

Jessika L. Gonzalez Permitting Coordinator Health, Safety & Environmental P.O. Box 100360 Anchorage, AK 99510-0360 Phone: (907) 265-6213 Jessika.L.Gonzalez@ConocoPhillips.com

October 2, 2017

DOG Permitting State of Alaska Department of Natural Resources 550 West 7th Avenue, Suite 1100 Anchorage, AK 99501-3563

Re: CD2 Pad Expansion Colville River Unit

Dear Regulators:

ConocoPhillips Alaska, Inc. (CPAI) requests authorization to place approximately 73,000 cubic yards of gravel fill material onto 5.8 acres of tundra to expand the west side of the existing Colville Delta 2 (CD2) pad in the Colville River Unit.

The gravel placement is necessary to support up to 32 additional wells on the west side of the existing CD2 pad along with associated infrastructure.

CPAI proposes to drill the additional wells in a phased approach based on rig availability between various drilling operations. Project work is expected to begin on January 1, 2018 and be completed by March 31, 2020.

Attached please find the permit application and corresponding attachments.

If you have any questions or need additional information, please contact me at (907) 265-6213.

Sincerely, Jessika L. Gonzalez

Permitting Coordinator

Enclosures



UNIT PLAN OF OPERATIONS AMENDMENT APPLICATION

State of Alaska Department of Natural Resources, Division of Oil & Gas 550 W. 7th Ave, Suite 1100, Anchorage, AK 99501-3563 Phone: 907-269-8800 Fax: 907-269-8943 Permitting Email: dog.permitting@alaska.gov



SECTION I: APP	LICANT INFORMATION		
1. Applicant:	2. Applicant Contact:		
Name: ConocoPhillips Alaska, Inc. (CPAI)	First Jessika Last Gonzalez Name: Permitting Coordinator		
Mailing Address: P.O. Box 100360	Mailing P.O. Box 100360 Address:		
City: Anchorage	City: Anchorage		
State: AK Zip Code: 99510-0360	State: AK Zip Code: 99510-0360		
Phone: 907-265-6213 Fax: 907-265-6216	Phone: 907-265-6213 Fax: 907-265-6216		
Email: Jessika.L.Gonzalez@conocophillips.com	Email: Jessika.L.Gonzalez@conocophillips.com		
3. Unit Name Colville River Unit			
4. Unit Operator Contact:			
First Name: Lynn/Sam Last Name: DeGeorge/W	idmer Title: Environmental Coordinator		
Mailing P.O. Box 100360			
City: Prudhoe Bay State: AK	Zip Code: 99734		
Phone: 907-670-4200 Fax: n/a	Email: N1838@conocophillips.com		
Describe the relationship between the Unit Operator and the Applicar	ıt:		
CPAI is the unit operator			
SECTION II: 3RD PARTY INFORMATION	SECTION III: APPLICATION DATE AND NUMBER		
(Fill out this section only if you are applying for the Applicant)			
3rd Party Company N/A Name:	Application Date (Office Use Only):		
First N/A Last N/A Name: N/A Name:			
Title: N/A			
Mailing Address: N/A			
City: N/A			
State: N/A Zip Code: N/A			
Phone: N/A Fax: N/A			
Email: N/A			
Describe the affiliation to the Applicant:	Application Number: LONS 97-007		
N/A			
SECTION IV: PR	OJECT INFORMATION		
1. Project Name: CD2 Pad Expansion (CD2x)			
2. Proposed Start Date: 1/1/2018			
3. Project Description:			

Unit Plan of Operations Amendment Application V1.0 Revised 06/01/2015

Is activity discussed in the approved Plan of Development on file with the Division's Units Section?	□ Yes	🖾 No	
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Describe what and where:

ConocoPhillips Alaska, Inc. (CPAI) requests to amend LONS 97-007 and proposes to place approximately 73,000 cubic yards of gravel fill material onto 5.8 acres of tundra to expand the west side of the existing Colville Delta 2 (CD2) pad on the North Slope of Alaska within the Colville River Delta (CRD), immediately east of the National Petroleum Reserve, Alaska (NPR-A). CPAI has a surface use agreement with Kuukpik Village Corporation and will be working with them closely on this project. The existing CD2 pad is a satellite drill site for the Alpine Development Project within the Colville River Unit (CRU), located two miles west of the Alpine Central Processing Facility (ACF) and approximately nine miles north of the Village of Nuiqsut. The proposed CD2 Expansion Project (CD2X) will provide infrastructure to support up to 32 additional wells to develop the Fiord West resource located west of the Niglig Channel.

SECTION V: LAND STATU	ECTION \	V: I	LAND	STAT	US
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1. State Mineral Estate:				
Are supplemental pages for land status	included in Appendix C?	⊠ Yes □ No		
Affected ADL: 380075	Date Effective: 2/1/1993 D.	ate Assigned: Enter Date.		
Oil And Gas Lessee(s): ConocoPhillips	Alaska, Inc.			
Surface Ownership: Kuukpik Village O	Corporation			
Do you have, or anticipate having an Ac	cess Agreement: ⊠ Yes □ No			
Special Use Lands: None Identified				
Jointly Managed Lands: ASRC Jointly	Manged Subsurface Lands			
Other Considerations: None Identified				
Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates		
Place 73,000 cubic yards of gravel	Umiat, T11N, R4E, Section 2	70.338143; -151.048697		
Placing surface casing for 32 wells	Umiat, T11N, R4E, Section 2	Various		
Click here to enter text.	Click here to enter text.	Click here to enter text.		
2. State of Alaska Surface Lands:				
Are supplemental pages for land status included in Appendix C?				
Oil And Gas Mineral Estate Owner: Click here to enter text.				
Access Authorization(s): Click here to	enter text.			
Special Use Lands: Click here to er	iter text.			
Jointly Managed Lands: Click here to	enter text.			
Other Considerations: Click here to enter text.				
Project Components	Meridian, Township, Range, And Section(s)	GPS Coordinates		
Click here to enter text.	Click here to enter text.	Click here to enter text.		
Click here to enter text.	Click here to enter text.	Click here to enter text.		
Click here to enter text. Click here to enter text.		Click here to enter text.		
3. Private Lands:				
Are supplemental pages for land status included in Appendix C? □ Yes				
Oil And Gas Mineral Estate Owner: N/A				
Surface Ownership And Access Agreement(s): N/A				
Special Use Lands: N/A				
Jointly Managed Lands: N/A				
Other Considerations: N/A				

N/A	N/A			N/A	
N/A		N/A N/A		N/A	
N/A		N/A		N/A	
	SECT	ION VI: SEQUENCE AND SCHEDULE	OF OPERATIONS	;	
Project Milestone #	Pro	pject Milestone	Proposed S	tart Date	Proposed End Date
1.	Gravel pad expansion - place	73,000 cubic yards of gravel	1/1/20	18	6/30/2018
2.	Install interconnets and pipe ra	cks	7/1/20	18	12/31/2019
3.	Begin drilling operations		1/1/20	20	3/31/2020
4.	Enter Milestone.		Enter D	ate.	Enter Date.
5.	Enter Milestone.		Enter D	ate.	Enter Date.
6.	Enter Milestone.		Enter D	ate.	Enter Date.
7.	Enter Milestone.		Enter D	ate.	Enter Date.
8.	Enter Milestone.		Enter D	ate.	Enter Date.
9.	Enter Milestone.		Enter D	ate.	Enter Date.
10.	10. Enter Milestone.		Enter D	ate.	Enter Date.
SECTION VII: PROJECTED USE REQUIREMENTS					
1. Describe the proposed operations, including the location and design, of Well Sites :					

The proposed CD2X will provide infrastructure to support up to 32 additional wells to develop the Fiord West resource located west of the Niglig channel from the CD2 pad. Upon completion, the CD2 pad will have a 110 total wells onsite.

Oil, gas, and water produced from the new wells will be carried via the existing CD2 pipeline to the ACF at the Colville Delta 1 (CD1) pad for processing. Sales-quality crude will be transported from ACF via the Alpine Oil Pipeline and Kuparuk Pipeline to the Trans-Alaska Pipeline System (TAPS). Lean gas and Kuparuk-supplied seawater will be delivered to the CD2 pad via pipelines from CD1 for injection into the reservoirs. The proposed pad expansion is sized and designed to allow for all drill site facilities, valve shelters, rig movement, drilling material storage, and well work equipment.

2. Describe the proposed operations, including the location and design, of **Buildings**:

No additional camp facilities are required for CD2X. All construction crews would be housed either Alpine, Kuukpik Pad, or Nuiqsuit.

3. Describe the proposed operations, including the location and design, of Fuel and Hazardous Substances:

Diesel may be stored on site during drilling and construction operations. Other fluid storage during the operations phase may include corrosion inhibitor, scale inhibitor, methanol, emulsion breaker, and foam inhibitor. Both diesel and other fluids are already stored at CD2. Secondary containment for single-wall fuel storage tanks with a capacity of 55 gallons or more are sized to 100 percent of the volume of the single largest tank plus an average additional 10 percent for precipitation; double-wall fuel storage tanks are designed to contain a leak and utilize a containment system to prevent a discharge resulting from overfill. Manifold tanks without isolation valves are treated as a single tank for calculating secondary containment requirements. Fuel storage will comply with State and Federal oil pollution prevention requirements, as detailed in the *Alpine Oil Discharge Prevention and Contingency Plan (Alpine ODPCP)* and *Alpine Spill Prevention, Control, and Countermeasure (Alpine SPCC) Plan.* Secondary containment for fuel storage tanks will be sized appropriately to the container type and according to governing regulatory requirements in 18 AAC 75 and 40 CFR 112. CPAI will amend the existing *Alpine ODPCP* and *Alpine SPCC Plan* to address construction and operation of the expanded CD2 pad. The *Alpine* ODPCP complies with State of Alaska requirements in AS 46.03.020(10)(A), 18 AAC 75, and Federal Department of Transportation requirements in 49 CFR 194. The *Alpine SPCC*

Plan complies with Federal EPA regulations in 40 CFR 112. The intent of the *Alpine ODPCP* and *Alpine SPCC Plan* is to demonstrate CPAI's capability to prevent oil and hazardous materials spills from entering the water and land and to ensure rapid response in the event of an accidental release. Drilling wastes (i.e., muds and cuttings) will be disposed of through annular disposal on-site and/or transported to an approved Class I or Class II disposal well. No temporary storage cells or reserve pits will be required. Well-work waste materials will be managed according to the *Alaska Waste Disposal and Reuse Guide*. Produced water will be processed and re-injected to the subsurface.

