

# **Appendix E**

Anarraaq and Aktigiruuq Exploration Program

## **Wildlife Interaction and Avoidance Plan**

Exploration Access Road Construction and Future  
Facilities

Prepared for:

Alaska Department of Natural Resources  
Alaska Department of Environmental Conservation  
Northwest Arctic Borough  
U.S Army Corp of Engineers



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## ACRONYMS/ABBREVIATIONS

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AAC	Alaska Administrative Code
AAEP	Anarraaq and Aktigirug Exploration Program
ADEC	Alaska Department of Environmental Conservation
ADNR	Alaska Department of Natural Resources
ADF&G	Alaska Department of Fish and Game
AS	Alaska Statute
BLM	Bureau of Land Management
BMP	Best Management Practice(s)
DMTS	DeLong Mountain Transportation System
DHSS	Department of Health and Social Services
DOI	Department of the Interior
EMS	Emergency Medical Services
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
MP	Milepost
NAB	Northwest Arctic Borough
NABC	Northwest Arctic Borough Code
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Association
MBTA	Migratory Bird Treaty Act
MSGP	Multi Section General Permit
MSHA	Mine Safety and Health Administration
Plan	AAEP Wildlife Interaction and Avoidance Plan
PoO	Plan of Operations
Project	Anarraaq and Aktigirug Exploration Project
RDO	Red Dog Operations
SPCC	Spill Prevention, Control, and Countermeasure
SWPPP	Stormwater Pollution Prevention Plan
TAI	Teck American Incorporated
TWUA	Temporary Water Use Authorization
US	United States
USACE	U.S. Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
Wildlife Plan	AAEP Wildlife Interaction and Avoidance Plan
WOTUS	Waters of the United States

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## **1. INTRODUCTION**

Teck American Incorporated (TAI) understands the ecological and esthetic significance of subsistence importance and value to local Alaska Native communities. As the conservator of the lands where it operates in the Northwest Arctic of Alaska, TAI is committed to protecting the environment, the people, and the wildlife by monitoring environmental conditions and seeking ways to reduce the impacts of its operations. A list of subsistence use species can be found under Appendix 1.

The proposed Anarraaq and Aktigirug Exploration Program (AAEP or Project) is located in northwest Alaska, approximately 10 miles north of Red Dog Mine and 51 miles east of Kivalina. The proposed Project involves the development of a gravel access road, secondary access roads, surface pads, and material sites to provide safe, year-round overland access and foundations for support facilities to allow a multi-year exploration drilling campaign to assess the technical characteristics and economic viability of the Aktigirug and Anarraaq mineral deposits. To ensure the safety of caribou and other wildlife species within the AAEP Project area, this Wildlife Avoidance and Interaction Plan (Plan or Wildlife Plan) was developed to provide procedures for AAEP employees and contractors while working in the project area. This Wildlife Plan describes procedures AAEP employees and contractors will follow to protect both personnel and wildlife.

## **2. ROLES AND RESPONSIBILITIES**

### **2.1 General Policies and Procedures**

The potential for wildlife to interact and be affected by AAEP activities still exists even if precautions are taken to eliminate attractants and reduce interactions. In these situations, personnel safety is the primary concern. For this reason, avoidance of interactions to the maximum extent possible to minimize potential conflict is necessary. On-site staff will be required to:

- Attend safety training and follow all rules/procedures established for wildlife interactions.
- Be alert for wildlife.
- Communicate wildlife observations, as well as potential attractants such as animal carcasses or garbage, to other personnel in Project area.
- Do not approach wildlife. The more distance between personnel and the animal, the better for conflict avoidance.
- Never intentionally or unintentionally feed wildlife. Put food waste into appropriate wildlife-proof waste receptacles.
- Personnel are prohibited from hunting, trapping, or fishing.
- Be vigilant and always look around before leaving a vehicle or building.
- Be cautious when working outside during evening hours and hours of darkness, or when weather conditions reduce visibility.
- Drive carefully -- wildlife always has the right-of-way.

## **2.2 Stop Work Authority**

AAEP employees and contractors must comply with this Plan and the procedures within in. AAEP employees and contractors have the authority to stop work if issues or challenges are observed.

## **2.3 Non-Interference Policy**

TAI maintains a non-interference policy for wildlife.

If the injury is a result of the access road, exploration activities or facilities, the field personnel must contact Alaska Department of Fish and Game (ADF&G). The employee observer must maintain a safe distance from the animal and not attempt to capture or contain the animal. No personnel should act without agency consultation (excepting those actions required to maintain personal safety).

## **2.4 Training Requirements**

The more site personnel are educated about working safely in areas with wildlife populations, the less potential there is for adverse human-wildlife interactions. TAI is committed to providing high-quality, relevant training for on-site workers.

