bbl Portable Storage Tank (AK-2424) and 400 bbl Portable Storage Tank (PGE-86BU): These tanks are listed with a required one year external, and two year internal inspection schedule, indicating the inspector has found some serious concerns with this tank and is recommending much more frequent inspections than the 5 year external and 10 year internal nominal inspection standard. Please evaluate continued use of this tank at your facility; replacement of this tank should be considered to reduce the potential for a discharge.

While these tanks may be reaching the end of their service life, they are being inspected at an interval deemed adequate by a qualified API 653 tank inspector. API 653 allows for variance in the duration of the tank inspections if corrosion rates are known. The information included in the plan meets our regulatory requirements.

500 bbl Portable Storage Tank (PGE-86BU): This tank is listed with a required one year external, and one year internal inspection schedule, indicating the inspector has found some serious concerns with this tank and is recommending much more frequent inspections than the 5 year external and 10 year internal nominal inspection standard. Please evaluate continued use of this tank at your facility; replacement of this tank should be considered to reduce the potential for a discharge.

While these tanks may be reaching the end of their service life, they are being inspected at an interval deemed adequate by a qualified API 653 tank inspector. API 653 allows for variance in the duration of the tank inspections if corrosion rates are known. The information included in the plan meets our regulatory requirements.

400 bbl Portable Storage Tank (PGE-86AM) and 400 bbl Portable Storage Tank (PGE-87): These tanks are listed with a required eight year external inspection schedule which is less frequent inspections than the 5 year external nominal inspection standard. Please justify this longer inspection interval.

ADEC contacted CPAI regarding the inspection frequency for tank PGE-86AM listed in Table B-2 of the plan. CPAI indicated that it was a typo and ADEC will require CPAI to submit an amendment to update frequency for this tank. Tank PGE-87 was updated in the RFAI response letter.

END