4. Describe the proposed operations, including the location and design, of Solid Waste Sites:

Garbage and domestic combustibles will either be stored in enclosed wildlife proof Conex containers, awaiting periodic hauling, or will be incinerated as allowable. No new solid waste sites will be developed as part of the proposed project.

5. Describe the proposed operations, including the location and design, of **Water Supplies**:

Water source will be permitted with the temporary, single-season Alpine Resupply Ice Road. The Alpine Resupply Ice Road is permitted under multiple year permits. The water source will be used for the construction and maintenance of the ice road. Snow removal plans include the use of snow blowing equipment to minimize gravel carryover to the tundra and placement of cleared snow in designated areas.

Snow removal plans include the use of snow blowing equipment to minimize gravel carryover to the tundra and placement of cleared snow in designated areas. The dust control plan includes watering gravel roads to minimize dust impacts on the tundra and maintain the integrity of the roads.

6. Describe the proposed operations, including the location and design, of Utilities:

Power will be supplied to the CD2X area by the existing CD2 transformer. A fiber optic communications system links the CD2 pad with ACF. No new power lines or utilities will be constructed.

7. Describe the proposed operations, including the location and design, of Material Sites:

The CD2X will require approximately 73,000 cubic yards of gravel fill material impacting 5.8 acres of tundra to expand the west side of the existing Colville Delta 2 (CD2) pad. Gravel will be transported from either Mine Site C, in Kuparuk, or the ASRC Mine Site to CD2 pad utilizing typical Maxi-Haul end-dumps via the Alpine Resupply Ice Road. Installation of additional gravel for the expanded CD2 pad will occur during one winter season. 1,400 cubic yards of rip rap will be utilized to provide permanent erosion protection on the western edge of the proposed expansion. The proposed 5.8acre CD2X will have a minimum depth of 7 feet from the existing ground surface, with side slopes of 2 feet wide to 1 foot high (2:1) (Sheet 5). The pad expansion area will extend the current CD2 pad footprint by 386-ft. to the west along the north edge and 129-feet to the west along the south edge.

8. Describe the proposed operations, including the location and design, of **Roads**:

The project will use existing road systems as well as the temporary, single-season Alpine Resupply Ice Road to access the CD2 pad.

9. Describe the proposed operations, including the location and design, of Airstrips:

No new airstrips will be constructed.

10. Describe the proposed operations, including the location and design, of All Other Facilities and Equipment:

The proposed CD2X will be operated and maintained by Alpine staff and supported using ACF infrastructure such as power generation, gas and water treatment, employee housing, and production processing.

The CD2X will add the following components to the west side of the existing pad: VSMs, pipe racks, approximate 100ft. high-mast light near the well row, and insulated conductors. Insulated conductors will be used to minimize subsidence and provide near-well bore protection. Thermosyphons will be installed directly behind the wells to protect the pipe rack VSMs.

11. If another peri	mit(s) is required for the above	described Projected Use Requ	irements, provide the following in	formation:
Agency	Permit Type	Permit Number	Application Status	Projected Use Requirement(s)
North Slope Boroug	h Land Management – Administrative Approval	TBD	Submitted	
		SECTION VIII: REHABILIT	TATION PLAN	
1. Proposed Leve	el of Infrastructure, Facilities and	d Equipment Removal:		
The amended application does not change the rehabilitation plans outlined in the original authorization. CPAI would fully dismantle, remove, and restore all temporary and permanent improvements approved by the POO unless the SOA determines, at the time of rehabilitation, that different rehabilitation measures are necessary to deliver up the land in good order and condition. When CPAI completes construction of all of the improvements approved by ADNR that are detailed in the POO, CPAI will submit to ADNR a list of actions that CPAI anticipates taking to rehabilitate the area.				
2. Description of	Restoration and Rehabilitation	Activities for Vegetation, Habita	at, Impacted Wildlife, and Other A	pplicable Resources:
The amended app	plication does not change the re	habilitation plans outlined in th	e original authorization.	
	SECTION IX: OPERA	ING PROCEDURES DESIGN	ED TO MINIMIZE ADVERSE EF	FECTS
Describe operatin adjacent areas inc	g procedures designed to prev cluding:	ent or minimize adverse effec	ts on other natural resources and	d other uses of the Unit area and
species, resulting in the risk of injury or transmission of disease to field personnel as well as the risk of harm to local animals. In addition, some species are protected by Federal and State regulation such as the Marine Mammal Protection Act, the Endangered Species Act (ESA), and the Migratory Bird Treaty Act. CPAI has developed a Wildlife Avoidance and Interaction Plan in consultation with State/Federal agency representatives to provide guidance to CPAI employees and contractors and assist them in implementing appropriate standardized procedures when wildlife is encountered. The Wildlife Avoidance and Interaction Plan is applicable to all CPAI's North Slope locations. CPAI will continue to follow this Plan for CD2X, and will update or modify the plan as necessary, in consultation with regulatory agencies and local residents.				
Historic and Archeological Sites: An archeological survey of the general area was conducted in advance of the development of the Alpine facility (Lobdell 1996). No previously unknown cultural resources were identified within the project area during the field survey conducted in 1996. Additionally, a cultural resource reconnaissance survey for the Alpine Re-Supply Ice Road was conducted in 2011 (Reanier 2011) and no previously unknown cultural resources were identified within the project area. A new archaeological survey of the proposed CD2X project area was conducted in the fall of 2017. CPAI anticipates no previous unknown cultural resources to be identified during the survey. A letter requesting concurrence will be submitted to the State Historical Preservation Office as part of permitting efforts. Cultural resources will not be significantly impacted by the proposed project. The USACE, NSB, State, and local entities would be notified immediately in the event that prehistoric, historic, or archaeological objects are discovered during construction or operations. The current online version of the Alaska Heritage Resources Survey (AHRS) has been consulted for the presence or absence of historic properties, including those listed in, or eligible for inclusion in, the National Register of Historic Places. No listed or eligible properties exist in the vicinity of the worksite.				
Public Use Areas	Public Use Areas: Access to the existing operating fields is via the Dalton Highway and is controlled at security checkpoints. The proposed project area will be closed to the general public for purposes of safety and confidentiality. Site visits by government agency personnel for purposes other than impromptu inspections should be arranged through the CPAI Alpine Field Environmental Coordinator at 907-670-4200.			
Other Uses: CPAI provides new-employee orientation on health, safety, and environmental issues; annual environmental training seminars; and appropriate certification classes for specific activities, including spill prevention and response. All North Slope employees and contractors are required to complete an 8-hour unescorted training program. All trainees in that program receive a Field Environmental Handbook and an Alaska Safety Handbook. This training emphasizes protection of archaeological and biological resources, avoiding conflicts with subsistence activities, relevant health and safety measures, and project mitigation commitments.				
Term #	Term	SECTION A. GEOSSAN	Term Definition	
1	ACF	Alpine Central Process Facility		
1.				

2.	ADEC	Alaska Department	Alaska Department of Environmental Conservation		
3.	ADNR	Alaska Department	Alaska Department of Natural Resources		
4.	ASRC	Arctic Slope Region	al Corporation		
5.	BLM	Bureau of Land Mar	nagement		
SECTION XI: CONFIDENTIALITY					
The undersigned hereby requests that each page/section of this application <u>marked</u> confidential be held confidential under AS 38.05.035(a)(8). APPLICANT CONTACT:					
Sign here.				10/2/2017	
Signature		Name	Title	Date	

	GLOS	SARY OF TERMS: SUPPLEMENTAL SECTION
Term #	Term	Term Definition
6	CFR	Code of Federal Regulations
7	CPAI	ConocoPhillips Alaska, Inc.
8	CRD	Colville River Delta
9	CRU	Colville River Unit
10	DA	Department of the Army
11	DMLW	(ADNR) Division of Mining, Land, and Water
12	ESD	Emergency Shut Down
13	EIS	Environmental Impact Statement
14	EPA	U.S. Environmental Protection Agency
15	ESA	Endangered Species Act
16	FEIS	Final Environmental Impact Statement
17	FLIR	Forward Looking Infrared
18	MBOPD	Thousand barrels of oil per day
19	NEPA	National Environmental Policy Act
20	NPR-A	National Petroleum Reserve-Alaska
21	NSB	North Slope Borough
22	ODPCP	Oil Discharge Prevention and Contingency Plan
23	PSD	Prevention of Significant Deterioration
24	ROD	Record of Decision
25	SHPO	State Historic Preservation Office
26	SPCC	Spill Prevention, Control, and Countermeasure
27	SWPPP	Storm Water Pollution Prevention Plan
28	TAPS	Trans-Alaska Pipeline System
29	TWUP	Temporary Water Use Permit
30	USLD	Ultra-low sulfur diesel
31	USACE	U.S. Army Corps of Engineers
32	USFWS	U.S. Fish and Wildlife Service
33	VSM	Vertical Support Member
34	CD2X	CD Expansion Project
35	ADF&G	Alaska Department of Fish & Game
36	ОНА	Office of History and Archaeology
37	TLUI	Traditional Land Use Inventory
38	TBD	To be determined

PROJECTED USE REQUIREMENTS: SUPPLEMENTAL SECTION				
Agency	Permit Type	Permit Number	Application Status	Projected Use Requirement(s)
USACE	Individual 404 Permit	TBD	Submitted	7
USFWS	Letter of Authorization	16-INT-14 & 16-13	Obtained	7
USFWS	Biological Opinion	BO 2016-2017	Obtained	7
AOGCC	Permit to Drill	TBD	Prepared	1
ADNR DMLW	Land Use Permit – Ice road and ice pad construction	LAS 25360	Obtained	8
ADNR DMLW	Land Use Permit – Off Road Travel	LAS 23007	Obtained	7
ADNR DMLW	Temporary Water Use Authorization	Various	Obtained	5
ADNR OHA	Cultural Clearance	TBD	Prepared	7
ADEC	Title V Operation Permit	AQ0489TVP02	Obtained	7
ADEC	ODPC Plan	12-CP-4140	Amend	3
ADEC	North Slope Oil and Gas General Permit, SPCC	Not Applicable	Amend	3
ADF&G	Fish Habitat Permit	Various	Obtained	5
NSB	Development Permit	TBD	Prepared	7
NSB TLUI	Cultural Clearance	TBD	Prepared	7

See attached



KUUKPIK VILLAGE CORPORATION P.O. BOX 89187 NUIQSUT, AK 99789 (907) 480-6220 ATTN: JOE NUKAPIGAK

STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES DIVISION OF MINING, LAND & WATER 3700 AIRPORT WAY FAIRBANKS, AK 99709 ATTN: JEANNE PROULX

	B BI B	ConocoPhillips Alaska, Inc.
	REFERENCE:	POA-XXXX-XXX
	APPLICANT:	CPAI
	PROPOSED:	CD2 EXPANSION PROJECT
CD2 EXPANSION PROJECT	AT:	ALASKA
ADJACENT PROPERTY OWNERS	SHEET 2	of 6 9-28-2017









See attached.