AAEP employees and contractors working onsite for the AAEP project will receive an environmental orientation before beginning work tasks along the access road or at the exploration site. AAEP employees and contractors are required to complete environmental training as part of the Mine Safety and Health Administration (MSHA) new miner or annual refresher training. AAEP employees permitted by the Public Safety Permit to haze animals must complete approved wildlife training annually.

Additional environmental awareness training will be given to onsite employees and contractors using environmental alerts/update, safety bulletins, safety meetings, daily safety briefings, and other methods as appropriate. Daily safety meetings will be held at the beginning of each shift to share pertinent information about recent wildlife sightings or interactions and update other personnel about wildlife-related challenges or concerns.

## **2.5 Waste Management**

AAEP employees and contractors are required to ensure that the site is managed to prevent attracting wildlife to the facility. To reduce wildlife attraction, waste will be stored in suitable covered/closed containers prior to incineration, open burning, or placement in the disposal cell, trench. To prevent attracting wildlife, putrescible wastes are to be incinerated and are not permitted in the landfill.

## **2.6 Infrastructure Design and Maintenance**

Infrastructure associated with access road construction/use and other exploration activities can potentially provide nesting or denning cover for wildlife. The following list provides examples of infrastructure design and maintenance activities that can help reduce the attraction of wildlife:

- Infrastructure design should incorporate modifications to reduce the attractiveness of a site to wildlife. Where practicable, these could include installation of skirting under elevated buildings, proper lighting, capping of stored pipes, blocking culverts in the winter, avoidance of guy wires, and the placement of gates or other barriers on stairwells.

- Elevated structures, including roads and pads, can collect drifting snow that can potentially serve as artificial denning habitat if not properly managed. 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 in a way to minimize spaces where animals could hide.
- Active work areas and buildings, including entrance areas, will be illuminated during working hours of darkness. Lighting should be directed downwards to avoid attracting or confusing migratory bird species.

## **2.7 Emergency Traffic**

It is critical that AAEP avoids disturbance of caribou, particularly during migration, grazing, or calving, and Dall sheep. If an emergency occurs while the access road is closed for wildlife, emergency response personnel may still proceed along the access road to address an ongoing designated emergency. The Construction General Manager, or their designee, must designate these official trips during wildlife road closures. This designation must be obtained prior to the trip. An incident report will be completed and reviewed by emergency personnel after each designation of an emergency trip.

## **3. PROCEDURES FOR VARIOUS WILDLIFE INTERACTIONS**

There are many different types of wildlife interactions that could potentially occur at the AAEP exploration site and along the access road. The procedures depend on the specific circumstances of the incident. The following sub-sections provide details on the steps required for the different types of wildlife interactions.

### **3.1 Wildlife is Accidentally Killed**

- A. The AAEP Field Lead will notify the Red Dog Environmental Department and initiate an incident report. Wildlife includes mammals, birds, and fish species.
- B. In accordance with the RDO Wildlife Incident Standard Operating Procedure (SOP) [SOP-2211-5] the Red Dog Environmental Department will immediately notify the following agencies:
  - i. ADF&G in Kotzebue at 907-442-3420 for accidental wildlife deaths.
  - ii. ADF&G Habitat in Fairbanks at 907-459-7282
  - iii. The Alaska Wildlife Trooper – Kotzebue Office at 907-442-3241 for accidental moose, caribou, muskox, Dall sheep, brown and black bear, and wolf deaths. Troopers may be notified of other animal deaths at the discretion of the Red Dog Environmental Department.
  - iv. The US Fish and Wildlife Service (USFWS) will be notified of accidental deaths of a caribou or migratory bird.
- C. To avoid attracting predators to facilities or roads, non-salvageable carcass parts should be removed from the road right of way by moving it (by hand or helicopter) out onto native tundra and left for consumption by scavengers. These parts should not be moved to any area within 200 feet of ponds, streams, or rivers. This includes frozen waterbodies. If it is not practical to relocate the carcass parts to the tundra, it is acceptable to incinerate some or all of the carcass.



### 3.2 Wildlife is Injured or in Poor Health

- A. AAEP employees are not authorized to act unless they have contacted ADF&G in Kotzebue at 907-442-3420 and received specific instructions.

