To participate in the Villages please go to the Village Liaisons Office.

THE PUBLIC is invited to attend the meeting. Pertinent reference materials, if used, will be made available to those members of the public who wish to participate in the meeting. If you plan on attending the meeting and require special accommodation because of a hearing or speech impairment, please contact Planning Department at 852-0320, three days prior to the scheduled meeting date, so that arrangements may be made.

The meeting locations are accessible to the physically disabled. ORDER OF BUSINESS IS SUBJECT TO CHANGE BY CHAIRMAN OF THE NORTH SLOPE BOROUGH PLANNING COMMISSION

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### North Slope Borough Planning Commission

<table>
<thead>
<tr>
<th>Village</th>
<th>Member</th>
<th>Alternate</th>
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</thead>
<tbody>
<tr>
<td>Atqasuk</td>
<td>Paul Bodfish Sr., Chair</td>
<td>Lilly E. Frankson</td>
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<tr>
<td>Anaktuvuk Pass</td>
<td>Esther S. Hugo</td>
<td>Peter E. Williams</td>
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<tr>
<td>Utqiagvik</td>
<td>Glenn R. Edwards</td>
<td>Hazel F. Pebley</td>
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<tr>
<td>Nuiqsut</td>
<td>George Sielak</td>
<td>VACANT</td>
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<tr>
<td>Kaktovik</td>
<td>Lee Kayotuk</td>
<td>Nora Jane Burns</td>
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<tr>
<td>Point Hope</td>
<td>Daisy Sage</td>
<td>Caroline Cannon</td>
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<td>Point Lay</td>
<td>Warren H. Lampe</td>
<td>Carrie Labrador</td>
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<td>Wainwright</td>
<td>Jimmie Kagak</td>
<td>Oliver Peetook</td>
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## NORTH SLOPE BOROUGH PLANNING COMMISSION REGULAR MEETING

**NORTH SLOPE BOROUGH ASSEMBLY CHAMBERS**

**UTQIAGVIK, ALASKA 99723**

**JANUARY 28, 2021; 9:30 A.M.**

### AGENDA

1. Call to Order
2. Roll Call
3. Invocation
4. Approval of Agenda
5. Approval of/or correction of minutes: December 17, 2020
6. Land Management Administrator’s Report
7. Platting Administrator’s Report
8. Land Services Report
9. Correspondence
10. Public Hearing
11. Old Business
   
   A. Resolution 2020-16 – A resolution approving a final plat for NANA Reservoir to be used to create a new major subdivision ASLC 2016-25
12. New Business
13. Village Concerns
14. Scheduling of Next Meeting: February 25, 2021
15. Adjournment

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The meeting locations are accessible to the physically disabled. ORDER OF BUSINESS IS SUBJECT TO CHANGE BY CHAIRMAN OF THE NORTH SLOPE BOROUGH PLANNING COMMISSION
Call to Order
Chair Paul Bodfish, Sr. called the meeting to order at 1:15pm.

Invocation
Chair Bodfish gave the invocation.

Roll Call
Commissioners Present: (Quorum Established)
- Paul Bodfish, Sr. - Atqasuk, Alaska - Teleconference
- Nora Jane Burns - Kaktovik, Alaska - Teleconference
- Carrie Labrado - Point Lay, Alaska - Teleconference
- Glenn R. Edwards - Utqiagvik, Alaska - Teleconference
- Oliver Peetook - Wainwright, Alaska - Teleconference
- Esther S. Hugo - Anaktuvuk Pass, Alaska - Teleconference
- Caroline Cannon - Point Hope, Alaska - Teleconference
- George Sielak - Nuiqsut, Alaska - Teleconference

Staff Present
Gordon Brower, Director of Planning & Community Services, Mabel Kaleak, Deputy Director of Planning & Community Services, Chastity Olemaun, Assistant to the Land Management Administrator, Lilly Kilapsuk, Land Management Specialist/Acting Land Management Regulations Manager, Nok Acker, Capital Improvement Program Technical Coordinator, Susan Kittick-Atos, CIP Specialist, Monica Rowe, CPD Manager, Maria Jo Patkotak, Commission Clerk

Others Present
Wayne Cary, North Slope Borough Assistant Borough Attorney, Ken Pinard, Umiaq

Approval of Agenda
Commissioner Cannon moved to approve the agenda, seconded by Commissioner Burns. Director Brower – Table Resolution 2020-16, map was not provided to the Commission. Need to appoint an acting Clerk for signatory purposes, Commissioner Edwards was appointed as acting Clerk. Revise Resolution 2020-18 a letter of intent to be introduced from the floor. Motion passed unanimously.

Approval of Minutes
Commissioner Edwards move to approve the minutes from November 19, 2020 seconded by Commissioner Hugo. Motion passed unanimously.
Land Management Administrator’s Report
Director Brower read the Land Management Administrator’s Report dated November 2020. Commissioner Edwards moved to approve, seconded by Commissioner Burns. Motion passed unanimously.

Platting Administrators Report
Director Brower read the Platting Administrator’s Report dated November 5, 2020. Commissioner Edwards moved to approve the Platting Administrator’s Report, seconded by Commissioner Sielak. Motion passed unanimously.

Land Services Report
Director Brower read the Land Services Report into record dated November 19, 2020. Commissioner Edwards moved to approve, seconded by Commissioner Hugo. Commissioner Edwards: the six leases are they in Deadhorse or elsewhere? Monica Rowe: the six leases are in Deadhorse are being advertised and the six will then be available to go through the Planning Commission and Ordinance. Motion passed unanimously.

Correspondence
Several correspondences attached.

Old Business
None at this time.

New Business
Resolution 2020-15 - A resolution recommending that the North Slope Borough Assembly approve of the Ordinance authorizing the disposal of Tract 76 on the Deadhorse area for fair market rent and authorizing the Mayor to manage the leasing of the land

Commissioner Edwards move to approve resolution 2020-15, seconded by Commissioner Sielak. Motion passed unanimously

Resolution 2020-18 - A resolution recommending that the North Slope Borough Assembly approve the CIP Project requests for funding through CIP Ordinance 2020-10E

Commissioner Edwards move to approve Resolution 2020-18, seconded by Commissioner Hugo. Motion passed unanimously

Great Bear Pantheon – Patrick Galvin

Village Concerns
Anaktuvuk Pass – Since COVID a couple had returned to the village and we had to put them in the church to quarantine how are we going to put 2 TNHA Houses to use when one family member comes from Fairbanks, the whole family needs to quarantine, we need to have access to those two buildings, there are issues with one of them, we need to be prepared when it comes to the village. It would be good for someone to check on those two individuals. The City had received a letter from the Mayor’s office that the CWAT trail will be suspended due to funding and we ordered two connexes, two argo, two snowmachines and a bunch of food for each family in the community. How will the North Slope Borough help us provide these to the community if the CWAT trail will be suspended?

Atqasuk – Roads need gravel, especially the airport. An employee tested positive, the individual has returned back to work exposing fellow workers who are now being tested and under lock down, the
individual knowingly had COVID that is jeopardizing the community. The individual is currently in isolation.

**Barrow** – Roads need to be cleared for pedestrians to have a place to walk, Cakeeater needs to be cleared a bit better

**Kaktovik** – When will they start rebuilding the school? The community requested a 10-plex, can I get an update on that? The sacks that were filled with contaminated gravel from the diesel spill; it’s been three years and sampling has been done, will the gravel be usable in the future. We need a place for people who come back after traveling to quarantine.

**Nuiqsut** – The most important concern is on the Willow project, there has been quite a few scoping meetings that past few months with not much people attending the meetings due to COVID, there needs to be representation from the village, the Public Hearing process should be held in the village and not telephonically, there is not enough time for the village to give any input, a tremendous amount of concerns have been brought up, there are more, we need more time before the Public Hearing process, if possible defer the rezone to a later time until the village can attend public hearing in person, Willow project will be impacting the community, once it is built it will affect us.

The power outages that have been happening have been burning out the electrical wires on our furnaces and boilers, we are buying parts from NUC that we buy, the Borough needs to reimburse the homeowners due to the outages

The tundra damage in the village still has not been address and it has been brought up numerous times, all the issues we bring up at Planning Commission meetings need to be taken care of.

**Point Hope** – Shares the same concern as Anaktuvuk Pass on having items shipped that is so costly.

**Wainwright** – No concerns

**Point Lay** – We need a quarantine facility in the village, are we able to check to see if we can get a machine here for the testing site? There was a power outage, the linemen came and returned everything back to normal. There are water leaks in the water tank and also leaks around town. We are still in need for a water source

**Public Hearing**

Commissioner Edwards move to go into Public Hearing, seconded by Commissioner Hugo. Motion passed unanimously.

- **Langston Chim** - slotting that were referenced, a lot of activity, KIC hasn’t seen the docs
- **Thomas Napageak** - asking if it’s the same map given to the assembly?
- **Director Brower** - yes should be the same and same material will be given to assembly for Jan meeting
- **Jim Brodie** started back at slide 4 at 6:50pm
- **Lisa Pekich** spoke about the community efforts
- **Leonard Lampe** - difficult time since COVID for this rezone like virtual meetings only and is a major concern to resident while the world is shut down; Size of the modules are same size as the ASRC building and when it was presented before to try transport these modules the change was made; more changes like this need to be made; ATQ, AIN and AKP will be impacted like the migration of the caribou; not against the project but changes need to be made; more time is needed to evaluate all of this; CPAI is not going anywhere they are too committed to AK; NSB will still get their tax money if this isn’t passed at this time; health like asthma is far worse than any other village;
- **Director Brower** read onto the record RoseMary Ahtuangaruk written comment
- **Andy Mack** from Kuukpik - biggest concern is living through a global pandemic; during federal process there were no legitimate public hearings in the communities due to hunker down orders or weather which were converted to virtual meetings; same thing and problems happened tonight which was documents not being sent to commissioners; realistically no one outside of public leaders have seen these maps and documents and this is why we have this process, so it’s not doing the job despite the NSBs best efforts; rezone is an alternate process for permits to think of impacts in a comprehensive fashion; so if this passes
then CPAI will not have to go through a public process in the future for all their permits; public hearing process is like an Inupiaq process with gatherings and talking through impacts and the federal process didn’t go through this public hearing process; reiterated the content of the KIC letter;

- **Director Brower** - clarified title 19 and this rezone is not an alternative process; rezone is not a permit it is a reclassification of land;

- **Andy Mack** - Kuukpik did not request but yet CPAI offered to try sway and this is a mitigated option in their slide; CPAI told KIC in meetings that they will still do BT4&5; a lot of wordsmithing in this is presentation; there is no agreement between the two and a permit sent to the CORE for it on the map and this isn’t a mitigation;

- **Director Brower** - asked Kuukpik if they wanted to read their letter into the record

- **Andy Mack** - summarized their 15-page letter

- **Mark Major** - final staff recommendation sent 12/10 and the KIC letter came on 12/11 so it wasn’t included in the staff recommendation so it should be tossed; limited rezone should be the route and disapprove this rezone

- **Director Brower** - not including this discredits the recommendations and all comments will be heard as public testimony;

- **Mark Major** - published comment deadline was 12/11/20 and their comments were timely and should be entered into the staff recommendation; so it is flawed; KIC met the requirements but yet they weren’t included;

- **Director Brower** - matter of concern as the comment period was extended and NSB worked diligently with applicant and comments could have been sent in prior to that and then read into the record comments from ASRC.

- Got disconnected and had to resend out new code from 8:55-9:10pm

- **Commissioner Sielak** - 11/25/20 email forwarded to Gordon and ccd to PC and Mayor Brower; read it on record from his phone; against telephonic public hearings and very large since Alpine and will divert caribou herds;

- **Director Brower** - spoke about schedule of applications coming in and title 19 interpretations; spoke about the benefits to development and how we’ve balanced these types of projects;

- **Isaac Nukapigak** - asked Gordon to listen and talk less; there has been no consolation with the neighbors like Atqasuk, Utiqagvik and Wainwright; Why were there not any stakeholder groups with them as they will be just as impacted as NUI; it’s only 40 miles from Teshukpuk Lake and Geese molding area; the whole north slope relies on them; NUI comp plan hasn’t been adopted and still in the works and it’s Gordon’s department who is in charge of it

- **Director Brower** - always good to listen; LMA is entrusted to enforce title 19 for the NSB and the Mayor; deference for areas of influence are in title 19 and comp plans;

- **Madam Mayor Mamie Pardue** - page 8 of the Master Plan; CON is supposed to be operated by NSB and road updates should have been done a long time ago is the dump road; page 5 stakeholders concerns as they are surrounded by all the modules and their man camps and they are having homelessness issues locally; rotational CPAI employees get complacent and they destroy the the land; locals should not be forced to live in a mancamp; how can one work a rotational job and still have a subsistence lifestyle;

- **Eli Nukapigak** - open gateway to NPRA lands to the west is just the start of a spider web that will impact all our villages; migration of caribou will be affected; just asking for a few more months right now during a pandemic as they will live with this for the next 40 years

- **Commissioner Peetook** - Lisa has made it to AIN numerous times for Willow and the positive and negative impacts; Thanks Gordon for explaining the process of this rezone

- **Leonard Lampes** - asked for roll call vote for approval to community can how their leaders vote

- **Joe Nukapigak** - they’ve lived this life for 20 years and soon it will be at other villages and NUI is left out of the NPRA mitigation funds even with the taxation funds the past 40 years; North Slope is still in a transitional period; he’s lived through all these changes and the impacts are felt within just one lifetime; home rule charter government is important and now looking tit he future they will still be feeling all the impacts; let’s use this charter and title 19 for the best of our future; Access to the lands is always what they strive for; the migration of the caribou on the land; they fight for the oil industry to be responsible