Alaska Department of Natural Resources Division of Oil & Gas 550 W 7th Ave. Suite 800 Anchorage, Alaska 99501

Revised: March 2013

MITIGATION MEASURE ANALYSIS: NORTH SLOPE

The following instructions are provided for guidance to adequately complete the Mitigation Measure Analysis form.

- 1. The applicant shall respond to each Mitigation Measure, and all subsets of mitigation measures; i.e. A.2.d.i should be addressed and A.2.d.ii, and so forth.
- 2. The applicant's response shall begin by clearly indicating if the <u>mitigation measure is satisfied</u>, an <u>exception is</u> <u>requested</u>, or if the mitigation measure is <u>not applicable</u>.
- 3. The applicants' response shall then address how the proposed project clearly satisfies the mitigation measure, meets the intent of the mitigation measure, is not practicable, or is not applicable.
- 4. The applicant shall verify working 'in consultation with' parties other than Department of Natural Resources (DNR), Division of Oil and Gas (DO&G) by reporting meeting dates and parties present for Mitigation Measures which require consultation with parties other than DNR, DO&G; i.e. Mitigation Measure 1.b.

Please note that this form, along with the Plan of Operations Application form and the Plan of Operations, must be adequately completed before DNR DO&G will review an application for potential approval.

NORTH SLOPE	Company Response
A. Mitigation Measures	
1. Facilities and Operations	
a. A plan of operations must be submitted and approved before conducting exploration, development or production activities, and must describe the lessee's efforts to minimize impacts on residential, commercial, and recreational areas, Native allotments and subsistence use areas. At the time of application, lessee must submit a copy of the proposed plan of operations to all surface owners whose property will be entered.	 A.1.a. Satisfied. The Unit Plan of Operations Amendment Application was submitted with the permit application. ConocoPhillips Alaska, Inc. (CPAI) maintains the Alpine Plan of Operations (POO) which is updated and submitted to surface property owners including the State of Alaska (SOA), Department of Natural Resources and the Kuukpik Corporation. The POO is updated to identify potential or proposed project activities on Kuukpik Corporation and SOA lands.
b. Facilities must be designed and operated to minimize sight and sound impacts in areas of high residential, commercial, recreational, and subsistence use and important wildlife habitat. Methods may include providing natural buffers and screening to conceal facilities, sound insulation of facilities, or by using alternative means approved by the Director, in consultation with ADF&G and the NSB.	A.1.b. Satisfied. The proposed project is not in an area of high residential, commercial, or recreational use. The project is not located in a subsistence use area and is within the existing Alpine Oil Field and reasonable access to the area will be maintained. There will be an increase in noise during construction activities but this will be temporary. Pad lighting will be directed downward and only structures necessary for oil and gas production will be situated on the pad.
c. To the extent practicable, the siting of facilities will be prohibited within 500 feet of all fish-bearing streams and waterbodies and 1,500 feet from all current surface drinking water sources. Additionally, to the extent practicable, the siting of facilities will be prohibited within one-half mile of the banks of the main channel of the Colville, Canning,	A.1.c. Satisfied. The proposed project will not be within 500 feet from any fish-bearing streams and water bodies or 1,500 feet from current surface drinking

Sagavanirktok, Kavik, Shaviovik, Kadleroshilik, Echooka, Ivishak, Kuparuk, Toolik, Anaktuvuk and Chandler Rivers. Facilities may be sited within these buffers if the lessee demonstrates to the satisfaction of the Director, in consultation with ADF&G, that site locations outside these buffers are not practicable or that a location inside the buffer is environmentally preferred. Road, utility, and pipeline crossings must be consolidated and aligned perpendicular or near perpendicular to watercourses.	 water sources. Lakes L9322 and L9321 are approximately 600 feet and 1,300 feet respectively from the proposed project area. The lakes are not surface drinking water sources. Nor will the proposed project be sited within one-half mile of the banks of the Colville, Canning, Sagavanirktok, Kavik, Shaviovik, Kadleroshilik, Echooka, Ivishak, Kuparuk, Toolik, Anaktuvuk and Chandler Rivers. The project will use existing road systems as well as a temporary, single-season construction ice road for road access. No new power lines or utilities will be constructed.
d. No facilities will be sited within one-half mile of identified Dolly Varden overwintering and/or spawning areas on the Canning, Shaviovik, and Kavik rivers. Notwithstanding the previous sentence, road and pipeline crossings may only be sited within these buffers if the lessee demonstrates to the satisfaction of the Director and ADF&G in the course of obtaining their respective permits, that either (1) the scientific data indicate the proposed crossing is not within an overwintering and/or spawning area; or (2) the proposed road or pipeline crossing will have no significant adverse impact to Dolly Varden overwintering and/or spawning habitat.	A.1.d. Satisfied. The project is not within a half mile of any Dolly Varden overwintering or spawning areas on the Canning, Shaviovik, and Kavik rivers.
e. Impacts to important wetlands must be minimized to the satisfaction of the Director, in consultation with ADF&G and ADEC. The Director will consider whether facilities are sited in the least sensitive areas. Further, all activities within wetlands require permission from the US Army Corps of Engineers.	A.1.e. Satisfied. Construction of the expanded pad will occur during a winter season when soils are frozen. The facility is designed to minimize the tundra footprint by utilizing existing infrastructure and meeting project needs. Use of the existing pad was evaluated and found to be insufficient in size to accommodate the proposed well additions.
f. Exploration facilities, including exploration roads and pads, must be temporary and must be constructed of ice unless the Director determines that no practicable alternative exists. Re-use of abandoned gravel structures may be permitted on a case-by-case basis by the Director, after consultation with the director, DMLW, and ADF&G. Approval	A.1.f. Not Applicable. The proposed project is not an exploration facility.

for use of abandoned structures will depend on the extent and method of restoration needed to return these structures to a usable condition.	
g. Pipelines must utilize existing transportation corridors where conditions permit. Pipelines must be designed to facilitate the containment and cleanup of spilled fluids. Where practicable, onshore pipelines must be located on the upslope side of roadways and construction pads, unless the director, DMLW, determines that an alternative site is environmentally acceptable. Wherever possible, onshore pipelines must utilize existing transportation corridors and be buried where soil and geophysical conditions permit. All pipelines, including flow and gathering lines, must be designed, constructed and maintained to assure integrity against climatic conditions, geophysical hazards, corrosion and other hazards as determined on a case-by-case basis.	A.1.g. Not Applicable. No pipelines will be constructed. The proposed project will utilize existing pipelines, power lines and access roads. Flow and gathering lines will be maintained to assure integrity against climatic conditions, geophysical hazards, corrosions, and other potential hazards.
h. Pipelines shall be designed and constructed to avoid significant alteration of caribou and other large ungulate movement and migration patterns. At a minimum, above- ground pipelines shall be elevated 7 feet, as measured from the ground to the bottom of the pipe, except where the pipeline intersects a road, pad, or a ramp installed to facilitate wildlife passage. Lessees shall consider increased snow depth in the sale area in relation to pipe elevation to ensure adequate clearance for wildlife. ADNR may, after consultation with ADF&G, require additional measures to mitigate impacts to wildlife movement and migration.	A.1.h. Not Applicable. No new pipelines will be constructed.
i. The state of Alaska discourages the use of continuous-fill causeways. Environmentally preferred alternatives for field development include use of buried pipelines, onshore directional drilling, or elevated structures. Approved causeways must be designed, sited, and constructed to prevent significant changes to nearshore oceanographic circulation patterns and water quality characteristics (e.g., salinity, temperature, suspended sediments) that result in exceedances of water	No causeways will be placed. A.1.h.ii. Not. Applicable. No causeways will be placed.
quality criteria, and must maintain free passage of marine and anadromous fish.ii. Causeways and docks shall not be located in river mouths or deltas. Artificial gravel islands and bottom founded structures shall not be located in river mouths or active stream channels on river deltas, except as provided for in (iii).	A.1.h.iii.Not Applicable. No causeways will be placed.