### 3.3 Foxes and Rabies

- A. Rabies is present in Arctic and red foxes of the region. In some years, it is more prevalent than others. In the past, rabid foxes have been found at the Red Dog and AAEP areas. Since foxes are opportunistic foragers, feeding of foxes is not allowed anywhere in the Project Area as it increases the risk that people will be bitten and exposed to rabies.
- B. Unusual fox behavior includes any of the following:
  - i. Demonstrating no fear of humans
  - ii. Staggering, tremors, or uncoordinated movements
  - iii. Nipping or biting at themselves or random objects
  - iv. Acting seemingly unaware or blind
  - v. Acting lethargic or reluctant to move
- C. If a fox is behaving sick/abnormal but has not bitten anyone, contact ADF&G.
- D. Under the Alaska Public Health Regulations, reports of foxes that have bitten or potentially exposed a person to rabies must be made immediately to the Department of Health and Social Services (DHSS) Section of Epidemiology (907) 269-8000, 1-800-418-0054 in Anchorage, AK.
  - i. On the direction from the DHSS, carcasses of canids (foxes, wolves, coyotes) that have bitten a person may be shipped to the Alaska State Virology Lab with the forms found under Appendix C at: <http://dhss.alaska.gov/dph/Epi/id/Pages/rabies/default.aspx> or to ADF&G.
  - ii. Canids that have bitten someone should not be shot in the head since a negative confirmation will be impossible. When canids that are found dead or were killed after exhibiting signs of illness or strange behavior but no human exposure to saliva/brain tissues, contact Dr. Kimberlee Beckmen at ADF&G (907-328-8354; email: [dfg.dwc.vet@alaska.gov](mailto:dfg.dwc.vet@alaska.gov)). Carcass submission forms for found dead wildlife are found at: [www.adfg.alaska.gov/index.cfm?adfg=disease.main](http://www.adfg.alaska.gov/index.cfm?adfg=disease.main). Please do not freeze carcasses; keep them chilled until directed on shipping or disposal.

### 3.4 Hazing of Wildlife

- A. AAEP was issued a Public Safety Permit in October 2022 by ADF&G outlining the conditions under which AAEP is allowed to haze wildlife.<sup>1</sup> The primary permittee will designate subpermittees to conduct activities authorized by this permit. The primary permittee is responsible for the actions of subpermittees and for ensuring their compliance with the conditions of this permit. Subpermittees must receive training in the use of beanbag, bear spray, and pyrotechnic devices for wildlife control prior to conducting activities authorized by this permit. A training record will be maintained for persons conducting hazing activities and must be available if requested by ADF&G or Alaska Wildlife Troopers. The permittee and subpermittees must complete bear hazing training offered by United States Department of Agriculture (USDA) APHIS Wildlife Services or a training course agreed upon with ADF&G, prior to conducting activities

authorized by this permit. Only personnel who have completed the training and are authorized by TAI are allowed to participate in wildlife hazing authorized by the Public Safety Permit. Persons conducting activities authorized by this permit are exempt from Fish & Game licensing requirements of AS 16.05.330.

- i. The justifications for hazing are:
  - a. To assure safe aircraft landings and takeoffs are not compromised by wildlife on or near the airfield.
  - b. To protect wildlife from harm that may occur by their contact with the exploration access road or exploration activities.
  - c. To protect people from being harmed by altercation with wildlife.
  - d. To protect property from wildlife damage.

### **3.5 Endangered Species**

Federally listed threatened and endangered species are afforded legal protections under the Endangered Species Act (ESA). To address issues and concerns of project-related activities to these species, TAI routinely coordinates with the USFWS and National Marine Fishery Service (NMFS).

- A. If a federally threatened or endangered species is injured or killed, the USFWS Enforcement must be notified for further instructions. The Red Dog Environmental Department will call 907-456-2335 or 0255.
- B. As of October 2022, no federally listed threatened or endangered species are expected to occur within the AAEP Project Area and there are no State of Alaska endangered species present in the AAEP Project Area.
- C. Information about the laws pertaining to marine mammals (and their parts), eagles and endangered species can be found at the USFWS website: <http://alaska.fws.gov/law/>.

### **3.6 Reporting**

Wildlife interactions should be reported immediately and documented. These incidental observations are extremely helpful in improving TAI understanding of the presence and range of wildlife, which TAI can use to improve operational practices. An example of the AAEP Caribou Observation Card can be found in Appendix 2.

## **4. AAEP WILDLIFE RULES**

During normal TAI operations in the AAEP Project Area, wildlife may be encountered along roadways as well as in and around facilities. When an animal is encountered, certain steps need to be taken depending on the species and the situation. In most situations when encountering wildlife, determine the animal's position relevant to workers and facilities (e.g., moose at Milepost 1.2 along the AAEP access road) and contact the AAEP Compliance Specialist. Contact information is provided in Appendix 3, which lists contact information for appropriately trained personnel that can advise in the event of a wildlife sighting, interaction, or other wildlife related situation.

The following rules may be revised when updated information and research is obtained (including local traditional ecological knowledge).

#### 4.1 Speed Limits

- To avoid collisions with wildlife and to promote road safety, drivers must obey posted speed limits along Project roads.
- On the AAEP access road, vehicles must not exceed 30 miles per hour, regardless of vehicle type. During periods of darkness when headlights are needed and during periods of limited visibility due to weather conditions, the speed limit is 25 miles per hour.
- Speed limits are applicable to all vehicles.
- Foxes, birds, and other wildlife can unexpectedly dart across roads. Drivers should be aware of this potential hazard throughout the year and drive defensively and according to the speed limit to protect themselves and the wildlife species.
- Additional Road Rules can be found in Appendix 4.