- **RoseMary Ahtuangaruk** - said thanks for reading her comments even though she sent them multiple times this year; the emissions is a huge health problem for their community; their serious concerns are being ignored throughout the decades; this virtual meeting is bad to hear their community; AKP has felt the impacts of oil industry and there are damages that will still be here for decades to come; please listen to their concerns;

- **Commissioner Hugo** - spoke in Inupiaq
Planning Commission Meeting Minutes – December 17, 2020

- Robert Pardue - 5 employees a year they employ is not a lot and the impact is huge and hurts their lifestyle
- Director Brower reads the staff recommendations stating on page 29 for the record at 10:15pm with some changes to it from Wildlife and acreage amounts
- Commissioner Sielak - move to amend for a limited rezone
- Director Brower - application was already submitted and we can’t change it; need to consult with law
- Wayne Cary - in public hearing so we can’t make that motion
- Commissioner Bodfish - question on wildlife studies and wondering why they can’t just use recent studies already completed
- Director Brower - current studies will be worked with wildlife but need to be in the ordinance
- Todd Smoro - the studies are for continual monitoring and to determine current or future changes and impacts
- Brian Pearson - work is not duplicated but they want to ensure the studies align with the caribou and fish and bird migration studies; they are trying to refine and not cause disturbance to the subsistence hunters and we hear the concern
- Leonard Lampe - there are sickly animals turned into NSB with no reports back and there is a lack of funding to do so; so there are studies not being finished and all these changes have to come from the industry

Commissioner Edwards moved back to regular meeting at 11:03pm from public hearing, seconded by Commissioner Peetook.
Motion passed unanimously

Director Brower read the resolution for the record

Commissioner Peetook - move to approve the resolution, seconded by Commissioner Edwards

- Commissioner Sielak - wants to amend it to have limited rezone only
- Discussion: George - amend for limited rezone and the map was sent to the planning department; the village doesn’t want to have the entire willow to be approved as they still don’t know all the effects of GMT2 which isn’t even completed yet; until a stormy public process can be completed;
- Wayne Cary - protocol needs to be followed
- Commissioner Sielak - he wants the 2mile road and mine site ice road and gravel pad only approved; he has Kuukpik on line if they have questions
- Commissioner Edwards - three options: approve or fail or ask the applicant to come back to give more specific location for the limited rezone access
- Connor - read a response stating they are following the BLM process; and they will do as stated in their application and in accordance with title 19
- Director Brower - read code for options
- Wayne Cary - read the code for the record
- Director Brower - the application has already been held for more than 60 days with concurrence with the applicant
- Commissioner Sielak - requests CPAI to come back to come back with a better picture
- Director Brower - Worked with CPAI to reduce acreage and a donut hole
- Commissioner Sielak - motion to return application back to CPAI; rescind first motion (after Paul corrected him) and 2nder has to rescind as well
- Commissioner Peetook - wants to move forward in approving the resolution

Commissioner Sielak move to return application back to ConocoPhillips, seconded by Commissioner Peetook.
Roll call vote had 5 nos and 2 yeses

Commissioner Sielak move to return application back to ConocoPhillips, seconded by Commissioner Labrado.
Roll call vote had 6 yeses and 1 no 11:52pm

- Director Brower - will work with law on the application
- Glen - move to adjourn
Next Meeting Date
January 28, 2021

Adjournment
Commissioner Edwards move to adjourn. Motion passed unanimously.

Meeting adjourned at 11:53pm.

DATE APPROVED:________________                ATTEST:

__________________________
Chair: Paul Bodfish, Sr.                        Clerk: Daisy Sage
Pursuant to North Slope Borough Municipal Code § 19.50.030 APPROVAL CRITERIA- An approval will be granted by the Administrator if all the standards set forth below are met. The approval shall include a finding by the Administrator that the proposal is consistent with the Borough Comprehensive Plan, can occur harmoniously with other activities allowed in the district and will not disrupt the character of the general neighborhood. Such findings shall be in writing and shall become part of the record and the permit case file. The Administrator shall report all permits and administrative approvals to the appropriate Commission at its first regular meeting following issuance.

**ADMINISTRATIVE APPROVAL AND MINOR ALTERATIONS:**


December 7, 2020  NSB 21-144, CONOCOPHILLIPS ALASKA, INC., Administrative Approval, Temporary Camp, T11N, R4E, Section 16, Kuukpik Pad, Alpine Satellite, Resource Development District. - DA

December 14, 2020  NSB 21-148, CONOCOPHILLIPS ALASKA, INC., Administrative Approval, Kuparuk & Oliktok Pipelines (KPL/OPL) 575-621 Ice Road, T11N, R11E, Section 10, Prudhoe Bay Unit (PBU), Resource Development District. - DA

December 11, 2020  NSB 21-149, EXXONMOBIL ALASKA PRODUCTION INC., Administrative Approval, Tundra Travel, Various Townships, Ranges & Sections, Umiat Meridian, Point Thomson Unit, Badami Unit, Resource Development & Conservation Districts. - LK

December 10, 2020  NSB 21-150, CONOCOPHILLIPS ALASKA, INC., Administrative Approval, (Minor Alteration to an Approved NSB 20-363), Kuparuk
Industrial Center (KIC) Ice Road for Light Pole Installation, T12N, R10E, Section 34, Umiat Meridian, Kuparuk River Unit (KRU), Resource Development District. - LK

December 15, 2020 NSB 21-152, EMERALD HOUSE LLC, Administrative Approval, 500' x 500' Ice Pad, T8N, R7E, Sections 7, 8 & 18, Umiat Meridian, Melt Water Unit, Resource Development District. -RB

December 14, 2020 NSB 21-153, CONOCOPHILLIPS ALASKA, INC., Administrative Approval, (Minor Alteration to an Approved NSB 19-313) Greater Mooses Tooth 2/Mooses Tooth 7 (GMT2/MT7) Chemical Storage Tank Farm, T10N, R2E, Section 32, Umiat Meridian, Alpine Satellite Unit, Resource Development District. - LK

December 11, 2020 NSB 21-154, Administrative Approval, GREAT BEAR PANTHEON LLC, Administrative Approval, 5 Mile Ice Road, T6N, R13E, Sections 25-29, Transportation Corridor. - RB

December 16, 2020 NSB 21-157, CONOCOPHILLIPS ALASKA, INC., Administrative Approval, Ice Road Bypass, T11N, R9E, Section 32-33, T10N, R9E, Section 5, Kuparuk River Unit, Resource Development District. -RB

December 18, 2020 NSB 21-159, CONOCOPHILLIPS ALASKA, INC., Administrative Approval, Prepacking for Lake L9308 Ice Spur, T11N, R4E, Section 16 & 17, Umiat Meridian, Alpine Satellite Unit, Resource Development District - LK

December 18, 2020 NSB 21-160, HILCORP ALASKA, LLC, Administrative Approval, L Pad Water Injection Header Expansion, T13N, R10E, Section 8, Umiat Meridian, Mine Point Unit (MPU), Resource Development District. - LK

December 18, 2020 NSB 21-161, CONOCOPHILLIPS ALASKA, INC., Administrative Approval, Drill Site 3S (DS-3S) Microwave Tower, T12N, R8E, Section 18, Kuparuk River Unit (KRU), Resource Development District. - DA

December 22, 2020 NSB 21-162, UMIAQ ENVIRONMENTAL on behalf of the US NA, Administrative Approval, Utqiagvik Bulk Fuel Tank Farm (BFTF), T23N, R18W, Section 14, Conservation District. - DA

December 21, 2020 NSB 21-163, ALASKA WEST EXPRESS INC. dba LYNDEN OILFIELD SERVICES (AWE), Administrative Approval, Tundra Travel from the (CWAT) to Inigok Airstrip & to Umiat, Various Townships, Ranges & Sections, Conservation District. - RB

December 21, 2020 NSB 21-164, HILCORP NORTH SLOPE, Administrative Approval, Vern Lake Ice Road, T10N, R15E, Section 2, Umiat Meridian, Prudhoe Bay Unit (PBU), Resource Development District. - LK


December 29, 2020  NSB 21-169, CONOCOPHILLIPS ALASKA, INC., Administrative Approval, Ice Pad MSIP-2, T10N, R2E, Sections 32-33, Alpine Satellite Unit, Resource Development District. - RB

December 29, 2020  NSB 21-170, CONOCOPHILLIPS ALASKA, INC., Administrative Approval, Western North Slope (WNS) Multi-Season Ice Pad (MSIP) - MSIP-1, T11N, R4E, Section 17, Alpine Satellite Unit, Resource Development District. - DA

January 7, 2021  NSB 21-172, HILCORP ALASKA, LLC, Administrative Approval, Northstar Ice Road & Trails, Various Townships, Ranges & Sections, Northstar Unit, Resource Development District. - DA

January 11, 2021  NSB 21-174, HILCORP ALASKA, LLC, Administrative Approval, L-4 Reinstatement Ice Pad, T11N, R14E, Section 24, Prudhoe Bay Unit, Resource Development District. - DA

January 11, 2021  NSB 21-175, ARCTIC SLOPE TELEPHONE ASSOCIATION COOPERATIVE, Administrative Approval, Placement of Two Utility Poles, T23N, R18W, Section 33, Utqiagvik, Alaska, Suburban District. - RB

January 11, 2021  NSB 21-177, ESKIMOS INC., Administrative Approval, 2021 Barrow to Atqasuk Fuel Haul, Various Townships, Ranges and Sections, Utqiagvik & Atqasuk, Village and Conservation Districts. - LK

January 5, 2021  NSB/NUI 21-052, EUNICE BROWER, Administrative Approval, Gravel Fill, Block 9, Lot 5, Nuiqsut, Alaska, Village District. - DA

Total Revenue Received for Admin. Approvals & Minor Alterations: $34,510.

DRAFT DEVELOPMENT PERMIT AND NORTH SLOPE BOROUGH CONSISTENCY DETERMINATIONS:

December 14, 2020  NSB 21-145, JACOBS CH2M HILL For NORTH SLOPE BOROUGH CIPM, Draft Development Permit, Wainwright Water Treatment Plant (WTP), #59-145, T15N, R32W, Section 34, Wainwright, Alaska, Village District. - DA


January 8, 2021  NSB 21-173, Draft Development Permit, KAKTOVIK INUPIAT CORPORATION, Marsh Creek 3D, Various Townships, Ranges & Sections, Umiat Meridian, Conservation District. - LK

December 28, 2020  NSB 21-166, CONOCOPHILLIPS ALASKA, INC., Draft Development Permit, Lookout 1 Plug and Abandon (P&A) Well-Ice Pad, T11N, R2E, Section 35-36, Conservation District. - RB

January 11, 2021  NSB 21-176, OLGOONIK CONSTRUCTION SERVICES, Draft Development Permit, Temporary Airstrip, T11N, R1E, Section 15, Conservation District. - RB

Total Revenue Received for Draft Development Permit & North Slope Borough Consistency Determinations: $14,000.

DRAFT CONDITIONAL DEVELOPMENT PERMIT AND NORTH SLOPE BOROUGH CONSISTENCY DETERMINATIONS:

None issued at this time.

Total Revenue Received for Draft Conditional Development Permits: $00.00

DRAFT USE PERMIT AND NORTH SLOPE BOROUGH CONSISTENCY DETERMINATIONS:

None issued at this time.

Total Revenue Received for Draft Use Permits: $00.00

DEVELOPMENT PERMIT AND NORTH SLOPE BOROUGH CONSISTENCY DETERMINATIONS:

January 7, 2021  NSB 21-143, EMERALD HOUSE LLC, Development Permit, Peregrine Exploration Program, Various Townships, Ranges & Sections, Conservation District. - DA

January 5, 2021  NSB 21-145, JACOBS/CH2M HILL for NORTH SLOPE BOROUGH CIPM, Development Permit, Wainwright Water Treatment Plant (WTP), # 59-145, T15N, R32W, Section 34, Wainwright, Alaska, Village District. - DA

January 4, 2021  NSB 21-146, GREAT BEAR PANTHEON LLC, Development Permit, Talitha A Exploration Well, T5N, R12E, Section 3, Conservation District. - RB

Land Management Administrator’s Report
December 2020 & January 2021
L.K.
Page 4
USE PERMIT AND NORTH SLOPE BOROUGH CONSISTENCY DETERMINATIONS:

None issued at this time.

CONDITIONAL DEVELOPMENT PERMIT AND NORTH SLOPE BOROUGH
CONSISTENCY DETERMINATIONS:

None issued at this time.