2. Fish and Wildlife Habitat	
j. Gravel mining sites required for exploration and development activities will be restricted to the minimum necessary to develop the field efficiently and with minimal environmental damage. Where practicable, gravel sites must be designed and constructed to function as water reservoirs for future use. Gravel mine sites required for exploration activities must not be located within an active floodplain of a watercourse unless the director, DMLW, after consultation with ADF&G, determines that there is no practicable alternative, or that a floodplain site would enhance fish and wildlife habitat after mining operations are completed and the site is closed. Mine site development and rehabilitation within floodplains must follow the procedures outlined in McLean, R. F. 1993, North Slope Gravel Pit Performance Guidelines, ADF&G Habitat and Restoration Division Technical Report 93-9, available from ADF&G.	A.1.j. Satisfied. The proposed project will obtain gravel from the either the existing Mine Site C located in the Kuparuk River Unit or the ASRC Mine Site and hauled to the project site via the Alpine Resupply Ice Road. Gravel collection would be completed in a single winter season. The Mine Sites have an approved mining and rehabilitation plan. No new gravel sites will be constructed.
i. Dismantlement, Removal and Rehabilitation (DR&R): Upon abandonment of material sites, drilling sites, roads, buildings or other facilities, such facilities must be removed and the site rehabilitated to the satisfaction of the Director, unless the Director, in consultation with DMLW, ADF&G, ADEC, NSB, and any non-state surface owner, determines that such removal and rehabilitation is not in the state's interest.	A.1.i. Satisfied. CPAI would fully dismantle, remove, and restore all temporary and permanent improvements approved by the POO unless the SOA determines, at the time of rehabilitation, that different rehabilitation measures are necessary to deliver up the land in good order and condition. When CPAI completes construction of all of the improvements approved by ADNR that are detailed in the POO, CPAI will submit to ADNR a list of actions that CPAI anticipates taking to rehabilitate the area.
iii. Each proposed structure will be reviewed on a case-by-case basis. Causeways, docks, artificial gravel islands and bottom founded structures may be permitted if the Director, in consultation with ADF&G, ADEC, and the NSB determines that a causeway or other structures are necessary for field development and that no practicable alternatives exist. A monitoring program may be required to address the objectives of water quality and free passage of fish, and mitigation shall be required where significant deviation from objectives occurs.	

 a. Detonation of explosives within or in proximity to fish-bearing waters must not produce instantaneous pressure changes that exceed 2.7 pounds per square inch in the swim bladder of a fish. Detonation of explosives within or in close proximity to a fish spawning bed during the early stages of egg incubation must not produce a peak particle velocity greater than 0.5 inches per second. Blasting criteria have been developed by ADF&G and are available upon request from ADF&G. The location of known fish-bearing waters within the project area can also be obtained from ADF&G. The lessee will consult with the NSB prior to proposing the use of explosives for seismic surveys. The Director may approve the use of explosives for seismic surveys after 	A.2.a. Not Applicable. The proposed project does not include the use of explosives and is not a seismic project.
consultation with the NSB.	
b. Water intake pipes used to remove water from fish-bearing waterbodies must be surrounded by a screened enclosure to prevent fish entrainment and impingement. Screen mesh size shall be no greater than 1 mm (0.04 inches), unless another size has been approved by ADF&G. The maximum water velocity at the surface of the screen enclosure may be no greater than 0.1 foot per second, unless an alternative velocity has been approved by ADF&G.	A.2.b. Not applicable. No project specific ice roads will be constructed. The Alpine Resupply Ice Road will be used to support the project.
c. Removal of snow from fish-bearing rivers, streams and natural lakes shall be subject to prior written approval by ADF&G. Compaction of snow cover overlying fish-bearing waterbodies is prohibited except for approved crossings. If ice thickness is not sufficient to facilitate a crossing, ice or snow bridges may be required.	A.2.c. Not applicable. No project specific ice roads will be constructed. The Alpine Resupply Ice Road will be used to support the project.
 d. Bears: i. Before commencement of any activities, lessees shall consult with ADF&G (907-459-7213) to identify the locations of known brown bear den sites that are occupied in the season of proposed activities. Exploration and production activities must not be conducted within one-half mile of occupied brown bear dens, unless alternative mitigation measures are approved by ADF&G. A lessee who encounters an occupied brown bear den not previously identified by ADF&G must report it to the Division of Wildlife Conservation, ADF&G, within 24 hours. Mobile activities shall 	 A.2.d. A.2.d.i. Satisfied. CPAI will consult with ADF&G prior to the start of activities to identify any known brown bear den sites within one-half mile of the project. All brown bear dens encountered by project personnel will be reported to ADF&G within 24 hours. If deviation from the requirement is necessary, ADF&G personnel will be contacted for approval. Please refer to CPAI's Wildlife Avoidance and Interaction Plan attached for

	avoid mitiga ADF8	such discovered occupied dens by one-half mile unless alternative ation measures are approved by the Director, with concurrence from &G. Non-mobile facilities will not be required to relocate.	further details.
ii. iii.	Beford USFV sites. who e USFV avoid develo For pr	e commencement of any activities, lessees shall consult with the VS (907-786-3800) to identify the locations of known polar bear den Operations must avoid known polar bear dens by 1 mile. A lessee encounters an occupied polar bear den not previously identified by VS must report it to the USFWS within 24 hours and subsequently the new den by 1 mile. If a polar bear should den within an existing opment, off-site activities shall be restricted to minimize disturbance. rojects in proximity to areas frequented by bears, lessees are required epare and implement a human-bear interaction plan designed to	A.2.d.ii. Satisfied. CPAI will perform an aerial Forward Looking Infrared (FLIR) survey of the project area in order to identify any polar bear dens and consult with the USFWS to confirm that there are no known polar bear dens within one mile of the project. All polar bear dens encountered by project personnel will be reported to ADF&G within 24 hours. See the <i>Polar Bear/Personnel Encounter Plan</i> attached for further details.
	minim meas	nize conflicts between bears and humans. The plan should include sures to:	A.2.d.iii.A. Satisfied.
	A.	minimize attraction of bears to facility sites;	The proposed project will implement the CPAI Wildlife Avoidance and Interaction Plan to minimize conflicts between bears and humans. The
	D.	between humans and bears;	infrastructure design, grizzly and polar bear alert system, deterrence guidelines, and reporting.
	C.	warn personnel of bears near or on facilities and the proper actions to take;	A.2.d.iii.B. Satisfied.
	D.	if authorized, deter bears from the drill site;	See the Polar Bear/Personnel Encounter Plan attached for further details in Appendix C.
	E.	provide contingencies in the event bears do not leave the site;	A 2 d iii C. Satisfied
	F.	discuss proper storage and disposal of materials that may be toxic to bears; and	See the Polar Bear/Personnel Encounter Plan attached for further details in Appendix C.
	G.	provide a systematic record of bears on the site and in the immediate area.	A.2.d.iii.D. Satisfied.

9	See the Polar Bear/Personnel Encounter Plan attached for further
d	details in Appendix C.
A	A.2.d.iii.E. Satisfied.
S d	See the Polar Bear/Personnel Encounter Plan attached for further details in Appendix C.
А	A.2.d.iii.F. Satisfied.
S d	See the Polar Bear/Personnel Encounter Plan attached for further details in Appendix C.
А	A.2.d.iii.G. Satisfied.
S d	See the Polar Bear/Personnel Encounter Plan attached for further details in Appendix C.
e. Permanent, staffed facilities must be sited to the extent practicable outside identified A brant white-fronted goose snow goose tundra swan king eider common eider	A.2.e. Satisfied.
Steller's eider, spectacled eider, and yellow-billed loon nesting and brood rearing areas.	The project site is an extension of an existing drill site with no history of use by nesting or brood-rearing waterfowl. Winter construction of gravel surfaces will eliminate physical disturbances of nesting sites and reduce noise and vehicle related disturbances during the breeding season.
3. Subsistence, Commercial and Sport Harvest Activities	

a.			A.3.a.i. Satisfied.
	i.	Exploration, development and production operations shall be conducted in a manner that prevents unreasonable conflicts between lease-related activities and subsistence activities. Lease-related use will be restricted when the Director determines it is necessary to prevent conflicts with local subsistence, commercial and sport harvest activities. In enforcing this term DO&G will consult with other agencies, the affected local borough(s) and the public to identify and avoid potential conflicts that are brought to the division's attention both in the planning and operational phases of lease- related activities. In order to avoid conflicts with subsistence, commercial and sport harvest activities, restrictions may include alternative site selection, requiring directional drilling, seasonal drilling restrictions, and other technologies deemed appropriate by the Director.	 The project will take place during the winter months when there is little subsistence hunting activity in the area. There are few or no adverse impacts expected from this project to subsistence use. A.3.a.ii. Satisfied. CPAI held a pre-application meeting with the NSB Planning Department on June 21, 2017 in Utgiagvik to discuss the project scope, schedule and potential impacts.
	ii.	Prior to submitting a plan of operations for either onshore or offshore activities which have the potential to disrupt subsistence activities, the lessee shall consult with the potentially affected subsistence communities and the NSB (collectively "parties") to discuss the siting, timing, and methods of proposed operations and safeguards or mitigating measures which could be implemented by the operator to prevent unreasonable conflicts. The parties shall also discuss the reasonably foreseeable effect on subsistence activities of any other operations in the area that they know will occur during the lessee's proposed operations. Through this consultation, the lessee shall make reasonable efforts to assure that exploration, development, and production activities are compatible with subsistence hunting and fishing activities and will not result in unreasonable interference with subsistence harvests.	 A.3.a.iii. Satisfied. CPAI held a pre-application meeting with the NSB Planning Department on June 21, 2017 in Utgiagvik to discuss the project scope, schedule and potential impacts. A.3.a.iv. Satisfied CPAI held a pre-application meeting with the NSB Planning Department on June 21, 2017 in Utgiagvik to discuss the project scope, schedule and potential impacts. CPAI does not anticipate any unresolved issues from the communities
	iii.	A discussion of agreements reached or not reached during the consultation process and any plans for continued consultation shall be included in the plan of operations. The lessee shall identify who participated in the consultation and send copies of the plan to participating communities and the NSB when it is submitted to the division.	and the NSB. A.3.a.v. Satisfied. The Director will be notified of any subsistence user concerns during

iv. If the parties cannot agree, then any of them may request the Commissioner of DNR or his/her designee to intercede. The commissioner may assemble the parties or take other measures to resolve conflicts among the parties.	project construction and operations.
 The lessee shall notify the Director of all concerns expressed by subsistence hunters during operations and of steps taken to address such concerns. 	
b. Traditional and customary access to subsistence areas shall be maintained unless	A.3.b. Satisfied.
access using means generally available to subsistence users. Lessees will consult the NSB, nearby communities, and native organizations for assistance in identifying and contacting local subsistence users.	The proposed project is in the vicinity of a traditional subsistence use area by the community of Nuiqsut. Customary and reasonable access to the area will be maintained and any subsistence access concerns will be discussed with the Kuukpik Subsistence Oversight Panel (KSOP).
4. Fuel, Hazardous Substances and Waste	
a. Secondary containment shall be provided for the storage of fuel or hazardous substances.	A.4.a. Satisfied. Secondary containment will be provided for regulated storage tanks as required by applicable federal regulations under the jurisdiction of the US Environmental Protection Agency (USEPA) in Title 40 of the Code of Federal Regulations (CFRs) Part 112 and SOA regulations under the jurisdiction of the Alaska Department of Environmental Conservation (ADEC) in Title 18 Alaska Administrative Code (AAC), Chapter 75. Containment for tanks will be sized appropriately for the container type and capacity, and in some cases, will consider type of typical failure mode and resulting quantity that could be spilled.
b. Containers with an aggregate storage capacity of greater than 55 gallons which contain fuel or hazardous substances shall not be stored within 100 feet of a waterbody,	A.4.b. Satisfied Containers with a capacity larger than 55 gallons will not be stored