#### 4.2 Driving at Night or During Periods of Limited Visibility

- Based on Red Dog data, the majority of wildlife collisions with vehicles occur when it is dark. Weather conditions that reduce visibility and terrain that reduces visibility are also associated with a large fraction of wildlife collisions. Consequently, TAI employees and/or contractors (Staff) need to be alert, reduce speeds, and use caution while driving under these circumstances.
- Vehicle headlights are to be on at all times. High beams may be used to improve visibility on and adjacent to the road, but low beams should be used if there is oncoming traffic. When caribou or other wildlife are known to be present in the Project Area, vehicles will reduce speeds to account for darkness and limited visibility to avoid collisions with animals.

#### 4.3 Action Distances

- **CARIBOU AND BIG GAME:** When caribou or other big game species are on or approaching a road, all vehicles must come to a complete stop when the crossing location is visible. Traffic shall not proceed through the area until 1) the group of animals has crossed and have continued beyond the road by at least 300 feet or 2) the animals have withdrawn from the road and are located more than 300 feet away from the road and are showing no signs of trying to cross.
- **MIGRATORY BIRDS:** It is illegal to harm, harass, injury or kill migratory birds, including active nests. To avoid the taking of Migratory Bird Treaty Act (MBTA) species during the nesting season, surface construction crews will only conduct land disturbing activities (e.g., tree and vegetation clearing, excavation, gravel fill, brush hogging, etc.) before or after the breeding season (May 1 – July 31; <https://www.fws.gov/alaska-bird-nesting-season>) unless a MBTA breeding bird clearance survey is conducted. . Breeding bird surveys will be conducted during the breeding season to identify active nests within areas of disturbance in areas that are not already disturbed. If active nests are found at any time, a 200-foot buffer will be established around the nest until the Environmental staff can coordinate with the USFWS Office of Migratory Bird Management (OMBM) regarding best practices. TAI will report incidents that result in mortality of MBTA species to the USFWS.
- **RAPTORS:** Raptors, including eagles, hawks, falcons, and owls, are protected under the MBTA and may begin breeding as early as March or April. A nesting raptor survey may be needed prior to surface construction. The USFWS timing window for nesting raptors is March 1 through August 31.

- **GOLDEN EAGLES AND THEIR NESTS:** If surface construction disturbances, including blasting, jackhammering, or pile-driving, cannot be timed to occur outside the eagle nesting season (March 1 – August 31), the USFWS recommends golden eagle and/or bald eagle nest surveys within a half-mile of the Project footprint, including cliffs of tributary streams, to determine if and where eagles may be nesting. If an active eagle nest is discovered within a half-mile of surface construction activities, AAEP will contact the USFWS for additional guidance. Additional information can also be found at the USFWS Alaska webpage for Bald Eagle Nesting and Sensitivity to Human Activity ([Bald Eagle Nesting & Sensitivity to Human Activity | U.S. Fish & Wildlife Service \(fws.gov\)](https://www.fws.gov/alaska/bald-eagle-nesting)).

#### 4.4 Construction/Operation Activities

- The AAEP Project has been designed and will be constructed to reduce impacts to wildlife, including mammals, birds, and fish. It is imperative that permit requirements, conservation measures, plans, and best management practices be adhered to during these activities, including (but not limited to):
  - ✓ The Plan of Operations describes construction methods, environmental protection measures (e.g., fugitive dust suppression), and compliance with environmental regulations, including the Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act.
  - ✓ ADF&G Fish Habitat Permit restrictions and Best Management Practices (BMPs) for in-water work and bridge abutment designs will be followed to minimize potential impacts to fish and other aquatic species.
  - ✓ Measures to minimize releases of sediment to waterbodies would be implemented during construction as part of compliance with the APDES Multi Sector General Permit (MSGP). Compliance with the MSGP includes preparation of a Stormwater Pollution Prevention Plan (SWPPP) and implementation and monitoring of erosion and sediment control BMPs. These measures reduce potential impacts to fish and aquatic habitats.
  - ✓ ADNR Temporary Water Use Authorization (TWUA) to withdrawal water from specific locations, water withdrawal rates, and volumes to reduce impacts to downstream aquatic resources.
  - ✓ The Spill Prevention, Control, and Countermeasure (SPCC) plan procedures that reduce the potential for spills, methods to contain spills, and cleanup procedures.