REZONING/ MASTER PLAN APPROVALS/ MASTER PLAN UPDATES:

None issued at this time

IHLC/TLUI CULTURAL RESOURCES CLEARANCE:

November 24, 2020 TLUI FORM 500, 21-009, GREAT BEAR PANTHEON, Certificate of Clearance, Talitha A Well, T5-6N, R12-13E, Various Sections, UM

December 8, 2020 TLUI FORM 500, 21-010, CONOCOPHILLIPS ALASKA, INC., Certificate of Clearance, GMT2/MT7 Ice Road System, T10-12N, R2-5E, Various Sections, UM

December 15, 2020 TLUI FORM 500, 21-011, EMERALD HILL LLC, Certificate of TLUI Clearance, Peregrine Exploration Program, T1S-7N, Range 7E-2W, Various Sections, UM

December 9, 2020 TLUI FORM 500, 21-012, CONOCOPHILLIPS ALASKA, INC., Certificate of TLUI Clearance, Alpine Resupply Ice Road System, T10-12N, R3-7N, Various Sections, UM

December 17, 2020 TLUI FORM 500, 21-013, OLGoonIK CONSTRUCTION SERVICES, Certificate of TLUI Clearance, Fish Creek and Ingok Wells Remediation, T8-13N, R1-5W, 1-8E, Various Sections, UM

December 28, 2020 TLUI FORM 500, 21-015, CONOCOPHILLIPS ALASKA INC., Certificate of TLUI Clearance, KPL-OPL 8 VSMs Ice Pad, T11N, R13E, Section 34, UM
December 28, 2020  TLUI FORM 500, 21-016, CONOCOPHILLIPS ALASKA, INC., Certificate of TLUI Clearance, DS-2F to DS-2G Bypass Ice Road, T10-11N, R9E, Section 5, 32-33, UM

December 29, 2020  TLUI FORM 500, 21-017, CONOCOPHILLIPS ALASKA, INC., Certificate of TLUI Clearance, Lake 9308 Ice Spur, T11N, R4E, Section 16, 17, UM

January 7, 2021  TLUI FORM 500, 21-018, CONOCOPHILLIPS ALASKA, INC., Certificate of TLUI Clearance, WNS Multi-Season Ice Pads, T10-11N, R2, 4, Sections 17, 32-33, UM

FILL/DRIVEWAY PERMIT UNDER General Permit 2007-541-MI:

None issued at this time.

VIOLATION NOTICES:

None issued at this time.

CORRESPONDENCE:

None at this time.

cc:  Harry Brower, Jr., NSB Mayor
     Scott Smyd, CAO Mayor’s Office
     Taquilek Hepe, Director Wildlife
     Wayne Cary, Law Dept.
     Planning Department Staff
December 4, 2020

Eskimo’s Inc on behalf of NSB Planning Dept. (EI)
C/O Richard Reich, General Manager
P.O. Box 536
Utqiagvik, Alaska 99723
Email: rreich@asrc.com


Dear Mr. Reich:

We have reviewed your application dated December 2, 2020 in which you have requested authorization to scout the traditional route between Utqiagvik and Wainwright Alaska within the Conservation & Village Districts.

Project Description

EI and its subcontractor Olgoonik Oilfield Service (OOS) proposes to hire (2) local Wainwright residents to travel via snow machine from Wainwright to Utqiagvik following the traditional route as indicated by the blue line in the attached map. The current permitted CWAT trail to Wainwright is shown by the green line in the attached maps. Olgoonik Corporation would also have a third staff person from OOS Lands Department join the reconnaissance trip to Utqiagvik. The travelers will have a GPS unit to record data points along the route.

Upon arrival in Utqiagvik, the travelers will meet with the EI and NSB Planning Department staff to discuss the route and provide data points to Tommy Nageak, NSB TLUI Coordinator. After the preliminary route is analyzed for potential Native Allotment or TLUI site encroachment, Tommy will join the team on the return trip to Wainwright to help reroute the preliminary alignment to avoid any encroachments. The return trip will have 5 travelers that includes Tommy Nageak and an EI staff member from Utqiagvik.

Upon arrival back in Wainwright, Tommy Nageak and the EI staff member will then travel back to Utqiagvik. Tommy will create a map of the final trail location and will have data points defined for the next step to request a CWAT trail deviation as required by the NSB and BLM permits.

It is estimated that one-way travel between communities by snow machines will take one day, to account for trail adjustments due to terrain and ice measurements at river crossings. Since (3) overland trips are proposed, it estimated that (3) days will be required for field reconnaissance and 1-2 days for office
analysis and creating mapping for the next step in requesting a CWAT trail deviation as required by NSB and Federal permits.

**Project Location:**

Project begins in Wainwright T15N, R32W, Umiat Meridian and ends at Utqiagvik T24N, R17W Umiat Meridian.

**Purpose of Project**

Collect GPS data points along the traditional route to facilitate the realignment of the CWAT that results in a more direct route between the two communities and is situated on better terrain. Minor site-specific variations will occur due to field conditions.

This project is scheduled to commence upon approval of this permit with a completion date of December 11, 2020.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Village & Conservation Districts.

We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

**WILDLIFE STIPULATION**

1. The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Planning and Community Services Department before the start of any field activities.

**TUNDRA STIPULATIONS**

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.
2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 L. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 L. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. Eskimo's Inc. shall consult with ICAS Realty Director, at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

- Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.

- A list of vehicles used for any off-road travel, which may have taken place.

- Statement of clean-up activities.

- Methods of disposal of garbage, and other camp debris.
A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.

Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspectors at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Field inspectors at (907) 852-0440.

Report any tundra damage within 24 hours and consult with NSB Land Management staff with any questionable activity unsure of.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4) & (5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cells, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, herbert.ipalook@north-slope.org and/or rodney.ahtuangaruak@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the Native Village of Barrow at (907) 852-4411 and Ukpik Corp at (907) 852-4460, also the Savaat Center (907) 852-0465, the village of Wainwright at (907) 763-2815 and Olgoonik Corporation at (907) 763-2613 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100
7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Darylynn Aveoganna, Land Management Specialist at (907) 852-0320 ext. 5418 or by email at darylynn.aveoganna@north-slope.org

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Raymond Nashookpak, Wainwright Village Deputy Assistant, NSB
Jeanne Proulx, AKDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Bruse, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDI/FWS, Fairbanks
Jeanne Hanson, USDI/NOAA, Anchorage
Josephina Delgado-Pilak, DCOM, Juneau
dcc.water.oilandgas@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.McCoy@usace.army.mil
Donna Wixon, USDI/BLM
Sheley Jones, BLM District Manager
Jeanne Frazier, AKDNR/DO&G, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
dog.permittings@alaska.gov
Lloyd Paningona, Inupiat Community of the Arctic Slope
Flossie Mongoyak, Realty Director, Native Village of Barrow
Rex Rock Sr., President, Arctic Slope Regional Corporation
Delbert Rexford, President, Utqiaġvik Inupiat Corporation
Hugh Pathotak Sr., President, Olgoonik Corporation
Fannie Suvlu, CAO/Mayor, City of Utqiaġvik
Raymond Nashookpak, Mayor, City of Wainwright
Howard Pathotak, President, Wainwright Tribal Council
Anne Jensen, UIC Real Estate/Science Division/Cultural Resources Management
Michelle Weyiouanna, Land Services, UIC
Herbert Ipakuak Jr., Rodney Ahktungaraavak Jr., Field Inspectors, Nuiqsut
Allyson Airos, Lead Field Inspector, Utqiaġvik
Leroy Oenga Jr. Ralph Kieak Sr., Field Inspectors, Utqiaġvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Raymond Aguvuk Jr, Inupiat Community of the Arctic Slope Board Member, Wainwright
Amy Bodfish, Inupiat Community of the Arctic Slope Liaison, Wainwright
Files

NSB21-142/GRB/mk/pdl LMR Manager/da
# Land Management Regulations (LMR) Permit Application

<table>
<thead>
<tr>
<th>Permit Number:</th>
<th>21-142</th>
<th>Permit Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant: Eskimo's Inc.</td>
<td>on behalf of NSB Planning</td>
<td>Date: 12/1/2020</td>
</tr>
<tr>
<td>Address: P.O. Box 536, Utqiagvik, AK 99723</td>
<td>State ID:</td>
<td>Phone: (907) 350-4210 (mobile)</td>
</tr>
<tr>
<td>Contact Person: Richard Reich</td>
<td></td>
<td>Project Name: NSB CWAT</td>
</tr>
<tr>
<td>Email: <a href="mailto:rreich@asrc.com">rreich@asrc.com</a></td>
<td>Field Name &amp; Pad:</td>
<td></td>
</tr>
<tr>
<td>Location (TRS): T: See Map</td>
<td>Zoning District: Conservation and Village Districts</td>
<td></td>
</tr>
<tr>
<td>R:</td>
<td>完成 Completion Date: 12/11/2020</td>
<td></td>
</tr>
<tr>
<td>Sec:</td>
<td>Proposed Start Date: 12/7/2020</td>
<td></td>
</tr>
<tr>
<td>Proposed Development: Scout the traditional route between Utqiagvik and Wainwright, Alaska</td>
<td>Purpose of Development: Collect GPS data points along the traditional route to facilitate the realignment of the Community Winter Access Trail (CWAT). Minor site-specific variations will occur due to field conditions</td>
<td></td>
</tr>
</tbody>
</table>

- Fill/Dredge
- Oil & Gas Wells
- Temp. Water Use
- Off Road Travel
- Fuel Storage
- Hazardous Material Storage
- Solid Waste
- Mining
- Air Emissions
- Noise/Vibrations
- Sensitive Habitat
- Transportation

- Marine Tanker Facility
- Causeway Construction
- Airport or Helicopter Pad
- Seismic Work
- Offshore Drilling
- Oil Transportation System
- Utility Development
- Recreational Development
- Residential Development
- CD-ROM Included
- Snow Removal
- Maps Included
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES
- SPECIFIC FOOTPRINT (IN ENVIRO SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GAS SHAPE FILE OR GLOBE DATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NAT 1927 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTHSLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLL FREE (IN-STATE): (800) 476-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

Authorized Signature

[Signature]

Richard S. Reich
Name

<table>
<thead>
<tr>
<th>FEE PAID</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECIAL PLANNING COMMISSION MEETING</td>
<td>$12,000</td>
</tr>
<tr>
<td>DEVELOPMENT PERMIT</td>
<td>$2,000, plus $500 well</td>
</tr>
<tr>
<td>ADMINISTRATIVE APPROVALS</td>
<td>$1,500</td>
</tr>
<tr>
<td>CONDITIONAL DEVELOPMENT PERMITS</td>
<td>$3,000</td>
</tr>
</tbody>
</table>

AMOUNT PAID

Date

11/30/2020

General Manager
Title

DECISION

☐ ADMINISTRATIVELY APPROVED
This is a minor deviation to a previously approved development permit for commercialization.

☐ REZONING APPROVED
This proposal for development substantially complies with the Master Plan and a rezoning is waived, conditioned on compliance with all relevant Master Plan Conditions, lease regulations, and guidelines of the state and federal law, and permit issued 12/14/20.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory policies, represents the developer's best efforts to implement, all relevant best efforts and minimum policies, and as long as conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter.)

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land that is listed as a conditional development in the zoning district, has been deemed by the NSB Land Management Administrator in the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

[Signature]

NSB Land Management Administrator

Date

12/14/20

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect.

NSMBP §19.30.140.
December 1, 2020

Land Management Regulations (LMR) Permit Application

Proposed Development:

Scout the traditional route between Utqiagvik and Wainwright, Alaska

Purpose of Development:

Collect GPS data points along the traditional route to facilitate the realignment of the Community Winter Access Trail (CWAT) that results in a more direct route between the two communities and is situated on better terrain. Minor site-specific variations will occur due to field conditions.

Project Description:

Eskimo’s Inc. (EI) and its subcontractor Olgoonik Oilfield Service (OOS) proposes to hire (2) local Wainwright residents to travel via snowmachine from Wainwright to Utqiagvik following the traditional route as indicated by the blue line in the attached map. The current permitted CWAT trail to Wainwright is shown by the green line in the attached map. Olgoonik Corporation would also have a third staff person from their Lands Department join the reconnaissance trip to Utqiagvik. The travelers will have a GPS unit to record data points along the route.

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Upon arrival back in Wainwright, Tommy Nageak and the EI staff member will then travel back to Utqiagvik. Tommy will create a map of the final trail location and will have data points defined for the next step to request a CWAT trail deviation as required by the NSB and BLM permits.

It is estimated that one-way travel between communities by snowmachines will take one day, to account for trail adjustments due to terrain and ice measurements at river crossings. Since (3) overland trips are proposed, it estimated that (3) days will be required for field reconnaissance and 1-2 days for office analysis and creating mapping for the next step in requesting a CWAT trail deviation as required by NSB and Federal permits.

Project Location:

Project begins in Wainwright T15N, R32W Umiat Meridian and ends at Utqiagvik T24N, R17W Umiat Meridian.
December 7, 2020

ConocoPhillips Alaska, Inc. (CPAI)
C/O Jennifer Collins, Senior Environmental Coordinator
P.O. Box 100360
Anchorage, Alaska 99510
Email: jennifer.collins@conocophillips.com


Dear Ms. Collins:

We have reviewed your application dated December 4, 2020, in which you have requested authorization to install a new temporary camp and supporting infrastructure on the Kuukpik pad located in the Colville River Unit within the Resource Development District.

The new personnel camp will be placed on Kuukpik Pad which is located within the North Slope Borough (NSB) Alpine Satellite Resource Development District (RDD) and the surface is privately owned.

The temporary camp and supporting infrastructure will consist of multiple modules, including personnel camps, offices, water modules, waste modules, connector modules, control modules, smoke shacks, rec/lounge module, facilities, offices, connexes, equipment shops, and storage facilities. Equipment that will be staged on the pad will include lights plants, heavy equipment (during construction), ice road equipment and other items associated with construction activities. Generators and supporting diesel fuel tanks will be located within a generator module in the vicinity of the camp. Both the generator modules and the waste/water tank modules will be placed in secondary containment.