or within 1,500 feet of a current surface drinking water source.	within 100 feet of a water body or within 1,500 feet of a current surface drinking water source.
c. During equipment storage or maintenance, the site shall be protected from leaking or dripping fuel and hazardous substances by the placement of drip pans or other surface liners designed to catch and hold fluids under the equipment, or by creating an area for storage or maintenance using an impermeable liner or other suitable containment mechanism.	A.4.c. Satisfied. Drip pans and liners will be placed under equipment and connections as appropriate to minimize the possibility of leakage to the environment. Some equipment may have built-in containment that satisfies this requirement. CPAI will provide training to employees on the importance of preventing the release of oil or hazardous spills.
d. During fuel or hazardous substance transfer, secondary containment or a surface liner must be placed under all container or vehicle fuel tank inlet and outlet points, hose connections, and hose ends. Appropriate spill response equipment, sufficient to respond to a spill of up to five gallons, must be on hand during any transfer or handling of fuel or hazardous substances. Trained personnel shall attend transfer operations at all times.	 A.4.d. Satisfied. All fueling operations will be executed in accordance with CPAI's Fieldwide Standard Operations Procedure for Fluid Transfers. Liners will be used as required by the Fieldwide Procedures for Liners and Drip Pans. Appropriate spill response equipment, sufficient to respond to a spill of up to 5 gallons, will be on hand during transfers or handling of fuel or hazardous substances. CPAI will provide training to employees on preventing oil or hazardous materials.
e. Vehicle refueling shall not occur within the annual floodplain, except as addressed and approved in the plan of operations. This measure does not apply to water-borne vessels.	A.4.e. Waiver is requested. The proposed project is in the Colville River floodplain and refueling in the floodplain cannot be avoided. Refueling within the Colville River floodplain will be conducted in accordance with procedures included in the C-Plan.
f. All independent fuel and hazardous substance containers shall be marked with the contents and the lessee's or contractor's name using paint or a permanent label.	A.4.f. Satisfied. Independent fuel and hazardous containers will be marked with the lessee's or contractor's name.

g. A fresh water aquifer monitoring well, and quarterly water quality monitoring, is required down gradient of a permanent storage facility, unless alternative acceptable technology is approved by ADEC.	A.4.g. Not Applicable.
h. Waste from operations must be reduced, reused, or recycled to the maximum extent practicable. Garbage and domestic combustibles must be incinerated whenever possible or disposed of at an approved site in accordance with 18 AAC 60.	A.4.h. Satisfied. Garbage and domestic combustibles will either be stored in enclosed wildlife proof Conex containers, awaiting periodic hauling, or will be incinerated as allowable.
i. New solid waste disposal sites, other than for drilling waste, will not be approved or located on state property during the exploration phase of lease activities. Disposal sites may be provided for drilling waste if the facility complies with 18 AAC 60.	A.4.i. Not Applicable. No new solid waste disposal sites will be developed as part of the proposed project.
j. The preferred method for disposal of muds and cuttings from oil and gas activities is by underground injection. Drilling mud and cuttings cannot be discharged into lakes, streams, rivers, or important wetlands. On pad temporary cuttings storage will be allowed as necessary to facilitate annular injection and/or backhaul operations. Impermeable lining and diking, or equivalent measures, will be required for reserve pits. Surface discharge of drilling muds and cuttings into reserve pits shall be allowed only when the Director, in consultation with ADF&G, determines that alternative disposal methods are not practicable. Injection of non-hazardous oilfield wastes is regulated by AOGCC through its Underground Injection Control (UIC) Program for oil and gas wells. See also Mitigation Measure 8.a.vi.	A.4.j. Satisfied. Drilling wastes (i.e., muds and cuttings) will be disposed of through annular disposal on-site and/or transported to an approved Class I or Class II disposal well such as the Alpine disposal wells at CD1. Drill cuttings may be washed and reused. No temporary storage cells or Reserve pits will be required.
k. Proper disposal of garbage and putrescible waste is essential to minimize attraction of wildlife. The lessee must use the most appropriate and efficient method to achieve this goal. The primary method of garbage and putrescible waste is prompt, on-site incineration in compliance with state of Alaska air quality regulations. The secondary method of disposal is on-site frozen storage in animal-proof containers with backhaul to an approved waste disposal facility. The tertiary method of disposal is on-site non-frozen storage in animal proof containers with backhaul to an approved waste disposal facility.	A.4.k. Satisfied. Solid, non-burnable waste will be deposited in large dumpsters located at the site. These containers will be back-hauled to the NSB landfill at Prudhoe Bay. Food waste that could attract wildlife will be placed in a secured wildlife proof container while waiting for pickup.

Daily backhauling of non-frozen waste must be achieved unless safety considerations	
prevent it.	

5. Access	
a. Except for approved off-road travel, exploration activities must be supported only by ice roads, winter trails, existing road systems or air service. Wintertime off-road travel across tundra and wetlands may be approved in areas where snow and frost depths are sufficient to protect the ground surface. Summertime off-road travel across tundra and wetlands may be authorized subject to time periods and vehicle types approved by DMLW. Exceptions may be granted by the director of the DMLW, and the Director, if an emergency condition exists; or, if it is determined, after consulting with ADF&G that travel can be accomplished without damaging vegetation or the ground surface. Exceptions, including the use of gravel, may also be granted on a site specific basis, if it is determined, after consulting with ADF&G and DMLW, that no practicable alternatives exist for constructing an exploration road or pad in the area south of the boundary described below and depicted in the map below:	A.5.a. Not Applicable. No exploration activities are required for this proposed project.

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Figure 7.1: Gravel Consideration Boundary

Beginning at the NPR-A boundary, from the northeast corner of T 1N, R 2E,

Figure 7.1: Gravel Consideration Boundary	
Beginning at the NPR-A boundary, from the northeast corner of T 1N, R 2E,	
 east to the northwest corner of T 1N, R 9E, then north to the northwest corner of T 4N, R 9E, then east to the northwest corner of T 4N, R 23E, then south to the southwest corner of T 4N, R 23E, and then east along the top of T 3N to the ANWR boundary. 	
b. Public access to, or use of, the lease area may not be restricted except within the immediate vicinity of drill sites, buildings, and other related facilities. Areas of restricted access must be identified in the plan of operations. Lease facilities and operations shall not be located so as to block access to or along navigable or public waters as defined in AS 38.05.	A.5.b. Not Applicable. The project is outside of the "Area of Consideration."

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6. Prehistoric, Historic, and Archeological Sites	

a. Prior to the construction or placement of any structure, road, or facility resulting from exploration, development, or production activities, the lessee must conduct an inventory of prehistoric, historic, and archeological sites within the area affected by an activity. The inventory must include consideration of literature provided by the NSB, nearby communities, Native organizations, and local residents; documentation of oral history regarding prehistoric and historic uses of such sites; evidence of consultation with the Alaska Heritage Resources Survey and the National Register of Historic Places; and site surveys. The inventory must also include a detailed analysis of the effects that might result from the activity.	 A.6.a. Satisfied. Two previous archeological and cultural resource surveys of the project area have been conducted and an additional survey was conducted in the fall of 2017. The previous surveys identified no critical sites in the project area. Village leaders from Nuiqsut will be consulted and a request for NSB TLUI clearance will be submitted A request for clearance is being submitted to the Alaska State Historic Preservation Office (SHPO) along with the permit applications. Cultural or archaeological resources are not expected to be affected by this project.
b. The inventory of prehistoric, historic, and archeological sites must be submitted to the Director, and to SHPO who will coordinate with the NSB for review and comment. If a prehistoric, historic, or archeological site or area could be adversely affected by a lease activity, the Director, after consultation with SHPO and the NSB, will direct the lessee as to the course of action to take to avoid or minimize adverse effects.	 A.6.b. Satisfied. The entire project area was examined for cultural resources and historical artifacts by Reanier and Associates in the fall 2017. No cultural sites are expected as a result of the survey. Village leaders from Nuiqsut will be consulted and a request for NSB TLUI clearance will be submitted. A request for clearance is being submitted to the Alaska State Historic Preservation Office (SHPO) along with the permit applications. Cultural or archaeological resources are not expected to be affected by this project.
c. If a site, structure, or object of prehistoric, historic, or archaeological significance is discovered during lease operations, the lessee must report the discovery to the Director as soon as possible. The lessee must make reasonable efforts to preserve and protect the discovered site, structure, or object from damage until the Director, after consultation with the SHPO and the NSB, has directed the lessee as to the course of action to take for its preservation.	A.6.c. Satisfied. Should any sites or objects of prehistoric, historic, or archeological significance be discovered, the find will be reported to the Director of SHPO and the NSB and reasonable efforts made to preserve the site or objects.