#### 4.5 Aircraft (fixed-wing and helicopters)

- **CARIBOU AND BIG GAME:** According to the Northwest Arctic Borough Red Dog Master Plan Permit No. 106-03-18, it is recommended that the permittee utilize mitigation measures during air transports that avoid or minimize disrupting caribou, bird, and other wildlife and their migration, including but not limited to, as safety permits, driving or flying around herds or flocks, driving or flying at distances or altitudes high enough to reduce noise and disturbances, limiting the number of trips or flights per day, parking or landing away from migration routes, or temporarily suspending transport operations. To minimize disturbance to wildlife during air transport, the aircraft must maintain a minimum altitude of 2,000 feet above ground level except as required for takeoff, landing, emergency and/or weather. Takeoff, landing and transport drop offs

should avoid proximity to a migrating caribou herd and specifically avoid interdicting the lead of a caribou herd.

- When wildlife is spotted, pilots are requested to maintain a wide berth and maneuver so as not to interfere with wildlife migration or movement.
- Pilots are required to report any instance where caribou and Dall sheep appear to be injured while fleeing aircraft.
- **RAPTOR NESTS:** Helicopters are commonly used to conduct surveys for active raptor nests. Pilots may approach the nest while a field staff inspects if a nest is active and what species is nesting. The location of the raptor nest will be recorded, and the area will be avoided for the remainder of the breeding season. The helicopter must immediately increase the distance from an active nest if the raptor shows signs of distress (hunkering down over eggs, flying away from nest). To minimize disturbance of confirmed raptor nests during air transport, the aircraft must maintain a minimum altitude of 2,000 feet above ground level except as required for takeoff, landing, emergency and/or weather.

## **5. DEPARTURE FROM PROCEDURE/PLAN**

This Plan was written to comply with all applicable laws, regulations, permits, plans, and other requirements pertaining to wildlife incidents and hazing. Failure to follow these procedures could result in personal harm. Departure from procedures in some cases could lead to criminal or civil penalties for you and the Company as well as adverse effects on corporate performance and reputation. The Wildlife Policy reflects the importance that TAI places on environmental conservation and its commitment to being a responsible conservator of the land, protect the environment, the wildlife, and the people and communities, and reduce the impacts of its operations.

## **6. GENERAL REQUIREMENTS**

ISO 14001 – 4.4.6 Operational Control  
Teck EHSC Standards – Standard 20 Documents and Records

## **7. KEY DOCUMENTS AND TOOLS**

Alaska Public Safety Permit – Hazing Permit (DOC ID 22-168)  
Red Dog Operations Firearms Policy (Doc ID 1464)  
RDO Firearms Policy (Doc ID 5163)  
Alaska Regional Response Team Wildlife Protection Guidelines for Alaska (Doc ID 1339)  
Red Dog Operations Wildlife Incident SOP (Doc ID 2211)  
Operating and Maintenance Plan for Delong Mountain Transportation System (DMTS) (Doc ID 1312)  
Health, Safety, Environment and Community Management Standards (Doc ID 2483)  
Environmental & Community Relations Emergency Reporting Contact List (Doc ID 971)  
Guidance Document to EHSC Management Standards (Doc ID 2483)  
Flight Restriction Bulletin – SOP (Doc ID 1115)