A trench within the gravel pad will be required to install fiber optic cables to provide network and telecommunications services to the new camp. The trench will be 1 foot wide by 2 feet deep and 120 feet in length. Spoils (or other fill material) from the excavation and trenching will be used as backfill when the cable installation is completed.

Project work is expected to begin on January 15, 2021 and the temporary camp and supporting infrastructure will be utilized for less than 12 months. Minor site-specific variations will likely occur due to field conditions. All work will occur on the existing Kuukpik pad.
Purpose of Project

The purpose of this project is to support Western North Slope oil and gas activities.

This project is scheduled to commence on January 1, 2021 with a completion date of January 1, 2022.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Resource Development District.

We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

SPILL RESPONSE TACTICS

1. Place drip pans under vehicles parked over 5 minutes

2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks

3. Impermeable lining and diking is required for fuel storage facilities with a capacity greater than 660 gallons.

Pink dye is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by CPAI.

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

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North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Darylynn Aveoganna, Land Management Specialist at (907) 852-0320 ext. 5418 or by email at darylynn.aveoganna@north-slope.org

Sincerely,

Gordon R. Brower,
Land Management Administrator

c:
NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Olivia Cabinboy, Nuiqsut Village Deputy Assistant, NSB
Jeanne Proulx, AKNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Dvision of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDI/FWS, Fairbanks
Jeanne Hanson, USDI/NMFS, Anchorage
Josephine Delgado-Pikut, DCOM, Juneau
dec.water.oilandgas@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.Mccoy@usace.army.mil
Donna Wixon, USDI/BLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AKNR/DO&G, Anchorage
Katie Farley, State Pipeline Coordinators Office JPO, SOA
Dog.permitting@alaska.gov
Mark Major, Kuukpik Corporation, maqinor@gmail.com
Willow Hetrick, Kuukpik Corporation, willow@kuukpik.com
Joseph Nukapigak, President, Kuukpik Village Corporation
Marnie Pardue Mayor, City of Nuiqsut
Raymond Ipalook, President, Native Village of Nuiqsut
Herbert Ipalook Jr., Rodney Ahtuanantuak Jr., Field Inspectors, Nuiqsut
Allyson Atos, Lead Field Inspector, Utqiagvik
Leroy Oemga Jr. Ralph Kakeak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Files
Land Management
Regulations Permit Application

Permit Number: 21-149

Applicant: ConocoPhillips Alaska, Inc
Address: P.O. Box 100360
Anchorage, AK 99510-0360

Contact Person: Jennifer Collins

Location (TRS): T11N, R4E, Section 16
Zoning District: Resource Development

Proposed Start Date: 1/15/2021
Completion Date: Less than 12 months

Proposed Development: ConocoPhillips Alaska, Inc. (CPAI) requests authorization to install a new temporary camp and supporting infrastructure on the Kuukpik pad located in the Colville River Unit.

Purpose of Development: The purpose is to support Western North Slope oil and gas activities.

- [ ] Fill/Dredge
- [ ] Oil & Gas Wells
- [ ] Temp. Water Use
- [ ] Off Road Travel
- [ ] Fuel Storage
- [ ] Hazardous Material Storage
- [ ] Solid Waste
- [ ] Mining
- [ ] Air Emissions
- [ ] Noise/Vibration
- [ ] Sensitive Habitat
- [ ] Transportation
- [ ] Marine Tanker Facility
- [ ] Seismic Work
- [ ] Utility Development
- [ ] Offshore Drilling
- [ ] Residential Development
- [ ] Oil Transport System
- [ ] Snow Removal
- [ ] CD-ROM Included
- [x] Maps Included

Permit Type: Administrative Approval
Date: 12/4/2020
State ID: (907) 265-6509
Project Name: Temporary Camp
Field Name & Pad: Alpine Satellite, Kuukpik Pad
ATTACH TO THIS APPLICATION THE FOLLOWING:

- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES. THE PROJECTION SHOULD BE NAD 27 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED)

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLLFREE (IN STATE): (800) 478-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT

Authorized Signature
Jennifer Collins
Name

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING
☐ DEVELOPMENT PERMIT
☒ ADMINISTRATIVE APPROVALS
☐ CONDITIONAL DEVELOPMENT PERMITS
☐ AMOUNT PAID: $1,500

12/4/2020
Date
Senior Environmental Coordinator
Title

Fee to be paid monthly by Electronic Funds Transfer.

DECISION
☒ ADMINISTRATIVELY APPROVED
☐ REZONING APPROVED
This is a minor amendment to a development permit or is a use of land listed under administrative approvals for this zoning district.

☐ DEVELOPMENT PERMIT APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued conditioned on compliance with all relevant Master Plan conditions, lease stipulations, and provision of state and federal law and permits served thereunder.

☒ CONDITIONAL DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory Policies, represents the Developer’s best efforts to implement all relevant best efforts and minimization policies, and as long as any conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter).

☐ PERMIT DENIED
(See accompanying letter)

Masey Kaleakgora
Land Management Administrator

12/8/20
Date

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect.

NSMBC §19.30.130.
ConocoPhillips Alaska, Inc. (CPAI) requests authorization to install a new temporary camp and supporting infrastructure on the Kuukpik Pad located in the Colville River Unit. The new camp will support Western North Slope (WNS) oil and gas activities. The new personnel camp will be placed on Kuukpik Pad which is located within the North Slope Brough (NSB) Alpine Satellite Resource Development District (RDD) and the surface is privately owned.

The temporary camp and supporting infrastructure will consist of multiple modules, including personnel camps, offices, water modules, waste modules, connector modules, control modules, smoke shacks, rec/lounge module, facilities, offices, connexes, equipment shops, and storage facilities. Equipment that will be staged on the pad will include light plants, heavy equipment (during construction), ice road equipment and other items associated with construction activities. Generators and supporting diesel fuel tanks will be located within a generator module in the vicinity of the camp. Both the generator modules and the waste/water tank modules will be placed in secondary containment.

A trench within the gravel pad will be required to install fiber optic cables to provide network and telecommunications services to the new camp. The trench will be 1 foot wide by 2 feet deep and 120 feet in length. Spoils (or other fill material) from the excavation and trenching will be used as backfill when the cable installation is completed.

Project work is expected to begin on January 15, 2021 and the temporary camp and supporting infrastructure will be utilized for less than 12 months. Minor site-specific variations will likely occur due to field conditions. All work will occur on the existing Kuukpik pad.
New Temporary Camp at Kuukpik Pad

Author: [Name]
Date: 10/15/2022

ConocoPhillips Alaska
December 14, 2020

ConocoPhillips Alaska, Inc. (CPAI)
C/O Kate Dodson, Environmental Engineer – GKA Permitting
P.O. Box 100360
Anchorage, Alaska 99510
Email: kate.dodson@conocophillips.com

RE: NSB 21-148, Administrative Approval, Kuparuk and Oliktok Pipelines (KPL and OPL)
575-621 Ice Road, T11N, R11E, Section 10, Prudhoe Bay Unit, Resource Development
District.

Dear Ms. Dodson:

We have reviewed your application dated December 10, 2020 in which you have requested
authorization to construct an ice road within the Resource Development District.

The ice road will provide a safe working area for the maintenance work and will be placed
between the existing spine road and pipeline. The ice road will measure no more than 350 feet
long.

Pullout areas or wide sections of ice road will be constructed at certain locations depending on
construction technique, field conditions, and safety considerations. The ice road will be refined
in the field to avoid hazards such as steep terrain or environmental sensitive areas, including
willow habitat, areas with thin snow cover, and culturally sensitive sites. The ice road will be
constructed and maintained using water and ice chips from permitted sources.

The proposed work is scheduled to begin January 1, 2021. The ice road will be completed by
September 15, 2021 and will end when stick picking and agency inspections have been
completed. Please see attachments for additional details. The figure represents the project plan
and will be adjusted if needed for varying field conditions.

This project is scheduled to commence on January 1, 2021 with a completion date of September
15, 2021.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC
19.20.020 and thus requires an administrative approval in the Resource Development District.
We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

PROJECT SPECIFIC STIPULATION

1. CPAI must obtain a letter of non-objection from all land owners and submit a copy to NSB Land Management Division.

WILDLIFE STIPULATION

1. The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Planning and Community Services Department before the start of any field activities.

ICE ROADS AND PADS STIPULATIONS

1. Water may be extracted only from sources approved by the Alaska Department of Natural Resources.

2. Onshore ice road construction is not to commence until frost has penetrated the ground to a depth of one-foot. The ice road is to be maintained at a minimum thickness of six (6) inches. NSBMC 19.50.030(J); NSBMC 19.60.040)(O).

3. Spills of fuels, hydrocarbons, or chemicals on ice roads shall be cleaned up thoroughly prior to break-up to prevent damage to the underlying tundra when the ice pad melts. NSBMC 19.50.030) (J); NSBMC 19.60.040)(O).

4. In the event that an alternate ice road route is required, all surface vehicles are to confine travel as much as possible to only those areas and times of year with sufficient (6 inches) snow cover in order to protect the underlying tundra. NSBMC 19.60.040)(O).

SPILL RESPONSE TACTICS

1. Place drip pans under vehicles parked over 5 minutes.

2. Placement of adequate surface liners is required under all valves or connections to diesel fuel tanks.
Pink dye is added to all fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by CPAI.

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 I. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 I. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. CPAI shall consult with ICAS Realty Director at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b)
storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

- Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.
- A list of vehicles used for any off-road travel, which may have taken place.
- Statement of clean-up activities.
- Methods of disposal of garbage, and other camp debris.
- A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.
- Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspectors at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.
- Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and
lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kalenak@north-slope.org, herbert.ipalook@north-slope.org and/or rodney.ahtuangaruak@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100
If you should have any questions please contact Darylynn Aveoganna, Land Management Specialist at (907) 852-0320 ext. 5418 or by email at darylynn.aveoganna@north-slope.org

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Olivia Cabinboy, Nuiqut Village Deputy Assistant, NSB
Jeanne Proulx, AKDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Bruce, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDI/FWS, Fairbanks
Jeanne Hanson, USDI/NMFS, Anchorage
Josephine Delgado-Plikat, DCOM, Juneau
dec.water.oilandgas@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.Mccoy@usace.army.mil
Donna Zane, USDI/BLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AkDNR/DO&G, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
Dog permitting@alaska.gov
Mark Major, Kukpik Corporation, major@live.com
Willow Hetrick, Kukpik Corporation, willow@kukpik.com
Joseph Nukapigak, President, Kukpik Village Corporation
Marie Pardue Mayor, City of Nuiqut
Raymond Ipalook, President, Native Village of Nuiqut
Herbert Ipalook Jr., Rodney Ahtuagruak Jr., Field Inspectors, Nuiqut
Alyson Atos, Lead Field Inspector, Utqiagvik
Lenny Oenga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPR/GIS, NSB
Files

NSB21-148/GRB/mk/pdl LMR Manager/da
Land Management
Regulations Permit Application

Permit Number: 21-46

Applicant: ConocoPhillips Alaska, Inc.
Address: P.O. Box 100360, Anchorage, AK 99510

Contact Person: Kate Dodson
Location (TRS): T11N, R11E, Section 10
Zoning District: Resource Development

Proposed Start Date: 1/1/2021
Completed Date: 9/15/2021

Purpose of Development: Construct an ice road.

To provide access for authorized maintenance work. Please see the attachments for more information.

Fill/Dredge
Material: N/A
Acreage: N/A

Oil & Gas Wells
Number of New Surface Holes: N/A

Temp. Water Use
Source: Permitted sources
Access: Existing infrastructure

Off Road Travel
Purpose: Ice road construction
Period: Winter tundra travel season
Site Access: Varies

Fuel Storage
Type: N/A
Amount: N/A

Hazardous Material Storage
Type: N/A
Amount: N/A

Solid Waste
Treatment: N/A

Mining
Habitat: N/A

Air Emissions
Type: Construction Equipment
Amount: Minor

Noise/Vibration
Type: Construction Equipment
Amount: Normal

Sensitive Habitat
Floodplain: N/A
Shoreline: N/A

Transportation
Type: N/A

Marine Tanker Facility
Seismic Work: 
Utility Development: 
Recreational Development: 

Causeway Construction
Offshore Drilling: 
Residential Development: 
CD-ROM Included: 

Temporary Airport
Oil Transport System: 
Snow Removal: 
Maps Included: 

Administrative Approval
Date: 12/10/2020
State ID: N/A
Phone: (907) 265-6181

Project Name: KPL/OPL 575-621 Ice Road
Field Name & Pad: Prudhoe Bay/KPL/OPL Pipeline
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES. THE PROJECTION SHOULD BE NAD 27 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED)

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLLFREE (IN STATE): (800) 478-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

Authorized Signature: [Signature]

Date: 12/10/2020

Environmental Engineer – GKA Permitting

Name: Kate Dodson

Title:

FEE PAID:
- [ ] SPECIAL PLANNING COMMISSION MEETING
- [ ] DEVELOPMENT PERMIT
- [x] ADMINISTRATIVE APPROVALS
- [ ] CONDITIONAL DEVELOPMENT PERMITS
AMOUNT PAID: $1,500.00

DECISION

[ ] ADMINISTRATIVELY APPROVED
This is a minor amendment to a development permit or is a use of land listed under administrative approvals for this zoning district.

[ ] REZONING APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan conditions, lease stipulations, and provisions of state and federal laws and permits served thereunder.

[ ] DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory policies, represents the Developer’s best efforts to implement all relevant best efforts and minimization policies, and as long as any conditions or forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter).

[ ] CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land this is listed as a conditional development for this zoning district or has been elevated by the Land Management Administrator to the Planning Commission.

[ ] PERMIT DENIED
(See accompanying letter)

Land Management Administrator: [Signature]

Date: 12/1/20

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect.

NSMBC §19.30.130.
KPL-OPL CTOPS1 575-621 Ice Road

Project Description

ConocoPhillips Alaska, Inc. (CPAI) requests authorization to construct an ice road to support maintenance on the Kuparuk and Oliktok Pipelines (KPL and OPL, respectively) in the Prudhoe Bay Resource Development District. The ice road will provide a safe working area for the maintenance work and will be placed between the existing spine road and pipeline. The ice road will measure no more than 350 feet long.

Pullout areas or wide sections of ice road will be constructed at certain locations depending on construction technique, field conditions, and safety considerations. The ice road will be refined in the field to avoid hazards such as steep terrain or environmental sensitive areas, including willow habitat, areas with thin snow cover, and culturally sensitive sites. The ice road will be constructed and maintained using water and ice chips from permitted sources. The work will be conducted at the following location(s):

<table>
<thead>
<tr>
<th>Township(s)</th>
<th>Range(s)</th>
<th>Section(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T11N</td>
<td>R11E</td>
<td>10</td>
</tr>
</tbody>
</table>

The proposed work is scheduled to begin January 1, 2021. The ice road will be completed by September 15, 2021 and will end when stick picking and agency inspections have been completed.

Please see the attachments for additional details. The figures represent the project plan and will be adjusted if needed for varying field conditions.
This Project is Located in BEECHEY POINT B-4 Quadrangle.

Vicinity Map
1" = 2 MILES

ConocoPhillips
Alaska, Inc.
December 11, 2020

Exxon Mobil Alaska Production, Inc. (EMAP)
C/O Emily Sappington, Environmental and Regulatory Advisor
P.O. Box 196601
Anchorage, Alaska 99519
Email: emily.n.sappington@exxonmobil.com

RE: NSB 21-149, Administrative Approval, Tundra Travel, Various Townships, Ranges and Sections, Umiat Meridian, Point Thomson Unit, Badami Unit, Resource Development & Conservation Districts.

Dear Ms. Sappington:

We have reviewed your application dated December 10, 2020, in which you have requested authorization for tundra travel for operation activities located within the Point Thomson & Badami Resource Development & Conservation Districts.

Project Description

In support of the 2021-2025 activities for Point Thomson, EMAP will be doing winter and summer tundra travel when overland access by gravel road or ice road is not available. Due to its remote location, air is the main mode of transportation for Point Thomson during operations. However, tundra travel is needed for access to areas off the gravel road system for operations support and for the transportation of equipment/materials to Point Thomson outside of the barge season.

Activities that can require winter and summer tundra travel can include, but not limited to:

- Maintenance of staged emergency response equipment and materials,
- Maintenance of Point Thomson Export Pipeline (PTEP),
- Maintenance or rehabilitation activities at legacy sites,
- Scientific, engineering, or geotechnical/geophysical field studies,
- Transportation of equipment and materials outside of the barging season,
- Transportation of waste for disposal.
In addition to the activities listed above, Point Thomson can undertake maintenance activities within 1,320 feet of the Point Thomson infrastructure which is not subject to administrative approval. These activities can require winter and summer tundra travel and can include, but not limited to:

- Maintenance, inspection, and monitoring of facilities,
- Repair and operation of facilities,
- Remediation and other general cleanup activities,
- Civil maintenance (e.g., snow management near bridges and culverts, etc.)

Tundra travel routes would occur within the following locations, but can change subject to safety, weather, and site conditions:

<table>
<thead>
<tr>
<th>Township</th>
<th>Range</th>
<th>Section</th>
</tr>
</thead>
<tbody>
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Winter and summer tundra travel will be conducted using Alaska Department of Natural Resources (ADNR) Division of Mining, Land and Water (DMLW) approved vehicles. Winter tundra travel would occur after the opening of winter tundra travel, as announced by DMLW, and will end by the close of winter tundra travel season. Tundra travel will also be conducted in accordance with applicable state approvals. See attached project description and figures for additional details.

**Purpose of Project**

Continued operation of the Point Thomson Unit including movement of supplies to and from Deadhorse to Point Thomson.
This project is scheduled to commence on January 1, 2021 with a completion date of December 31, 2025.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Resource Development & Conservation Districts.

We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

**PROJECT SPECIFIC STIPULATION**

1. EMAP shall obtain a Non-Objection letter from all land owners.

**TUNDRA STIPULATIONS**

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauling to an authorized solid waste disposal facility NSBMC 19.70.050 L. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 L. 11.
7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. EMAP shall consult with ICAS Realty Director, at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough; b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15 of each year, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

   o Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.

   o A list of vehicles used for any off-road travel, which may have taken place.

   o Statement of clean-up activities.

   o Methods of disposal of garbage, and other camp debris.

   o A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.
Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspectors at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0440.

Report any tundra damage within 24 hours and consult with NSB Permitting staff with any questionable activity unsure of.

**SPILL RESPONSE TACTICS**

1. Place drip pans under vehicles parked over 5 minutes.

2. Placement of adequate surface liners is required under all valves or connections to diesel fuel tanks.

3. Impermeable lining and diking is required for fuel storage facilities with a capacity greater than 660 gallons.

*Pink dye* is added to all fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by EMAP.

**WILDLIFE STIPULATION**

1. The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Planning and Community Services Department before the start of any field activities.

**GENERAL STIPULATIONS**

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Permitting and Zoning Division to become a part of this permit file. NSBMC 19.70.050(1)(4)&(5)
2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, herbert.ipalook@north-slope.org and/or rodney.ahtuanangaruak@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(l)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100
If you should have any questions please contact Lilly Kilapsuk, Land Management Specialist at (907) 852-0320 ext. 5411 or by email at lilly.kilapsuk@north-slope.org.

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Nora Jane Burns, Marianne Rexford, Kaktovik Village Deputy Assistant, NSB
Jeanne Proulx, AkDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDIFWS, Fairbanks
Jeanne Hanson, USDINMFS, Anchorage
Josephine Delgado-Pilkat, DCOM, Juneau
dcc.water.oilandgas@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R. Romero, US Army COE, Mary_R_Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.McCoy@usace.army.mil
Donna Wixon, USDIBLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AkDNR/DO&G, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
dog.permittings@alaska.gov
Matthew Rexford, President, Kaktovik Inupiat Corporation
Amanda Kaleak, Mayor, City of Kaktovik
Edward Rexford Sr., President, Native Village of Kaktovik
Herbert Ipalook Jr., Rodney Ahtuangarak Jr., Field Inspectors, Nuiqsut
Allyson Atos, Lead Field Inspector, Utqiagvik
Leroy Oonng Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Matthew Rexford, Kaktovik Board Member, Inupiat Community of the Arctic Slope Files
Land Management Regulations (LMR) Permit Application

<table>
<thead>
<tr>
<th>Permit Number:</th>
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<tbody>
<tr>
<td>Applicant:</td>
<td>ExxonMobil Alaska Production Inc.</td>
</tr>
<tr>
<td>Address:</td>
<td>P.O. Box 196601, Anchorage, AK 99519</td>
</tr>
<tr>
<td>Contact Person</td>
<td>Emily Sappington</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:emily.n.sappington@exxonmobil.com">emily.n.sappington@exxonmobil.com</a></td>
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<td>Tundra travel through December 31, 2025 for operations activities</td>
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<td>Purpose of Development:</td>
<td>Continued operation of the Point Thomson Unit including movement of supplies to/from Deadhorse-Point Thomson</td>
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<td>Transportation</td>
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ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES
- SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NAD 1983 ALASKA ALBERS OR GEODETIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BAREW, AK 99723
PHONE: (907) 852-0320 TOLL FREE (IN-STATE): (800) 476-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

Authorized Signature
Erin Sage

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING $12,000
☐ DEVELOPMENT PERMIT $2,000, plus $500/well
☑ ADMINISTRATIVE APPROVALS $1,500
☐ CONDITIONAL DEVELOPMENT PERMITS $3,000

AMOUNT PAID

DEPARTMENT
□ ADMINISTRATIVELY APPROVED
This is a minor deviation to a previously approved development permit for commercial recreation.

□ REZONING APPROVED
That rezone development substantially complies with the Master Plan, and a site permit is issued, conditioned on compliance with all relevant Master Plan Conditions, lease stipulations, and approval of the state and federal use and permit served.

□ DEVELOPMENT PERMIT APPROVED
The proposed development substantially complies with the Master Plan policies, represents the developer's best efforts to implement all relevant best efforts and minimization policies, and as long as conditions of such in the accompanying letter are complied with, does not represent a net public benefit. (See accompanying letter.)

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land that is listed as a conditional development for this zoning district or has been elevated by the NSB Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

NSB Land Management Administrator

Date
December 8, 2020

Point Thomson Safety, Security, Health & Environmental Supervisor

Title

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect. NSMBC §19.30.130.
December 8, 2020
ER-2020-OUT-251

Mr. Gordon Brower
Director, Department of Planning and Community Services
North Slope Borough
Post Office Box 69
Barrow, Alaska 99723

RE: Request for Administrative Approval, ExxonMobil Alaska Production Inc., 2021-2025 Tundra Travel

Dear Mr. Brower,

ExxonMobil Alaska Production Inc. (EMAP) is requesting administrative approval for tundra travel as described below in support of Point Thomson operations.

These activities and their locations are consistent with those described in the Master Plan and Application for Zoning Map for the Point Thomson Resource Development District, which was approved by the North Slope Borough (NSB) in 2012. A summary of the tundra travel program through December 31, 2025 is provided below.

SUMMARY OF PROPOSED ACTIVITY

Tundra Travel Activities

In support of 2021-2025 activities for Point Thomson, EMAP is requesting approval for winter and summer tundra travel when overland access by gravel road or ice road is not available. Due to its remote location, air is the main mode of transportation for Point Thomson during operations. However, tundra travel is needed for access to areas off the gravel road system for operations support and for the transportation of equipment/materials to Point Thomson outside of the barging season.

Activities that may require winter and summer tundra travel may include, but not be limited to:
- Maintenance of staged emergency response equipment and materials
- Maintenance of Point Thomson Export Pipeline (PTEP)
- Maintenance or rehabilitation activities at legacy sites
- Scientific, engineering, or geotechnical/geophysical field studies
- Transportation of equipment and materials outside of the bargeing season
- Transport of waste for disposal

In addition to the activities listed above, Point Thomson may undertake maintenance activities within 1,320 feet of the Point Thomson infrastructure which is not subject to administrative approval. These activities may require winter and summer tundra travel and may include, but not be limited to:
- Maintenance, inspection, and monitoring of facilities
- Repair and operation of facilities
- Remediation and other general cleanup activities
- Civil maintenance (e.g., snow management near bridges and culverts, etc.)

Tundra travel routes would occur within the following locations, but may change subject to safety, weather, and site conditions:

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Winter and summer tundra travel will be conducted using Alaska Department of Natural Resources (ADNR) Division of Mining, Land, and Water (DMLW) approved vehicles. Winter tundra travel would occur after the opening of winter tundra travel, as announced by DMLW, and will end by the close of winter tundra travel season. Tundra travel will also be conducted in accordance with applicable state approvals.
In support of our request for NSB authorization of 2021-2025 tundra travel activities, the following are attached:

- NSB Land Management Regulations Permit Application
- Map of proposed routes for potential tundra travel
- A check in the amount of $1,500 to cover the permit processing fee

If you have any questions or need additional information to complete your review, please contact Emily Sappington at (907) 564-3611 or via email at emily.n.sappington@exxonmobil.com.

Sincerely,

For and On Behalf of ExxonMobil Alaska Production Inc.

Attachments: NSB Land Management Regulations Permit Application
Proposed Tundra Travel Maps
Check for 2021-2025 ($1500)
To: All NSB Departments

From: Gordon R. Brower, Director of Planning and Community Services

Date: December 2, 2020

Subject: Delegation of Authority

I hereby delegate Mabel J. Kaleak as Acting Director of Planning and Community Services effective December 1, 2020 until further notice.

Please extend your cooperation to Mabel during this time.

Thank you,
December 10, 2020

ConocoPhillips Alaska, Inc.
C/O Kate Dodson, Environmental Engineer- GKA Permitting
P.O. Box 100360
Anchorage, Alaska 99510
Email: Kate.Dodson@ConocoPhillips.com

RE: NSB 21-150, Administrative Approval, (Minor Alteration to an Approved NSB 20-363)- Kuparuk Industrial Center (KIC) Ice Road for Light Pole Installation, T12N, R10E, Section 34, Umiat Meridian, Kuparuk River Unit, Resource Development District.

Dear Ms. Dodson:

We have reviewed your application dated December 10, 2020, in which you have requested authorization for a minor alteration to an approved NSB 21-363- KIC Ice Road for Light Pole Installation, changing the start date, due to Covid-19 concerns, the work was stopped and now scheduled for January 1, 2021, located within the Kuparuk River Resource Development District.

Project Description

The ice road will be no more than 200 feet long. Pullout areas or wide sections of ice road will be constructed at certain locations depending on construction technique, field conditions, and safety considerations. The ice road will be refined in the field to avoid hazards such as steep terrain or environmental sensitive areas, including willow habitat, areas with thin snow cover, and culturally sensitive sites. The ice roads will be constructed and maintained using water and ice chips from permitted sources.