7. Local Hire, Communication, and Training	
a. Lessees are encouraged to employ local and Alaska residents and contractors, to the extent they are available and qualified, for work performed in the lease area. Lessees shall submit, as part of the plan of operations, a proposal detailing the means by which the lessee will comply with the measure. The proposal must include a description of the operator's plans for partnering with local communities to recruit, hire and train local and Alaska residents and contractors. The lessee is encouraged, in formulating this proposal, to coordinate with employment and training services offered by the State of Alaska and local communities to train and recruit employees from local communities.	A.7.a. Satisfied. CPAI is committed to continuing its partnership with local contractors and business in the construction of the proposed project through competitive bid contracting opportunities. When reasonably foreseeable to do so, CPAI is committed to hire and where appropriate, to provide training to Kuukpik Shareholders, Nuiqsut residents, and Alaska Natives. When appropriate, local resident hire will be coordinated through the Kuukpik employment coordinator to identify and place qualified individuals interested in working on the project. In addition, CPAI and its contractors assist with scholarships, career training and internship opportunities to further expand local workforce capabilities and ensure that local residents are hired and retained as CPAI's employment requirements increase.
b. A plan of operations application must describe the lessee's past and prospective efforts to communicate with local communities and interested local community groups.	 A.7.b. Satisfied. CPAI has dedicated community relation resources focused on providing project information to Nuiqsut, the closest community to the North Slope operations. CPAI will contact the Native Village of Nuiqsut, Kuukpik Corporation, and the City of Nuiqsut with the project description and maps of the project area as part of the NSB TLUI cultural clearance procedure.
c. A plan of operations application must include a training program for all personnel including contractors and subcontractors. The program must be designed to inform each person working on the project of environmental, social, and cultural concerns that relate to that person's job. The program must use methods to ensure that personnel	A.7.c. Satisfied. CPAI requires all North Slope employees and contractors to complete an 8-hour unescorted training program established by the North Slope

understand and use techniques necessary to preserve geological, archeological, and biological resources. In addition, the program must be designed to help personnel increase their sensitivity and understanding of community values, customs, and lifestyles in areas where they will be operating.	Training Cooperative (NSTC). All employees receive a Field Environmental Handbook and the Alaska Safety Handbook. The unescorted training includes review of the Alaska Safety Handbook, and sections on personal protective equipment, camps and safety orientation, hazards communication, HAZWOPER Level 1, and Environmental Excellence. Additional NSTC curriculum includes specialized training in hydrogen sulfide, hearing conservation, electrical safety, respiratory protection, energy isolation, confined space entry, asbestos awareness, fall protection, toxic substance control, benzene, NORM, formaldehyde, and first aid/CPR.
8. Definitions	

a. In this document:
i. "Facilities" means any structure, equipment, or improvement to the surface, whether temporary or permanent, including, but not limited to, roads, pads, pits, pipelines, power lines, generators, utilities, airstrips, wells, compressors, drill rigs, camps and buildings;
ii. "Important wetlands" means those wetlands that are of high value to fish, waterfowl, and shorebirds because of their unique characteristics or scarcity in the region or that have been determined to function at a high level using the hydrogeomorphic approach;
iii. "Minimize" means to reduce adverse impacts to the smallest amount, extent, duration, size, or degree reasonable in light of the environmental, social, or economic costs of further reduction;
iv. "Plan of operations" means a lease Plan of operations under 11 AAC 83.158 and a unit Plan of operations under 11 AAC 83.346;
v. "Practicable" means feasible in light of overall project purposes after considering cost, existing technology, and logistics of compliance with the standard;
vi. "Secondary containment" means an impermeable diked area or portable impermeable containment structure capable of containing 110 percent of the volume of the largest independent container plus 12 inches of freeboard. Double walled tanks do not qualify as Secondary Containment unless an exception is granted for a particular tank.
vii. "Temporary" means no more than 12 months.

PUBLIC INVOLVEMENT

CPAI has dedicated community relation resources focused on providing project information to Nuiqsut, the closest community to the North Slope operations. CPAI held a pre-application meeting on June 21, 2017 with the North Slope Planning Department. CPAI will contact the Native Village of Nuiqsut, Kuukpik Corporation, and the City of Nuiqsut with the project description and maps of the project area as part of the NSB TLUI cultural clearance procedure.

Finally, the permitting actions associated with the proposed project will be public noticed as required by agency specific regulatory programs. This action will provide opportunities for public input and involvement.

NATIVE HIRE POLICY

CPAI is committed to continuing its partnership with local contractors and businesses in the expansion of the CD2 pad through competitive bid contracting opportunities. When reasonably foreseeable to do so, CPAI has committed to hire and, where appropriate, to provide training to Kuukpik shareholders, Nuiqsut residents, and Alaska Natives. When appropriate, local resident hire will continue to be coordinated through the Kuukpik employment coordinator to identify and place qualified individuals interested in working on the project. In addition, CPAI and its contractors assist with scholarships, career training, and internship opportunities to further expand local workforce capabilities and ensure that local residents are hired and retained as CPAI's employment requirements increase.

AIR EMISSIONS

Drilling associated with the additional wells will be conducted under the existing air permits. No additional air permitting approvals will be required for well installation or operations. No stationary emission units will be added as a result of the proposed expansion



AND INTERACTION PLAN



July 2016



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LIST OF APPENDICES

- Appendix A Notification Procedures and Forms
- Appendix B CPAI Polar Bear Hazing and Deterrence Policies and Procedures

LIST OF ACRONYMS

AAC	Alaska Administrative Code
ACS	Alaska Clean Seas
ADF&G	Alaska Department of Fish and Game
ADNR	Alaska Department of Natural Resources
CFR	Code of Federal Regulations
CPAI	ConocoPhillips Alaska, Inc.
ESA	Endangered Species Act
FEC	Field Environmental Coordinator
FLIR	Forward Looking Infrared
FR	Federal Register
HSE	Health, Safety, and Environmental
ITR	Incidental Take Regulations
LOA	Letter of Authorization
MMM	Marine Mammals Management (Office, USFWS)
MMPA	Marine Mammal Protection Act
NSB	North Slope Borough
NW	northwest
Plan	Polar Bear Avoidance and Interaction Plan
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WSW	west-southwest

ACKNOWLEDGMENTS

The preparation of this Planning document has been refined and updated over the years with contributions from many individuals. During the initial creation of this document, senior technical expertise was ably provided by Geoff York, United States Geological Survey (USGS) Biological Research Division, and Craig Perham and Christopher Putnam, United States Fish and Wildlife Service (USFWS) Marine Mammal Management (MMM) Office. The input provided by all parties mentioned above is greatly appreciated.

1.0 PURPOSE AND SCOPE

The main purpose of the *Polar Bear Avoidance and Interaction Plan* (Plan) is to provide guidance to ConocoPhillips Alaska, Inc. (CPAI) employees and contractors working at North Slope facilities where polar bears (*Ursus maritimus*) or their dens may be encountered. Oilfield activities have the potential to disturb wildlife species during important life cycle events. To minimize disturbance, CPAI has developed a multitude of planning documents, Standard Operating Procedures, and training requirements for all personnel. The polar bear presents a potential serious risk of injury to field personnel. To protect the safety of personnel, and polar bears, North Slope workers should avoid encounters with polar bears and their dens whenever possible. Should such an encounter occur during the performance of work, this Plan provides guidance to enhance personnel safety and minimize the effect of the disturbance.

The Plan includes the following information:

- Training requirements for all CPAI employees and contract personnel working on the North Slope (Section 3.0).
- Roles and responsibilities of key personnel (Section 4.0).
- Procedures for avoiding and detecting polar bears (Section 5.0).
- Description of the polar bear alert system, deterrence, and reporting method (Section 6.0).

This Plan supports compliance with the Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA) regulations as well as various project permit conditions concerning protection and monitoring of polar bears. This Plan is one component of CPAI's overall wildlife management program. This Plan has been prepared as a separate document from CPAI's *Wildlife Avoidance and Interaction Plan* (CPAI, 2015) due to the federal protection afforded polar bears and the significant risks and dangers associated with an encounter between humans and bears

Table 1 lists the documents and information sources included in CPAI's wildlife management program that pertain to polar bears.

Table 1Wildlife Management Program Documents for Polar Bear Avoidance
and Conservation Policies and Procedures

Document/Information Source	Pertinent Information
Polar Bear Avoidance and	Polar bear detection and avoidance techniques
Interaction Plan (this document)	 Guidance for complying with federal polar bear regulations (Marine Mammal Protection Act) and specific permit conditions
	 Procedures for submitting sighting/activity reports
	Description of polar bear training program(s)
	Polar Bear Hazing and Deterrence Policies and Procedures
North Slope Wildlife Training	Describes laws and regulations
Module	Explains predator and waste management procedures
	Employee responsibilities regarding wildlife interactions
	Detection and avoidance of polar bear dens
Deterrence Training	 Specific to personnel that are engaged in hazing or deterrence activities (polar bear watch designees, Security staff)
	Classroom training
	• Training in use of deterrence methodologies such as cracker shells, bean bags, etc.
	 Training is done by federal and/or state wildlife biologists or others (e.g., Security) appropriately trained
Alaska Waste Disposal and Reuse Guide	 Summary of CPAI's approved waste management practices as detailed in the Alaska Waste Disposal and Reuse Guide
North Slope Environmental Field Handbook	 Summary of North Slope wildlife interaction policies and related topics such as garbage control, worker safety, and wildlife habitat protection
	 Summary of the occurrence and behavior of common North Slope species
	 Summary of approved waste management practices including use of proper wildlife-proof dumpsters
Employee Awareness Tools	• CPAI and contractor safety meetings (e.g., pre-spud, daily tailgate, etc.)
	 Environmental alerts (issued throughout camp at the onset of winter field season to heighten awareness of workers on polar bear avoidance measures)

2.0 LAWS AND REGULATIONS

Several regulatory requirements, permits and CPAI policies are applicable to the wildlife management program. These include, but are not limited to:

Applicable State Regulations

- 18 Alaska Administrative Code (AAC) 60.010 Treatment of solid waste
- Armed Guard License (Security guards only)

Applicable Federal Regulations

- Endangered Species Act (ESA) On May 15, 2008, the USFWS published a Final Rule in the Federal Register (73 FR 28212) listing the polar bear as a threatened species under the Endangered Species Act.
- Marine Mammal Protection Act (MMPA) Polar bears are protected by the 1972 MMPA, as amended November 2001 (16 USC 1361-1407). The MMPA explicitly states that it is illegal to "harass, injure, capture, kill or to attempt to harass, injure, capture, or kill" a marine mammal. The term used to describe any of these activities is "take". However, Section 101(a)(5)(A) of the MMPA includes an exception to the law by authorizing the issuance of regulations to allow the incidental, but not intentional, taking of small numbers of marine mammals, upon request for a specified activity in a specified geographic region. Industry petitions the federal government to promulgate regulations to allow for incidental take (referred to as Incidental Take Regulations or ITRs) of marine mammals every five (5) years. These regulations are important for the continued operation of oil and gas activities where polar bears may be encountered.