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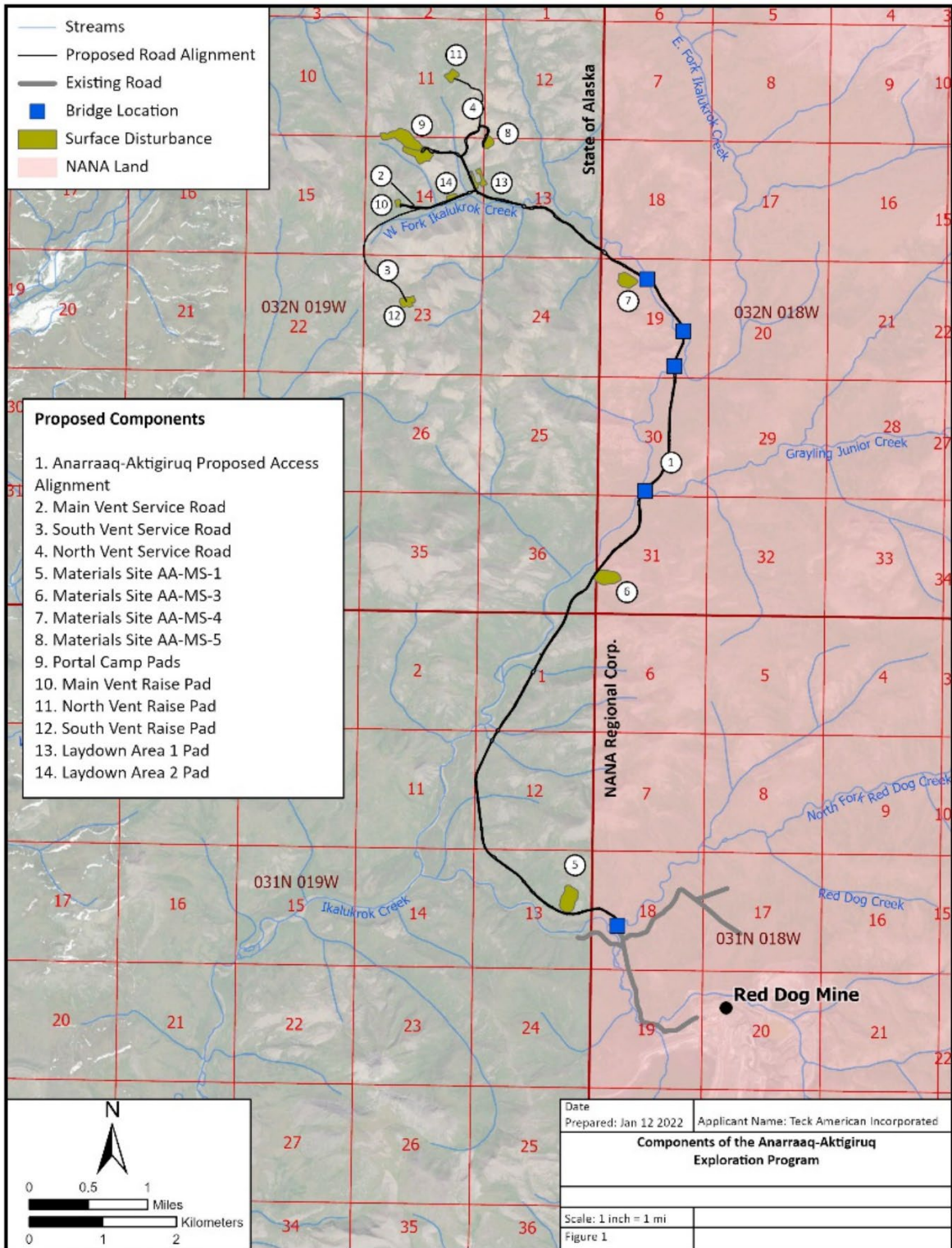
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# FIGURES

**FIGURE 1.**



Path: C:\s\FraZ\AK\AAEP\AAEP\_2021\208\_2022Plan\O\Operation\AAEP\_2021\208\_2022Plan\O\Operation.cprx



## **APPENDICES**

## APPENDIX 1.

### Subsistence Use Wildlife Species – AAEP

Category	Inupiaq Name	Common English Name	Scientific Name
Freshwater Invertebrates		Amphipods	
Freshwater Fish	Sulukpanigaq	Arctic grayling	<i>Thymallus arcticus</i>
	Aqalukpiq	Dolly Varden	<i>Salvelinus malma</i>
	Titaaliq	Burbot	<i>Lota lota</i>
		Arctic lamprey	<i>Lethenteron camtschaticum</i>
Terrestrial Birds	Ukpik	Snowy owl	<i>Bubo scandiacus</i>
	Aqargiq	Willow ptarmigan	<i>Lagopus lagopus</i>
	Niqsaaqtuniq	Rock ptarmigan	<i>Lagopus mutus</i>
Aquatic Birds	Akpak	Common murre	<i>Uria aalgea</i>
	Aakpaluuzaq	Thickbilled murre	<i>Uria lomvia</i>
	Amauligruak	Common eider	<i>Somateria mollissima</i>
	Kinaliq	King eider	<i>Somateria spectabilis</i>
	Ivugasrugruk	Mallard	<i>Anas platyrhynchos</i>
	Kurugaq	Northern pintail	<i>Anas acuta</i>
	Ahaalik	Long-tailed duck	<i>Clangula hyemalis</i>
	Tattirgak	Lesser sandhill crane	<i>Antigone canadensis</i>
	Liqlinauraq	Brant goose	<i>Branta bernicla nigricans</i>
	Kaquq	Lesser snow goose	<i>Anser caerulescens caerulescens</i>
	Iqsragutilik	Lesser Canada goose	<i>Branta canadensis parvipes</i>
	Iqsragutilik	Taverner's cackling goose	<i>Branta hutchinsii taverneri</i>
	Kigiyuk	Greater white-fronted goose	<i>Anser albifrons</i>
	Iragusrugruk	Tundra swan	<i>Cygnus columbianus</i>
Birds Eggs		Gull eggs	<i>Larus spp.</i>
		Murre eggs	<i>Uria spp.</i>
		Swan eggs	<i>Cygnus columbianus</i>
		Goose eggs	
		Arctic Tern eggs	<i>Sterna paradisaea</i>
Small Terrestrial Mammals	Qapvik	Wolverine	<i>Gulo gulo</i>
	Paluqtaq	Beaver	<i>Castor canadensis</i>
	Qusraaq	Arctic fox	<i>Vulpes lagopus</i>
	Kayuqtuq	Red fox	<i>Vulpes vulpes</i>
		North American river otter	<i>Lontra canadensis</i>
	Siksrik	Parka squirrel	<i>Urocitellus parryii</i>
	Kiqvaluq	Muskrat	<i>Ondatra zibethicus</i>
	Iluqutaq	Porcupine	<i>Erethizon dorsatum</i>
Large Terrestrial Mammals	Ipnaiq	Dall sheep	<i>Ovis dalli dalli</i>
	Aklaq	Brown bear	<i>Ursus arctos</i>