The proposed work is scheduled to begin on January 1, 2021. The ice road will be completed by September 15, 2021 and will end when stick picking and agency inspections have been completed.

Please see the attachments for additional details. The figures represent the project plan and will be adjusted if needed for varying field conditions.
Purpose of Project

To update the project start date.

This project is scheduled to commence on January 1, 2021 with a completion date of September 15, 2021.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Resource Development District.

We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

PROJECT SPECIFIC STIPULATION

1. CPAI must obtain a letter of non-objection from all land owners prior to commencement of this project and submit a copy to NSB Land Management Division.

2. CPAI must have two trained fuel handlers onsite during refueling operations.

ICE ROADS AND PADS STIPULATIONS

1. Water may be extracted only from sources approved by the Alaska Department of Natural Resources.

2. Onshore ice road construction is not to commence until frost has penetrated the ground to a depth of one-foot. The ice road is to be maintained at a minimum thickness of six (6) inches. NSBMC 19.50.030(J); NSBMC 19.60.040)(O).

3. Spills of fuels, hydrocarbons, or chemicals on ice pads shall be cleaned up thoroughly prior to break-up to prevent damage to the underlying tundra when the ice pad melts. NSBMC 19.50.030 (J); NSBMC 19.60.040)(O).

4. In the event that an alternate ice road route is required, all surface vehicles are to confine travel as much as possible to only those areas and times of year with sufficient (6 inches) snow cover in order to protect the underlying tundra. NSBMC 19.60.040)(O).

WILDLIFE STIPULATION

1. The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use
areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Planning and Community Services Department before the start of any field activities.

**SPILL RESPONSE TACTICS**

1. Place drip pans under vehicles parked over 5 minutes.

2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks.

*Pink dye* is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by CPAI.

**TUNDRA STIPULATIONS**

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 I. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 I. 11.
7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. CPAI shall consult with ICAS Realty Director, at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15, 2020, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

- Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.

- A list of vehicles used for any off-road travel, which may have taken place.

- Statement of clean-up activities.

- Methods of disposal of garbage, and other camp debris.

- A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.
Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspectors at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0440.

Report any tundra damage within 24 hours and consult with NSB Land Management staff with any questionable activity unsure of.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, herbert.ipalook@north-slope.org and/or rodney.ahtuangaruak@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030
6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Lilly Kilapsuk, Land Management Specialist at (907) 852-0320 ext. 5411 or by email at lilly.kilapsuk@north-slope.org.

Sincerely,

[Signature]

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Olivia Cabinboy, Nuiqsut Village Deputy Assistant, NSB
Jeanne Proulx, A&DMR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/DIVision of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDI/FWS, Fairbanks
Jeanne Hanson, USDI/NMFS, Anchorage
Josephina Doga-Doig, DCOM, Juneau
dec.water.ohlandgas@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.McCoy@usace.army.mil
Donna Wixson, USDI/BLM
Shelly Jones, BLM District Manager
Jeanne Frazier, A&DMR/DO&G, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
dogpermitting@alaska.gov
Mark Major, Kuukpik Corporation, majorinor@ive.com
Willow Hetrick, Kuukpik Corporation, willow@kuukpik.com
Joseph Nukapigak, President, Kuukpik Village Corporation
Mamie Pardue Mayor, City of Nuiqsut
Raymond Ipalook, President, Native Village of Nuiqsut
Herbert Ipalook Jr., Rodney Ahtuangarak Jr., Field Inspectors, Nuiqsut
Allyson Atos, Lead Field Inspector, Utqiaġvik
Leroy Oenga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiaġvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Files

NSB21-150/GRB/mk/pdl LMR Manager/ik
**Land Management Regulations Permit Application**

- **Permit Number**: 21-190
- **Applicant**: ConocoPhillips Alaska, Inc.
  - **Address**: P.O. Box 100360, Anchorage, AK 99510
- **Date**: 12/1/2020
- **State ID**: N/A
- **Phone**: (907) 265-6181

**Contact Person**: Kate Dodson
**Project Name**: Minor Amendment to NSB 20-363 - KIC Ice Road for Light Pole Installation

**Location (TRS)**: T12N, R10E, Section 34
**Field Name & Pad**: Kuparuk / KIC

**Zoning District**: Resource Development District
**Completion Date**: 9/15/2021

**Proposed Start Date**: 1/1/2021

**Proposed Development**: Minor Amendment to NSB 20-363 to change project start date.

**Purpose of Development**: To update the project start date. Please see the attachments for more information.

| Development Area | Material | Acres | Source | Access | Purpose | Access | Equipment | Site Access | Type | Amount | Handling | Type | Amount | Handling | Treatment | Habitat | Type | Amount | Handling | Type | Amount | Handling | Type | Amount | Handling |
|------------------|----------|-------|--------|--------|---------|--------|-----------|------------|------|--------|----------|------|--------|----------|----------|---------|------|--------|----------|------|--------|----------|------|--------|----------|------|--------|----------|
| Fill/Dredge      | N/A      | N/A   |        |        |         |        |           |            |      |        |          |      |        |          |          |         |      |        |          |      |        |          |      |        |          |      |        |          |
| Oil & Gas Wells  | N/A      | N/A   |        |        |         |        |           |            |      |        |          |      |        |          |          |         |      |        |          |      |        |          |      |        |          |      |        |          |
| Temp. Water Use  | N/A      | N/A   | Permitted sources |        | Ice road construction and maintenance |        | Existing infrastructure | Maximum allowable by ADNR temporary water use permits | Varies | N/A | N/A | N/A | N/A | N/A |
| Off Road Travel  | N/A      | N/A   | Winter tundra travel season |        | Equipment |        | Water trucks, graders, etc. |          |          |      |        |          |      |        |          |      |        |          |      |        |          |
| Fuel Storage     | N/A      | N/A   |        |        |         |        |           |            |      |        |          |      |        |          |          |         |      |        |          |      |        |          |      |        |          |
| Hazardous Material Storage | N/A | N/A |        |        |         |        |           |            |      |        |          |      |        |          |          |         |      |        |          |      |        |          |      |        |          |
| Solid Waste      | N/A      | N/A   |        |        |         |        |           |            |      |        |          |      |        |          |          |         |      |        |          |      |        |          |      |        |          |
| Mining           | N/A      | N/A   |        |        |         |        |           |            |      |        |          |      |        |          |          |         |      |        |          |      |        |          |      |        |          |
| Air Emissions    | Construction Equipment | N/A |        |        |         |        |           |            |      |        |          |      |        |          |          |         |      |        |          |      |        |          |      |        |          |
| Noise/Vibration  | Construction Equipment | N/A |        |        |         |        |           |            |      |        |          |      |        |          |          |         |      |        |          |      |        |          |      |        |          |
| Sensitive Habitat| N/A      | N/A   |        |        |         |        |           |            |      |        |          |      |        |          |          |         |      |        |          |      |        |          |      |        |          |
| Transportation   | N/A      | N/A   |        |        |         |        |           |            |      |        |          |      |        |          |          |         |      |        |          |      |        |          |      |        |          |
| Marine Tanker Facility | N/A | N/A |        |        |         |        |           |            |      |        |          |      |        |          |          |         |      |        |          |      |        |          |      |        |          |
| Causeway Construction | Offshore Drilling | N/A |        |        |         |        |           |            |      |        |          |      |        |          |          |         |      |        |          |      |        |          |      |        |          |
| Temporary Airport | Oil Transport System | N/A |        |        |         |        |           |            |      |        |          |      |        |          |          |         |      |        |          |      |        |          |      |        |          |
| Seismic Work | Utility Development | N/A |        |        |         |        |           |            |      |        |          |      |        |          |          |         |      |        |          |      |        |          |      |        |          |
| Recreational Development | CD-ROM Included | N/A |        |        |         |        |           |            |      |        |          |      |        |          |          |         |      |        |          |      |        |          |      |        |          |
| Maps Included | N/A | N/A |        |        |         |        |           |            |      |        |          |      |        |          |          |         |      |        |          |      |        |          |      |        |          |
ATTACH TO THIS APPLICATION THE FOLLOWING:

- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES. THE PROJECTION SHOULD BE NAD 27 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED)

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLLFREE (IN STATE): (800) 478-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT

Authorized Signature  
Kate Dodson  
Name

Date  
12/1/2020  
Environmental Coordinator

Title

FEE PAID  
☐ SPECIAL PLANNING COMMISSION MEETING  
☐ DEVELOPMENT PERMIT  
☐ ADMINISTRATIVE APPROVALS  
☐ CONDITIONAL DEVELOPMENT PERMITS  
AMOUNT PAID: $1,500.00

DECISION

☐ ADMINISTRATIVELY APPROVED
This is a minor amendment to a development permit or is a use of land listed under administrative approvals for this zoning district.

☐ REZONING APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan conditions, lease stipulations, and provision of state and federal law and permits listed thereunder.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory Policies, represents the Developer’s best efforts to implement all relevant best efforts and minimization policies, and as long as any conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter).

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land this is listed as a conditional development for this zoning district or has been elevated by the Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

Land Management Administrator  

Date  
12/11/20

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect.

NSMBC §19.30.130.
KIC Ice Road for Light Pole

Project Description

ConocoPhillips Alaska, Inc. (CPAI) requests authorization to construct an ice road near the Kuparuk Industrial Center (KIC) pad in the Kuparuk River Resource Development District. The ice road will provide vehicle access for activities associated with installation of a power pole, which has been permitted separately. The ice road will be no more than 200 feet long.

Pullout areas or wide sections of ice road will be constructed at certain locations depending on construction technique, field conditions, and safety considerations. The ice road will be refined in the field to avoid hazards such as steep terrain or environmental sensitive areas, including willow habitat, areas with thin snow cover, and culturally sensitive sites. The ice roads will be constructed and maintained using water and ice chips from permitted sources. The ice road will be constructed at the following location:

<table>
<thead>
<tr>
<th>Township(s)</th>
<th>Range(s)</th>
<th>Section(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T12N</td>
<td>R10E</td>
<td>34</td>
</tr>
</tbody>
</table>

The proposed work is scheduled to begin once tundra travel opens, or as soon as permits are received. The ice road will be completed by September 15, 2020 and will end when stick picking and agency inspections have been completed.

Please see the attachments for additional details. The figures represent the project plan and will be adjusted if needed for varying field conditions.
To: All NSB Departments

From: Gordon R. Brower, Director of Planning and Community Services

Date: December 2, 2020

Subject: Delegation of Authority

I hereby delegate Mabel J. Kaleak as Acting Director of Planning and Community Services effective December 1, 2020 until further notice.

Please extend your cooperation to Mabel during this time.

Thank you,
December 15, 2020

Emerald House LLC
C/O Erik Opstad, Vice President
P. O. Box 112212
Anchorage, Alaska 99511-2212
Email: erik.opstad@gmail.com

RE: NSB 21-152, Administrative Approval, 500’ x 500’ Ice Pad, T8N, R7E, Sections 7, 8 & 18, Melt Water Unit, Resource Development District.

Dear Mr. Opstad:

We have reviewed your application dated December 10, 2020, in which you have requested authorization to construct a 500’ x 500’ ice pad located within the Melt Water Unit, Resource Development District.

Project Description

Introduction and Project Overview

Emerald House LLC (Emerald) plans on drilling two exploration oil and gas exploration wells on the North Slope of Alaska. The proposed wells will be drilled from ice pads within Emerald’s Peregrine Lease Block in the National Petroleum Reserve in Alaska (NPR-A) during winter 2020/2021. Access will be by the North Slope Borough Community Winter Access Trail (NSB CWAT) snow road starting near the Kuparuk River Unit (KRU) Drillsite 2P production pad and then the Peregrine Snow Road which will pioneer south from the NSB CWAT west of the Colville River within the NPR-A (Figures 2 to 4).

Emerald’s planned winter operations include constructing/maintaining an ice staging pad (“PEP 2P Staging Pad”) at the start of the NSB CWAT, helping to construct and maintain 42 miles of the NSB CWAT, constructing/maintaining another 76 miles of the Peregrine Snow Road, constructing/maintaining the Merlin-1 and Harrier-1 ice drilling pads, plus drilling and testing the Merlin-1 and Harrier-1 exploration wells.

All facilities and snow roads will be temporary, and will be designed and constructed to meet federal, State and NSB regulatory requirements, industry standards and arctic oil field best practices. Additionally, the NSB Oil and Gas Technical Report (NSB 2104) was consulted along with the NSB Comprehensive Plan from 2019 to 2030 (adopted March 2019).
Temporary Buildings and Utilities

Temporary buildings or facilities also are shown in Figure S in Attachment 1. These include the Nordic #4 40-bed modular rig camp. The rig camp includes offices, telecommunications, and restroom, food service, lounge and recreation areas. Other temporary facilities used to support logistics will include storage, spill response connexes, generators, and maintenance shops. Additionally, two 9,980-gallon fuel tanks within lined SCA will be on the ice pad.

Water and Wastewater

Fresh Water and Ice Chips. Overall and for fill Project activities, Emerald will withdraw 20 million gallons of water and will trim 10 million gallons of ice chips from 5 lakes issued under TWUA A2020-110 from the ADNR/ DM L&W. Of that total, water and ice chips used for construction of the PEP 2P Staging Pad will total 1 million gallons with water withdrawn and ice chips trimmed for Lake L9006.

Snow will be removed from portions of the lake prior to water withdrawal to help provide access for water trucks and ice chippers. Water pumped from lakes will be transported by low ground pressure vehicles or rolling stock once winter tundra travel is approved by ADNR. Rolling stock will only use trails that have been improved with a firm ice surface or packed snow to support the weight and pressure of the vehicles.