CPAI Policies, Procedures, and Permits/Approvals

- Non-Interference Policy, Section 6 of the North Slope Environmental Field Handbook
- United States Army Corps of Engineers (USACE) Permits (I.E., Section 404 permits)
- Land Use Permits (typically issued by the Alaska Department of Natural Resources [ADNR] and North Slope Borough [NSB])
- Hazing permits (issued by the Alaska Department of Fish and Game [ADFG])
- Letters of Authorization (LOA) (issued by the USFWS) Oil and gas operators may submit letters to USFWS requesting an incidental take exemption to conduct specified activities (e.g., exploration, development, production, etc.). The USFWS may then issue LOAs to the applicant, pursuant to the ITRs noted in the

above section under the MMPA description. LOAs describe specific stipulations and monitoring requirements for each applicant and have varying effective periods. CPAI applies to the USFWS for two types of LOAs that may grant intentional or incidental (unintentional) take.

3.0 TRAINING REQUIREMENTS

All CPAI and contractor personnel working on the North Slope on a regular rotation will complete the North Slope Wildlife Awareness training module once every two years.

Field Environmental Coordinators (FECs) regularly attend CPAI and contractor safety meetings, pre-spud meetings, and pre-construction meetings to reinforce the importance of proper food management to prevent attraction of predator species, including polar bears, to our facilities.

General awareness training is provided annually to all personnel using environmental alerts and updates, safety bulletins, safety meetings, and the training modules as appropriate. Select personnel are required to attend a Deterrence Training Program approved by the Alaska Department of Fish and Game (ADF&G) and/or the USFWS. The class consists of classroom information covering polar bear behavior, biology, and hazing techniques, as well as hands-on hazing and deterrence techniques using actual equipment. Staff with this specialized training typically includes security personnel, survey contractors, and Alaska Clean Seas (ACS) staff in remote locations.

4.0 ROLES AND RESPONSIBILITIES

The key personnel and their responsibilities with regard to CPAI's general wildlife management program are as follows:

Environmental Studies Coordinator – Manages the overall environmental studies program, manages all company wildlife plans, and is the primary point of contact with agency wildlife regulators.

Field Environmental Coordinator (FEC) – Oversees spill prevention, reporting, and cleanup; coordinates tundra travel, waste management, wildlife interaction, and environmental management systems.

ACS Technicians – Oversee wildlife hazing, capture, and stabilization during an oil spill response.

Security – Has overall responsibility for wildlife hazing and monitoring during routine oilfield operations in oilfields. Security responds to wildlife sighting and interaction reports as appropriate.

All Personnel – Responsible for participating in wildlife interaction and management training. All personnel *must*:

- Complete the wildlife training requirements for all CPAI employees, contractor personnel, and unescorted visitors prior to their work in the North Slope oilfields.
- Review Section 6 of the *North Slope Environmental Handbook* and comply with CPAI policy regarding wildlife.
- Immediately report polar bear interactions to Security and their Supervisor and/or the FEC.

This Plan will be updated on an as-needed basis. This document and all other wildlife interaction documents are maintained by the Environmental & Permitting group of ConocoPhillips Alaska. Copies of these plans are available to the environmental coordinators for use in training North Slope field personnel prior to conducting winter work. Additional training on avoidance and reporting may be given to crews operating in or near potential polar bear habitat during the winter.

5.0 POLAR BEAR EARLY DETECTION AND AVOIDANCE PROCEDURES

Early detection and avoidance procedures for polar bears are generally the same for all of the oilfield activities. While human safety is the top priority, it must be emphasized that early detection and avoidance procedures are designed to prevent encounters that might also result in harm to a polar bear.

It is the responsibility of each worker to be aware of his/her surroundings and inspect the work area before leaving a vehicle or building. <u>As a precautionary measure</u>, personnel should have a heightened awareness about the potential for encounters with polar bears within the oilfields and proposed exploration areas. All CPAI and contractor field personnel should understand and follow the detection and avoidance procedures outlined below.

- Outdoor working personnel must maintain either radio or visual contact with Security so that they can be immediately alerted in the event a polar bear is sighted.
- Personnel with work assignments that require they be outside of areas secure from polar bears (buildings, heavy equipment cabs, etc.) should check directly with Security for the latest information on polar bear sightings in their work area.
- All personnel should use the buddy system when working outdoors during winter construction, exploration, and operations activities. If necessary, a polar bear watch may be designated to monitor the work site after consulting with a Supervisor and Security.
- Truck drivers should sweep their headlights around work areas or use portable light plants to look for polar bears before exiting their trucks.
- If possible, drill site personnel should park their vehicles at a well house for protection if a polar bear is sighted.
- Heavy equipment operators (using forklifts, loaders, etc.) working from inside protective vehicle cabs are well situated to visually detect bears and sound the alert in the event a polar bear is discovered within the site.
- Personnel should check behind doors prior to exiting stairs, access areas, and under structures to be sure no bears are present before moving to or from these areas.
- Beyond the illuminated drill site pad areas, all personnel must exercise special alertness if conditions are dark and there is poor visibility.
- Notify Security of all polar bear sightings (see Section 6.0 for details).

5.1 Infrastructure Design and Maintenance

Infrastructure associated with oilfield development can potentially provide denning or cover for polar bears. The following are some examples of infrastructure design and maintenance activities that can help minimize the attraction of polar bears:

- The design of the infrastructure at any site should incorporate features to reduce the attractiveness of the site to bears as appropriate (e.g., installation of skirting under elevated buildings, visual aides [mirrors, proper lighting], capping of large diameter pipes stored onsite, and placement of gates or other barriers on stairwells). For facilities located adjacent to the coast, the installation of a gated enclosure outside the exit door (similar to West Dock and Oliktok Point) should be considered to minimize the likelihood of encounters between humans and bears.
- Elevated structures, including roads and pads, can collect drifting snow that can serve as artificial denning habitat if not properly managed. The prevailing wind is from the northeast, and the direction of drifting should be taken into account when placing barriers or storing materials.
- If materials must be stored outdoors, they should be arranged either very close together or very wide apart to minimize the space where bears could hide.
- Personnel areas, including all entrance areas, must be illuminated during working hours of darkness.

5.2 Handling Food Materials and Waste

Particular care will be taken to ensure that no food wastes are left in places that might attract polar bears. Taking food into vehicles is discouraged, but if food must be taken into vehicles for remote operations (from camp), it must be stored in containers that minimize odors, such as plastic bags or plastic containers with lids. All food waste must be brought back to the appropriate disposal receptacle, and all garbage, including used food containers, will be removed from the vehicles at the end of each shift.

The cleanliness of the project area must be strictly maintained, and eating outside buildings or vehicles is prohibited. These food waste disposal practices should ensure that no bear attractants are present.

5.3 Handling Non-Food Materials and Waste

Although the main food sources of polar bears are marine mammals such as ice seals, non-food materials (e.g., plastic, rubber, motor oil, and chemicals such as antifreeze) have attracted bears in the past. If these materials are not handled properly, they can increase the likelihood of polar bear encounters. Potentially harmful materials will be labeled appropriately and stored in secure containers (e.g., 55-gallon steel drums) or inside secure buildings and they will be properly disposed of away from the project area.

5.4 Den Detection and Avoidance

Avoidance of active maternal denning locations is standard operating procedure during winter work and travel activities. Den selection by pregnant sows can occur during late November through mid-December. CPAI will engage with USFWS MMM personnel to identify potential den survey locations and protocols in advance of proposed winter activity. On the basis of these discussions, CPAI will engage trained observers to conduct aerial surveys from a fixed wing aircraft or other aerial platform using the Forward Looking Infrared Radar (FLIR) or some other method approved by USFWS over the proposed work area. This is typically done in early December. If USFWS or USGS biologists cannot accompany the crew, the flight tapes will be provided to these agencies for review.

If a survey detects a bear den, the procedures cited below may be followed if the den is near infrastructure or project activity:

- Review nearby project descriptions, including timelines and locations for construction of ice roads and infrastructure.
- Consider modification of any air traffic patterns, as human safety allows, to avoid flying over the den.
- Initiate den monitoring activities as practicable. Continue to monitor via agreedupon tactics with USFWS.
- Communicate on a routine schedule (agreed upon through discussions with Service personnel) on the status of the den site(s) and/or polar bear(s).
- If/when a bear emerges, monitor the bear(s) activity and provide daily updates to USFWS.

The USFWS mandates that a one-mile buffer be placed around <u>known</u> maternal dens to limit disturbances to the sow and cub(s) caused by activity.

In some instances, even though den survey activities were conducted, a polar bear den may not have been identified and a polar bear(s) may emerge in the spring (March through April). Once a bear den is encountered in the field, it becomes a "known" den and all provisions of the LOA apply immediately. When a polar bear(s) emerges from an unknown den located less than one mile from activities, activities must cease until a site-specific Mitigation and Monitoring Plan is implemented by CPAI and USFWS.

The Field Environmental Coordinator or Environmental Studies Coordinator will contact the USFWS immediately to report the bear(s) emergence from the unknown den and to initiate discussions on protocols to be followed. The Mitigation and Monitoring Plan will be prepared as soon as possible to minimize disturbance to the bear(s) while allowing for activities to potentially proceed.

6.0 POLAR BEAR ALERT SYSTEM, DETERRENCE, AND REPORTING

The Notification Flow Chart (Appendix A) lists the actions to be taken when: a) a polar bear is sighted, b) a bear remains in the area, and c) a lethal take occurs. Also included in the flow chart are the appropriate contact persons and their contact information. Actual polar bear sightings will be recorded on a *Polar Bear Sighting Form* (Appendix A). If there is the potential for a life-threatening interaction, Section 101(c) of the MMPA allows, without specific authorization, the take (including lethal) of a polar bear if such a taking is imminently necessary in self-defense or to save the life of a person in immediate danger and such taking is reported to the USFWS within 24 hours.

6.1 Polar Bear Alert System and Reporting

The primary source of polar bear sighting information will come from personnel conducting routine activities in the oilfields. Should a bear or bear sign (e.g., tracks or scat) be discovered within the vicinity of work areas, camp buildings, or storage locations, the observer must immediately report the sighting to his/her Supervisor and Security once refuge has been sought in a secure location. Personnel should not remain in an exposed position in order to locate the bear.