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	Nuutuuyiq	Lynx	<i>Lynx canadensis</i>
	Amaguq	Wolf	<i>Canis lupus</i>
	Tuttu	Caribou	<i>Rangifer tarandus</i>
	Tinniikaq	Moose	<i>Alces alces gigas</i>

Source: Singagmiut Working Group. 2021. Kivalina Traditional Use Study and Impact Assessment – Work Plan. Prepared by Kavik-Stantec Inc. and Stantec Consulting Services. 51 pp.

## APPENDIX 2. CARIBOU CARD

### Caribou Observer Form

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Please use back side of form for additional comments

Location During Observation: \_\_\_\_\_

Start Time of Observation: \_\_\_\_\_

End Time of Observation: \_\_\_\_\_

Caribou Location  
(check more than one if applicable)

- On the road
- On North side of road (Kivalina side)
- On South side of road (Noatak side)
- On Both sides of road

Estimated Distance of Caribou from Road

- ~100 feet
- ~300 feet
- ~600 feet
- Distance by RangeFinder (feet): \_\_\_\_\_

Estimated Number of Caribou

- 1-2
- 3-10
- 11-25
- 26-50
- 51-100
- 101-500
- 501-1000
- >1000

Direction of Herd Movement

- Stationary
- Generally moving towards port
- Generally moving towards mine
- Generally moving south (towards Noatak)
- Generally moving north (towards Kivalina)

Caribou Behavior (check all that apply)

- Resting – sitting down
- Grazing
- Head down
- Head up
- Alert
- Moving slow (walking)
- Moving quickly (trotting)
- Moving fast (running)
- Other

Visible activity on the road at time of observation:

- All work vehicles stopped
- No work vehicles stopped
- Some work vehicles slowed down but did not stop for the caribou
- Some work vehicles did not stop or slow down for the caribou

Number of Vehicles Stopped on Road

- #Concentrate Trucks \_\_\_\_\_
- #Light Vehicles \_\_\_\_\_
- #Freight Trucks \_\_\_\_\_
- #Fuel Trucks \_\_\_\_\_
- #Surface Crew Equipment \_\_\_\_\_

Did Road Traffic Influence Herd Movement?

- Yes
- No
- Comments: \_\_\_\_\_

If Hunters observed, what is location (check all that apply)

- No hunters present
- On the road
- North side of road
- South side of road
- Number of visible ATVs: \_\_\_\_\_
- Number of visible hunters: \_\_\_\_\_

Hunter Activity (check all that apply)

- Hunters driving on Port Road
- Hunters on tundra moving towards herd
- Hunters on tundra moving away from herd
- Hunters field dressing carcass
- Hunters actively shooting
- Hunters not moving; observing caribou
- Hunters not moving; resting
- Comments on Hunter/Caribou/Road Traffic? Interactions: \_\_\_\_\_

Predators Visible (check all that apply)

- Wolf
- Bears
- Other Predator: \_\_\_\_\_
- Reported on Radio (species, location): \_\_\_\_\_

Low Flying Aircraft Present Overhead?

- Helicopter
- Fixed Wing Aircraft – Propeller
- Fixed Wing Aircraft – Jet

Loud Noises Heard from Observation Area

- Blasting
- ATVs
- Gunshots
- Human Voices
- Equipment operating

### APPENDIX 3.

## ANARRAAQ AND AKTIGIRUAQ EXPLORATION PROGRAM (AAEP) EXTERNAL CONTACT INFORMATION

The following table includes the contact information for various wildlife related incidents along the AAEP exploration access road or at/around the AAEP Exploration area.