Domestic Wastewater. Camp and drill support operations are expected to generate less than 5,000 gallons per day of domestic wastewater (both gray and black water). Domestic wastewater will be temporarily stored in camp wastewater and sewage tank modules before being hauled to the NSB-SA-10 wastewater treatment plant for disposal.

Potable Water. Potable water will be sourced and hauled for use by 3rd party commercial carrier from either the CPAI KRU Central Production Facility or the NSB SA-10.

Fluids Management, Storage and Spill Response

Aboveground Storage Tanks (ASTs) storing flammable and combustible liquids will comply with the International Fire Code (IFC) and 13 AAC 50.025 regulations.

Ultra-low sulfur diesel (ULSD) will be stored in double-walled ASTs that are <9,999 gallons and spotted within lined secondary containment areas (SCAs) providing 110% containment. Red dye will be added to ULSD and ASTs will be to 90% capacity (8,999 gallons). Other chemicals, required for testing & well stimulation, also will be brought in. These various additives will be stored in 5-gallon pails, 55-gallon drums or 250-gallon isocontainers within lined SCA. All storage tanks, containers and lined SCAs will be inspected daily by an on-site Alaska Clean Seas (ACS) spill technician, and conditions will be documented.

During fuel and fluid transfer operations, equipment storage or maintenance activities, the staging pad and underlying tundra will be protected from fluid leaks or drips by using drip pans or other surface liners designed to catch and hold fluids under the equipment. Two spill technicians & fuel contractors (trained and certified oil handlers), operating under the Emerald Fluid Transfer Procedures, will attend all bulk fluid transfer operations. Spills of hydrocarbons, or chemicals on ice pads will be cleaned up immediately to prevent damage to the underlying tundra when the ice pad or roads melt.
Solid Waste Management for PEP 2P Staging Pad

All waste management activities will be conducted in general accordance with the Emerald Peregrine Exploration Program Solid Waste Management Plan (WMP) and in conformance with Emerald HSE Management Policies.

Additionally, the latest versions of the Alaska Safety Handbook (ASII), the North Slope Environmental Field Handbook (NSEFH) and the Alaska Waste Disposal & Reuse ("Redbook") Guide are adopted for Emerald operations as guidance, and will be referenced for standard operating procedures (SOPs), and workplace "best" safety, environmental & waste management practices (BMPs).

Other RCRA-exempt Wastes. Besides domestic wastewater, the rig camp will generate <1 gallon/day of household (camp) fluid. These are exempt from regulation as Resource Conservation and Recovery Act (RCRA) hazardous wastes ("RCRA-exempt wastes") per 40 CFR 261.4 and 261.7. These RCRA-exempt household wastes will be combined with the domestic wastewater and temporarily stored in the camp sewage tank modules before being hauled to the NSB SA-10 WWTP for disposal.

Non-hazardous Solid Wastes. Non-hazardous solid waste will include municipal solid waste (MSW) such as kitchen waste, construction & demolition (C&D) waste such as plastic, empty aerosol cans & timbers, as well as used metal. Each waste stream will be stored in separate dumpsters and will be managed to avoid potential wildlife interactions by covering. MSW and C&D dumpsters will be hauled offsite for disposal in the NSB SAIO landfill. Used metal may be sent to Fairbanks for recycling.

Universal Wastes. Universal wastes are hazardous wastes that are not listed nor characteristically toxic, reactive, corrosive or flammable. These include used oil and lubricants, printer cartridges and batteries.

These waste streams will be temporarily stored on site in Satellite Accumulation Areas (SAAs) in the camp area within lined SCA. Used oil will be packaged in drums for transport and recycled or disposed at an approved facility. Batteries and cartridges will be hauled offsite for disposal and/or recycling at approved facilities. (Please see attachments for more details).

Purpose

This project is needed in support of the Peregrine Exploration Program.

This project is scheduled to commence on December 15, 2020, with a completion date of April 27, 2021.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Resource Development District.

We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

PROJECT SPECIFIC STIPULATIONS

1. Emerald House shall get a Non-Objection letter from all land owners and provide a copy to the North Slope Borough Land Management Division.
2. Emerald House shall have two trained fuel handlers on sight during all fueling/refueling activities.

WILDLIFE STIPULATION

The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Land Management Divisions before the start of any field activities.

SPILL RESPONSE REQUIREMENTS

1. Emerald House shall have an approved spill response and contingency plan. The approved Plan shall be attached to this file for reference. NSBMC 19.70.050 I (11)

SPILL RESPONSE TACTICS

1. Place drip pans under vehicles parked over 5 minutes.

2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks.

3. Impermeable lining and diking is required for fuel storage facilities with a capacity greater than 660 gallons.

Pink dye is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by Emerald House.

ICE ROADS AND PADS STIPULATIONS

1. Water may be extracted only from sources approved by the Department of Natural Resources.

2. Onshore ice road construction is not to commence until frost has penetrated the ground to a depth of one-foot. The ice road is to be maintained at a minimum thickness of six (6) inches. NSBMC 19.50.030(J); NSBMC 19.60.040(O).

3. Spills of fuels, hydrocarbons, or chemicals on ice pads shall be cleaned up thoroughly prior to break-up to prevent damage to the underlying tundra when the ice pad melts. NSBMC 19.50.030) (J); NSBMC 19.60.040(O).

4. In the event that an alternate ice road route is required, all surface vehicles are to confine travel as much as possible to only those areas and times of year with sufficient (6 inches) snow cover in order to protect the underlying tundra. NSBMC 19.60.040(O).
TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 L. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 L. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. Emerald House shall consult with ICAS Realty Director, at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6”) of snow cover and twelve inches (12”) of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.
12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

- Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.
- A list of vehicles used for any off-road travel, which may have taken place.
- Statement of clean-up activities.
- Methods of disposal of garbage, and other camp debris.
- A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.
- Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspector at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.
- Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, herbert.ipalook@north-slope.org and/or rodney.ahtuangaruak@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)
4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Ralph Burke, Land Management Specialist at (907) 852-0320 ext. 5414 or by email at ralph.burke@north-slope.org

Sincerely,

Gordon R. Brower,
Land Management Administrator

c: NSB Planning Commission
Brian Person, NSB Wildlife (caribou/fox/geese/vegetation)
Robert Saydam, NSB Wildlife (Birds/Bowhead/Beluga)
Selene Tirre, Assessing Division, NSB
Olivia Cubinboy, Nuiqsut Village Deputy Assistant, NSB
Jeanne Proulx, AkiDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USD/F&WS, Fairbanks
Jeanne Hanson, USD/NMFS, Anchorage
Josephina Delgado-Plikat, DCOM, Juneau
dc.water.oilandgas@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Donna Wixon, USD/BLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AkiDNR/DOG, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
Dog.permittings@alaska.gov
Mark Major, Kuukpik Corporation, majorinor@live.com
Willow Hetrick, Kuukpik Corporation, willow@kuukpik.com
Marnie Pardue Mayor, City of Nuiqsut
Raymond Ipapook, President, Native Village of Nuiqsut
Tommy Nageak, Cultural Resource Specialist, NSB
Darren W. Aiken, TLUI Technician, NSB
Herbert Ipapook Jr., Rodney Ahtuangaruak Jr., Field Inspectors, Nuiqsut
Allyson Atos, Lead Field Inspector, Utqiagvik
Leroy Oenga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Files
## Land Management Regulations (LMR) Permit Application

<table>
<thead>
<tr>
<th>Permit Number:</th>
<th>21-152</th>
<th>Permit Type:</th>
<th>Land Development Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant:</td>
<td>Emerald House LLC</td>
<td>Date:</td>
<td>11/24/2020</td>
</tr>
<tr>
<td>Address:</td>
<td>P.O. Box 112212, Anchorage, Alaska 99511-2212</td>
<td>State ID:</td>
<td>NA</td>
</tr>
<tr>
<td>Contact Person:</td>
<td>Erik Opstad - Vice President</td>
<td>Phone:</td>
<td>907-244-5210</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:erik.opstad@gmail.com">erik.opstad@gmail.com</a></td>
<td>Project Name:</td>
<td>Peregrine Exploration Program</td>
</tr>
<tr>
<td>Location (TRS):</td>
<td>T: 08N R: 07E Sec: 7, 8 &amp; 18</td>
<td>Field Name &amp; Pad:</td>
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<tr>
<td>Zoning District:</td>
<td>Resource Development (Kuparuk River Unit)</td>
<td>Proposed Start Date:</td>
<td>12/15/2020</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Completion Date:</td>
<td>4/27/2021</td>
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<tr>
<td>Proposed Development:</td>
<td>Construct 500' x 500' ice pad at the start of the NSB CWAT, accessing the KRU Drillsite 2P lease road</td>
<td>Purpose of Development:</td>
<td>Support snow road construction; then support drill ops from pad at the start of the NSB CWAT for swapping out loads from conventional trucks to tundra-approved tractor trailers for snow road transport</td>
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<table>
<thead>
<tr>
<th>Fill/Dredge</th>
<th>Material</th>
<th>Acres:</th>
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<tbody>
<tr>
<td>Oil &amp; Gas Wells</td>
<td>Number of New Surface Holes</td>
<td>NA</td>
</tr>
<tr>
<td>Temp. Water Use</td>
<td>Sources: Lake L9006-see Plan of Ops</td>
<td>Access:</td>
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<tr>
<td></td>
<td>Purpose: Ice pad construction</td>
<td>Maximum Amount:</td>
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<tr>
<td>Off Road Travel</td>
<td>Period: NA</td>
<td>Equipment:</td>
</tr>
<tr>
<td></td>
<td>Site Access: NA</td>
<td></td>
</tr>
<tr>
<td>Fuel Storage</td>
<td>Type: Diesel with red dye</td>
<td>Amount:</td>
</tr>
<tr>
<td></td>
<td>Handling: Fluid transfers by cert. oil handlers per Spill Plan; see more details in Sec. 5 in Plan of Ops</td>
<td></td>
</tr>
<tr>
<td>Hazardous Material Storage</td>
<td>Type: NA</td>
<td>Amount:</td>
</tr>
<tr>
<td></td>
<td>Handling: NA</td>
<td></td>
</tr>
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<td>Solid Waste</td>
<td>Treatment: No onsite treatment. See Plan of Ops for solid waste handling, storage, transport &amp; disposal</td>
<td></td>
</tr>
<tr>
<td>Mining</td>
<td>Habitat:</td>
<td></td>
</tr>
<tr>
<td>Air Emissions</td>
<td>Type: Generators &amp; equipment</td>
<td>Amount:</td>
</tr>
<tr>
<td>Noise/Vibrations</td>
<td>Type: Generators &amp; equipment</td>
<td>Amount:</td>
</tr>
<tr>
<td>Sensitive Habitat</td>
<td>Floodplain: NA</td>
<td>Shoreline:</td>
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<td>Transportation</td>
<td>Type: NA</td>
<td></td>
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<tr>
<td>Marine Tanker Facility</td>
<td>Seismic Work</td>
<td>Utility Development</td>
</tr>
<tr>
<td>Causeway Construction</td>
<td>Offshore Drilling</td>
<td>Residential Development</td>
</tr>
<tr>
<td>Airport or Helicopter Pad</td>
<td>Oil Transportation System</td>
<td>Snow Removal</td>
</tr>
</tbody>
</table>

North Slope Borough
Department of Planning and Community Services
Land Management Regulation Division

Page 1 of 2
Land Management Regulations - General Application
October 2011
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES
- SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NAD 1927 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0230 TOLL FREE (IN-STATE): (800) 476-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

[Signature]
Authorized Signature

11/24/2020
Date

Erik Opstad
Name

Vice President
Title

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING
☐ DEVELOPMENT PERMIT
☐ ADMINISTRATIVE APPROVALS
☐ CONDITIONAL DEVELOPMENT PERMITS

AMOUNT PAID
$2000

DECISION
☐ ADMINISTRATIVELY APPROVED
☐ REZONING APPROVED
☐ DEVELOPMENT PERMIT APPROVED
☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
☐ PERMIT DENIED

NSB Land Management Administrator

[Signature]
Date

If you wish to appeal this decision, you must submit written notice to the Commissioner Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect. NSMBC §19.30.130.
Plan of Operations: PEP 2P Staging Pad

Emerald House LLC
Peregrine Exploration Program:

Emerald House LLC
P.O. Box 112212
Anchorage, Alaska
99511-2212

November 2020
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Note Figures are included as Attachment 1 to NSB LMR Development Permit Application
Plan of Operations: PEP 2P Staging Pad

1 Introduction and Project Overview

Emerald House LLC (Emerald) plans on drilling two exploration oil and gas exploration wells on the North Slope of Alaska. The proposed wells will be drilled from ice pads within Emerald's Peregrine Lease Block in the National Petroleum Reserve in Alaska (NPR-A) during winter 2020/2021. Access will be by the North Slope Borough Community Winter Access Trail (NSB CWAT) snow road starting near the Kuparuk River Unit (KRU) Drillsite 2P production pad and then the Peregrine Snow Road which will pioneer south from the NSB CWAT west of the Colville River within the NPR-A (Figures 2 to 4).

Emerald's planned winter operations include constructing/maintaining an ice staging pad ("PEP 2P Staging Pad") at the start of the NSB CWAT, helping to construct and maintain 42 miles of the NSB CWAT, constructing/maintaining another 76 miles of the Peregrine Snow Road, constructing/maintaining the Merlin-1 and Harrier-1 ice drilling pads, plus drilling and testing the Merlin-1 and Harrier-1 exploration wells.