When a bear is sighted near a work area, Security will initiate the alert system, which is provided by radio contact (personnel working outside will carry hand-held portable radios). All personnel will be alerted to go immediately to pre-identified secure areas. Secure areas include buildings (except for warm-up shacks and other light structures) and cabs of large trucks or other heavy equipment. If only a pickup or other similar size vehicle is available, personnel should drive the vehicle at least 50 yards away from the bear and keep the engine running while observing the bear's behavior. No one should attempt to photograph a bear.

The alert will consist of voice communication, which will provide specifics on the location of the bear, instructions for who must evacuate, and evacuation instructions. The presence of a bear(s) will be announced to all personnel in this fashion so that appropriate avoidance measures are taken. Only when it has been determined by subsequent inspection that bears are no longer present in the work vicinity will the alert be lifted.

After the pertinent alerts have been issued, and all personnel are safe, the following steps will occur to notify USFWS of the event.

Security will verify the polar bear sighting and complete a *Polar Bear Sighting Form* in the field. Security should contact the respective FEC staff for any questions concerning completion of the form. An example of how to complete the "encounter description" section of the form would be: "Sighted two polar bears approximately 500 yards west-southwest (WSW) of location walking in a northwest (NW) direction. Stopped to sniff air three times and continued walking."

If a designated Polar Bear Watch is on duty when a bear is sighted, that person will be responsible for filling out the *Polar Bear Sighting Form* (rather than Security). The

designated Polar Bear Watch must give the completed *Polar Bear Sighting Form* to security for reporting purposes. The FEC then transmits the sighting notification to: USFWS Marine Mammals Management, and, for information only (not a regulatory requirement), ADF&G Wildlife Conservation Division (see Appendix A).

An annual polar bear observance monitoring report will be submitted by the appropriate FEC staff to the USFWS by **December 15th**. Sightings observed during the last two weeks of December shall be provided as an addendum to the above report and submitted to USFWS as soon as possible.

6.2 Polar Bear Deterrence and Reporting

In the event that a bear must be deterred, CPAI is permitted by Letters of Authorization (LOAs) to haze polar bears (see Appendix A-2.1.1). Only trained personnel should undertake hazing or deterrence actions to move bear(s) away from work areas. Hazing policies and procedures are discussed in Appendix B. Whenever possible, Security will notify the FEC in advance of any polar bear hazing or deterrence activities. Prenotification would not be feasible in a situation where deterrence is required immediately for the protection of personnel or bears.

Security staff will follow the same reporting procedures detailed in Section 6.1 to report hazing events. Polar bear harassment/hazing events are to be reported to USFWS MMM Office within <u>24 hours</u>.

Polar Bear Avoidance and Interaction Plan

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Appendix A Notification Procedures and Forms

Notification Flow Chart

No work should be conducted within 1 mile of a known den.

Appendix B-2.0 Summary of Contact Information

ConocoPhillips Alaska

Alpine Facilities

Security: (907) 670-4002

Field Environmental Coordinator:

Primary:	(907) 670-4200
Pager information:	(907) 670-4930, pager 718
Secondary:	(907) 659-7242

ACS Lead Technician: (907) 670-4586 Pager Information: (907) 670-4930, pager 602

Kuparuk Facilities

Security: (907) 659-7997

Field Environmental Coordinator:

Primary:	(907) 659-7212
Pager information:	(907) 659-7000, pager 669
Secondary:	(907) 659-7242

ACS Lead Technician:	(907) 659-7879
Pager information:	(907) 659-7000, pager 801

Anchorage

Environmental Studies Coordinator Robyn McGhee (907) 265-1087(w) (907) 529-1222 (cell)

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Polar Bear Activity/Sighting Form

United States Department of the Interior Fish And Wildlife Service 1011 E. Tudor Road Anchorage, Alaska 99503-6199 POLAR BEAR SIGHTING REPORT						
						Company: Date: Time:
Location:						
Latitude:	Longitude:		Datum:			
Weather Conditions: Fog	Snow Rain	Clear	Temperature°F / °C			
Wind Speed mph / kt	ts Wind Direction (from)_	N NE E	SE S SW W NW			
Visibility: Poor Fai	r Good Exce	llent				
Number of Bears: (total n	number of bears & how mai	ny of each type)	Total # Bears			
adult Male Female Unknown	sub-adult 2 year-old	d yearling	cub of year			
Closest Distance of Bear(s	s): from personnel	facility	m / yd / ft			
Bear Behavior (Initial Co other	ntact): curious ignore ag	gressive walk ru	m swim hunt feed rest			
Bear Behavior (After Con other	ntact): curious ignore agg	ressive walk ru	n swim hunt feed rest			
Description of Encounter	:					
Duration of Encounter:	Possible	e Attractants Pr	esent: Y/N			
Describe Attractants:						
Deterrents Used & Distan Vehicle Hom/Siren/Noise Spotlight/Headlight	ace: Y / N m / yd / ft Crackersha Rubber Bu Bean Bag	ell illet	Other (describe)			
Agency/Contacts: USFWS Craig Perham (786	6-3810) (FAX: 786-3816)	Time	Date			

Appendix B

CPAI Polar Bear Hazing and Deterrence Policies and Procedures

CPAI Polar Bear Hazing and Deterrence

Policies and Procedures

Training Requirements

All North Slope security officers and/or personnel assigned to perform bear guard duties will receive the appropriate training needed to properly uphold their roles and responsibilities. Only properly trained personnel are authorized to conduct polar bear deterrence and hazing activities. Designated hazers will be firearms qualified and familiar with the capabilities and limitations of the tools (e.g., hazers will practice with actual deterrents during training classes).

Only United States Fish and Wildlife Service (USFWS) Marine Mammals Management staff, or individuals approved in writing by USFWS will provide the classroom deterrence module training. Deterrence training for authorized hazers will occur, at a minimum, biannually. Deterrence and hazing training will include, at a minimum, the following:

- Regulatory background (e.g., review of Marine Mammals Protection Act, Endangered Species Act, and associated definitions) - annually.
- Review of the polar bear interaction plan annually.
- Biology and behavior of polar bears and preventing bear conflicts biannually.
- Hazing and deterrence principles, techniques and limitations biannually.
- Accountability and reporting requirements of hazers biannually.
- Identification of and field training with deterrent and lethal rounds biannually.

Steps of Progressive Deterrence and Hazing

Any type of deterrence or hazing must be permitted by a Letter of Authorization for intentional take of polar bears, and should be conducted only as a last measure when needed to prevent escalation of an encounter and to ensure the safety of people and wildlife. If a bear is present at a work site but all personnel are able to retreat indoors to safety or otherwise leave the work site the bear shall not be hazed, regardless of hindrance of the progression of work activities. If altering the bear's behavior is the <u>only</u> way in which to ensure the safety of workers, the following steps of progressive deterrence and hazing will be followed:

- 1. Intimidate with size and movement Position vehicle between bear and work area, shine headlights.
- 2. Startle with sound Yelling, clapping, followed by horn honking, sirens, and finally cracker shells.
- 3. Non-lethal physical contact Fire ammunition, such as a beanbag or finstabilized rounds, at bear.
- Lethal contact Fire lethal round at bear. This can only be used in defense of human life. Example scenarios include a charging bear leaving no avenue of escape for personnel, or a bear that has already attacked a person.

Ammunition Storage Inspection and Handling

Only the types of ammunition listed in the following table are authorized for bear hazing and are to be labeled and stored in containers as specified.

Type of Round	Type of Casing	Label	Manufacturer	STORAGE CONTAINER Label and Color	
Shell Cracker	Transparent plastic	Explosive/Crimped shell nose	Stoneco, Inc/ Relabeled Northern Security Supply	"SHELL CRACKER" Orange	
Bean Bag Round	Transparent plastic	CTS Super Sock/ Cardboard shell nose	Combined Tactical Systems/Super Sock		
Bean Bag Round	Light grey, not transparent	Ballistic System P/N 4020 Ballistic Baton	MK Ballistics System	"BEAN BAG and/or FIN- STABLILIZED" Smoke Grav	
Fin- Stabilized Round	Transparent plastic	Fin Stabilized/Black rubber projectile visible at shell nose	Defense Technologies	Shicke Glay	
Lethal Round	Non- transparent plastic	Federal Rifled Slug/Lead shell nose	Federal	"LETHAL	
Lethal Round	Transparent plastic	Classic Magnum/Lead shell nose	Brenneke	Forest Green	

A maximum of twenty five rounds of each type of ammunition will be carried. The ammunition will be containerized as described in the table above. Containers will be inspected by the officer assigned to bear hazing duties at the beginning of each shift to verify the number and types of rounds in possession. Only lethal ammunition will be carried in a shotgun magazine (tube). If non-lethal rounds are to be used they will be loaded into the firearm immediately prior to discharge.

The preferred practice for ammunition handling in the field will be to leave the rounds in their color-coded containers at all times. The firearm handler must <u>always</u> inspect each cartridge casing for color and text to verify which type of round is being loaded. Rounds should be loaded into the firearm directly from the box immediately before use. Carrying ammunition in different containers (i.e. coat pockets) should be avoided. If a situation arises where a hazer must carry ammunition out of the containers (such as they must walk to an area where the

vehicle cannot travel and the plastic containers cannot be brought with them) then ammunition may be carried in other manners although should remain segregated (i.e. different coat pockets or bags for different types of rounds). It is vital to know exactly what type of round is in the firearm at all times so that they are used appropriately.

Fire Arms Discharge Reporting and Evidence Retention

Any discharge of a firearm will be thoroughly documented and reported to the CPAI Field Environmental Coordinator (FEC). The FEC will make the appropriate notifications to USFWS as detailed in Section 6.0 of CPAI's Polar Bear Avoidance and Interaction Plan, as required by the Letters of Authorization issued to CPAI for the intentional take of polar bears.

Any recoverable materials including spent shell casings, bean bags, etc. will be collected and preserved in accordance with standard law enforcement evidence collection and chain of custody protocols. The evidence will be maintained for a period of sixty (60) days.

Additional Information

Any questions or clarifications should be directed to the Security Captain at Alpine (907-670-4003) or Kuparuk (907-659-7213).