CONTACT	TELEPHONE	EMAIL	ADDRESS	HOURS OF OPERATION
Alaska Wildlife Troopers – Kotzebue Office	(907) 442-3241	<a href="https://dps.alaska.gov/awt/contact">https://dps.alaska.gov/awt/contact</a>		9am to 5pm Monday-Friday
US Fish and Wildlife Service (Sarah Conn)	(907) 456-0203 (907) 456-0499	<a href="mailto:sarah_conn@fws.gov">sarah_conn@fws.gov</a>	101 12 <sup>th</sup> Ave, Room 110, Fairbanks, Alaska 99701	9am to 5pm Monday-Friday
Bird TLC	(907) 562-4852	<a href="mailto:office@birdtbc.org">office@birdtbc.org</a>	15510 Old Seward Hwy, Anchorage, Alaska 99516	9am to 5pm Monday-Friday
Alaska WildBird Rehabilitation Center	(907) 892-2927	<a href="mailto:email@akwildbird.org">email@akwildbird.org</a>	12235 Bird Rd, Houston, Alaska 99694	10am to 2pm Monday-Friday
Alaska Department of Fish and Game Habitat Office (Audra Brase)	(907) 4597282	<a href="mailto:Audra.brased@alaska.gov">Audra.brased@alaska.gov</a>	1300 College Rd Fairbanks, AK 99701	8am to 5pm Monday-Friday
Alaska Department Fish & Game	(907) 328-8354	<a href="mailto:dfg.dwc.vet@alaska.gov">dfg.dwc.vet@alaska.gov</a>	240 5th Avenue P.O. Box 689 Kotzebue, AK 99752-0689	9am to 5pm Monday-Friday
Alaska State Virology Laboratory	(907) 269-8000	<a href="mailto:Nisha.Fowler@alaska.gov">Nisha.Fowler@alaska.gov</a>		8am to 5pm Monday-Friday

## **APPENDIX 4.**

### **AAEP Exploration Access Road Rules**

#### **1. GENERAL**

All operators driving on the AAEP exploration access road or any roads at the Red Dog Mine must have a valid driver's license.

- Emergency Response Vehicles, Fuel Tanker and Concentrate Haul Trucks have the right of way. Yield to these vehicles and equipment at all times.
- It is required that all drivers maintain control of equipment while in motion; and that operating speeds be consistent with conditions of roadway, track, grades, clearance, visibility, traffic, and type of equipment being operated.
- All exploration access road traffic must yield to members of the public that are crossing the road, stopping at least 100 yards away when possible.

#### **2. INSPECTION**

Equipment and vehicle operators are responsible for their own equipment. At the start of every shift the operator must inspect for:

- 1) Items that ensure the safe operation of equipment. Any equipment found with defects will be taken out of service until defects are corrected.
- 2) Fuel (a full tank).
- 3) Survival Kit, as seasonally required.
- 4) Proper Clothing, as seasonally required.
- 5) Other items as required for the specific job or as directed by a supervisor.

#### **3. SPEED**

- On the AAEP access road, vehicles must not exceed 30 miles per hour, regardless of vehicle type. On secondary road, vehicles must not exceed 15 miles per hour.
- During periods of darkness when headlights are needed and during periods of limited visibility due to weather conditions, the speed limit is 25 miles per hour.
- Speed limits are applicable to all vehicles, including construction equipment, haul trucks, light trucks and vans.

#### **4. VISIBILITY**

A major factor related to vehicle accidents is loss of visibility. In order to improve visibility and reduce the frequency of accidents, the following must be followed:

- All equipment and vehicles must have headlights and functioning blue strobe light.
- Vehicle headlights will be turned on at all times regardless of the season. High beams may be used to improve visibility on and adjacent to the road, but low beams should be used if there is oncoming traffic.

- In the wintertime, delineators indicate the road edges by reflecting white on the right driving side, and color on the opposite side.

## **5. PASSING**

- Haul Trucks, Fuel Tankers, and Heavy Equipment have the right of way
- DO NOT attempt to pass any equipment, no matter what the road condition, until:
  - a) The operator of the equipment you are following has given you specific clearance by radio to do so.
  - b) You are positive the verbal clearance to pass is directed at you specifically.
  - c) You are positive you have ample room and visibility to complete the pass safely and without crowding the slower equipment.

## **6. MEETING**

- When meeting on-coming Haul Trucks, Fuel Tankers, and Heavy Equipment slow to 20 mph, or less, and pull as far right as safety allows.
- To avoid meeting in the valleys, slow down, pull over to the side of the road on top of hills.
- To avoid meeting on bridges or in corners, slow down, pull over to the side of the road.
- If necessary, you may have to come to a complete stop to avoid these hazards.
- When approaching Road Crews, slow down to 10 MPH or less.
- Be aware that other encounters might happen along the road: wildlife, pedestrians, and snowmobiles; therefore, the operator will review the “Public Access Control Plan” and the “Wildlife Interaction and Avoidance Plan.”

**ALWAYS REMEMBER: THE DRIVER IS RESPONSIBLE FOR THE SAFE AND PRUDENT OPERATION OF VEHICLE OR EQUIPMENT AT ALL TIMES!**

## **7. EMERGENCY TRAFFIC**

Emergency traffic during caribou migration will be limited to officially designated Emergency Response Technician and Emergency Medical Technician response trips on the exploration road.

Emergency traffic during grazing, which would result in the disturbance of the caribou, must be authorized by the Construction Manager, or designee. An incident report will be completed and reviewed after each designation of an emergency trip.