All facilities and snow roads will be temporary, and will be designed and constructed to meet federal, State and NSB regulatory requirements, industry standards and Arctic oilfield best practices. Additionally, the NSB Oil and Gas Technical Report (NSB 2104) was consulted along with the NSB Comprehensive Plan from 2019 to 2030 (Adopted March 2019).

The focus of this application and plan of operations is the PEP 2P Staging Pad.

<table>
<thead>
<tr>
<th>SEQUENCE and SCHEDULE of OPERATIONS</th>
<th>Project Milestones and Schedule</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Permitting</td>
<td>10 July 2020</td>
<td>10 January 2021</td>
<td></td>
</tr>
<tr>
<td>2. Perform Field Studies</td>
<td>14 August 2020</td>
<td>5 September 2020 (complete)</td>
<td></td>
</tr>
<tr>
<td>3. Pre-pack and construct staging ice pad and then snow roads</td>
<td>7 December 2020</td>
<td>5 January 2021</td>
<td></td>
</tr>
<tr>
<td>4. Use PEP 2P Staging Pad as logistics hub, swapping out loads</td>
<td>5 January 2021</td>
<td>27 April 2021</td>
<td></td>
</tr>
<tr>
<td>5. Construct drill ice pads (concurrent with and as snow road advances)</td>
<td>27 December 2020</td>
<td>5 January 2021</td>
<td></td>
</tr>
<tr>
<td>6. Mobilize drill rig, camp, and tangibles to first well</td>
<td>5 January 2021</td>
<td>15 January 2021</td>
<td></td>
</tr>
<tr>
<td>7. Drill Merlin-1</td>
<td>15 January 2021</td>
<td>1 February 2021</td>
<td></td>
</tr>
<tr>
<td>8. Haul camp, and tangibles to Harrier-1</td>
<td>2 February 2021</td>
<td>12 February 2021</td>
<td></td>
</tr>
<tr>
<td>9. Mobilize equipment and test Merlin-1</td>
<td>1 February 2021</td>
<td>15 February 2021</td>
<td></td>
</tr>
<tr>
<td>10. Mover drill rig and drill Harrier-1</td>
<td>12 February 2021</td>
<td>8 March 2021</td>
<td></td>
</tr>
<tr>
<td>11. Move testing spread from Merlin-1 and test Harrier-1</td>
<td>8 March 2021</td>
<td>22 March 2021</td>
<td></td>
</tr>
<tr>
<td>12. Demobilize drill rig and tangibles</td>
<td>22 March 2021</td>
<td>30 March 2021</td>
<td></td>
</tr>
<tr>
<td>13. Demobilize all equipment and camps, close snow roads and ice pads</td>
<td>30 March 2021</td>
<td>27 April 2021</td>
<td></td>
</tr>
<tr>
<td>14. Stick pick ice roads and pads</td>
<td>1 August 2021</td>
<td>1 September 2021</td>
<td></td>
</tr>
</tbody>
</table>

2 Temporary Buildings and Utilities

Temporary buildings or facilities also are shown in Figure 5 in Attachment 1. These include the Nordic #4 40-bed modular rig camp. The rig camp includes offices, telecommunications, restroom, food service, lounge and recreation areas. Other temporary facilities used to support logistics will include storage, spill response connexes, generators, and maintenance shops. Additionally, two 9,980-gallon fuel tanks within lined SCA will be on the ice pad.

No utilities are planned for this project.

3 Water and Wastewater

Fresh Water and Ice Chips. Overall and for all Project activities, Emerald will withdraw 20 million gallons of water and will trim 10 million gallons of ice chips from 5 lakes issued under TWUA A2020-110 from the ADNR/DML&W. Of that total, water and ice chips used for construction of the PEP 2P Staging Pad will total 1 million gallons with water withdrawn and ice chips trimmed for Lake L9006.

<table>
<thead>
<tr>
<th>TWUA A2020-110 Water Sources Summary - PEP 2 P Staging Pad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>Lake L9006</td>
</tr>
</tbody>
</table>

Snow may be removed from portions of the lake prior to water withdrawal to help provide access for water trucks and ice chippers. Water pumped from lakes will be transported by low ground pressure vehicles or rolling stock once winter tundra travel is approved by ADNR. Rolling stock will only use trails that have been improved with a firm ice surface or packed snow to support the weight and pressure of the vehicles.

Domestic Wastewater. Camp and drill support operations are expected to generate less than 5,000 gallons per day of domestic wastewater (both gray and black water). Domestic wastewater will be temporarily stored in camp wastewater and sewage tank modules before being hauled to the NSB-SA-10 wastewater treatment plant for disposal.
Plan of Operations: PEP 2P Staging Pad

**Potable Water.** Potable water will be sourced and hauled for use by 3rd party commercial carrier from either the CPAI KRU Central Production Facility or the NSB SA-10.

4 **Fluids Management, Storage and Spill Response**

Aboveground Storage Tanks (ASTs) storing flammable and combustible liquids will comply with the *International Fire Code (IFC)* and 13 AAC 50.025 regulations.

Ultra-low sulfur diesel (ULSD) will be stored in double-walled ASTs that are <9,999 gallons and spotted within lined secondary containment areas (SCAs) providing 110% containment. Red dye will be added to ULSD and ASTs will be to 90% capacity (8,999 gallons). Other chemicals, required for testing & well stimulation, also may be brought in. These various additives will be stored in 5-gallon pails, 55-gallon drums or 250-gallon isocontainers within lined SCA. All storage tanks, containers and lined SCAs will be inspected daily by an on-site Alaska Clean Seas (ACS) spill technician, and conditions will be documented.

During fuel and fluid transfer operations, equipment storage or maintenance activities, the staging pad and underlying tundra will be protected from fluid leaks or drips by using drip pans or other surface liners designed to catch and hold fluids under the equipment. Two spill technicians & fuel operators (trained and certified oil handlers), operating under the Emerald Fluid Transfer Procedures, will attend all bulk fluid transfer operations. Spills of hydrocarbons, or chemicals on ice pads will be cleaned up immediately to prevent damage to the underlying tundra when the ice pad or roads melt.

EMERALD’s existing, Alaska Department of Environmental Conservation (ADEC)-reviewed spill plan: ADEC 20-CP-5256, covers spill response equipment to be staged at the facility; and provides spill prevention and response considerations for this Project. The Plan includes immediate response actions, reporting requirements, communication trees, receiving environments, spill cleanup mobilization response times, and spill prevention guidance. Additionally, contractors will have current, signed Spill Prevention Control and Countermeasure (SPCC) Plans specific to their onsite operations. Contractor crews will be trained in the appropriate response & prevention strategies outlined in these plans.

5 **Solid Waste Management for PEP 2P Staging Pad**

All waste management activities will be conducted in general accordance with the Emerald Peregrine Exploration Program Solid Waste Management Plan (WMP) and in conformance with Emerald HSE Management Policies.

Additionally, the latest versions of the Alaska Safety Handbook (ASH), the North Slope Environmental Field Handbook (NSEFH) and the Alaska Waste Disposal & Reuse (“Redbook”) Guide are adopted for Emerald operations as guidance, and will be referenced for standard operating procedures (SOPs), and workplace “best” safety, environmental & waste management practices (BMPs).

**Other RCRA-exempt Wastes.** Besides domestic wastewater, the rig camp will generate <1 gallon/day of household (camp) fluid. These are exempt from regulation as Resource Conservation and Recovery Act (RCRA) hazardous wastes (“RCRA-exempt wastes”) per 40 CFR 261.4 and 261.7. These RCRA-exempt household wastes will be combined with the domestic wastewater and temporarily stored in the camp sewage tank modules before being hauled to the NSB SA-10 WWTP for disposal.

**Non-hazardous Solid Wastes.** Non-hazardous solid waste will include municipal solid waste (MSW) such as kitchen waste, construction & demolition (C&D) waste such as plastic, empty aerosol cans & timbers, as well as used metal. Each waste stream will be stored in separate dumpsters and will be managed to avoid potential wildlife interactions by covering. MSW and C&D dumpsters will be hauled offsite for disposal in the NSB SA10 landfill. Used metal may be sent to Fairbanks for recycling.

**Universal Wastes.** Universal wastes are hazardous wastes that are not listed nor characteristically toxic, reactive, corrosive or flammable. These include used oil and lubricants, printer cartridges and batteries.

These waste streams will be temporarily stored on site in Satellite Accumulation Areas (SAAs) in the camp area within lined SCA. Used oil will be packaged in drums for transport and recycled or disposed at an approved facility. Batteries and cartridges will be hauled offsite for disposal and/or recycling at approved facilities.
6 Location

Location by Umiat Meridian, Townships, Ranges and Sections (MTRS) for the PEP 2P Staging Pad are listed below, along with GPS Coordinates. Pad dimensions are show in Figure 4 in Attachment 1. The pad will be large enough to safely carry out logistic support operations and will be constructed and maintained using generally accepted practices for the North Slope.

<table>
<thead>
<tr>
<th>PEP 2P Staging Pad</th>
<th>ADNR Land Use Permit</th>
<th>Umiat MTRS</th>
<th>Pad Centroid (WGS84)</th>
<th>ASPC Zone 4 – NAD83</th>
<th>Distance to (Miles)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>LAS 32023</td>
<td>T3N/R2W, S8</td>
<td>70.05827°</td>
<td>150.45244°</td>
<td>GPBU 48 KRU 27 MPU 38 Nunqisut 17</td>
</tr>
</tbody>
</table>

7 Heavy Equipment

Types and numbers of heavy equipment used to construct the ice staging pad and support logistics at the pad during drilling operations are listed below.

<table>
<thead>
<tr>
<th>Snow Road and Ice Pad Construction Kit (Typical)</th>
<th>Equipment1</th>
<th>Quantity</th>
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<th>Quantity</th>
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</thead>
<tbody>
<tr>
<td>Model 2000 Tucker Snow-Cats on tundra track w/ice auger drills</td>
<td>1</td>
<td>Cat 245 hard tail end dumps on LGP tires</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Challenger Cat DB on low ground pressure (LGP) tracks</td>
<td>2</td>
<td>Cat 966C loader or similar w/ice trimmers</td>
<td>3</td>
<td></td>
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<tr>
<td>All Terrain Tractors w/ blades</td>
<td>10</td>
<td>Volvo A25 water buffaloes on LGP tires</td>
<td>3</td>
<td></td>
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<tr>
<td>Skid-mounted roll-on roll-off winch and low boy trailers</td>
<td>10</td>
<td>Pumps and pump houses</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>5000-gal fuel “spreader” truck</td>
<td>1</td>
<td>Mobile Heaters</td>
<td>8</td>
<td></td>
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<tr>
<td>Mechanic field service truck</td>
<td>1</td>
<td>Pickup Trucks</td>
<td>10</td>
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<tr>
<td>Caterpillar Motor Grader</td>
<td>2</td>
<td>Crew Bus</td>
<td>1</td>
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</tr>
</tbody>
</table>

1 All terrain tractors include Steigers and Pisten Bullys; all tanks and trailers are on tracks, low-ground pressure tires, skids or sleds

8 Permit Requirements

The following permits are required for the construction and successful operation of the PEP 2P Staging Pad.

<table>
<thead>
<tr>
<th>Permit Information</th>
<th>Agency</th>
<th>Permit Type</th>
<th>Permit Number</th>
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<tr>
<td></td>
<td>NSB Department of Planning &amp; Community Services</td>
<td>NSB Traditional Land Use Inventory (TLUI) Certificate of Clearance</td>
<td>NSB 21-001</td>
<td></td>
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<tr>
<td></td>
<td>NSB Department of Planning &amp; Community Services</td>
<td>NSB Development Permit for PEP 2P Staging Pad</td>
<td>TBD</td>
<td>NSB notified of project; pre-app meeting conducted in June 2020. LMR application submitted with this Plan of Operations.</td>
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<tr>
<td></td>
<td>ADNR / Division of Mining, Land &amp; Water (DML&amp;W)</td>
<td>Temporary Water Use Authorizations (TWUAs) for water withdrawal</td>
<td>TWUA 2020-110</td>
<td>Submitted</td>
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<td></td>
<td>ADNR/DML&amp;W</td>
<td>Land Use Permit</td>
<td>LAS 32023</td>
<td>Executed, revised to reflect constructing and operating staging pad</td>
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Plan of Operations: PEP 2P Staging Pad

### Permit Information

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</thead>
<tbody>
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<td>MGP1 Air Quality Permit for Land Drill Rigs and Related Equipment</td>
<td>TBD</td>
<td></td>
</tr>
<tr>
<td>ADEC / Division of Spill Prevention &amp; Response (SPAR)</td>
<td>Oil Discharge Prevention and Contingency Plan 20-CP-5256</td>
<td>ODPCP 20-CP-5256</td>
<td>Emerald responding to RFAs prior to distribution</td>
</tr>
<tr>
<td>ADEC / Division of Environmental Health (EH)</td>
<td>Peregrine Exploration Program Solid Waste Management Plan</td>
<td>Submitted</td>
<td>Under review</td>
</tr>
<tr>
<td>AK Department of Fish &amp; Game (ADF&amp;G) / Division of Habitat</td>
<td>Title 16 Fish Habitat</td>
<td>Submitted</td>
<td>Under review</td>
</tr>
<tr>
<td>US Environmental Protection Agency</td>
<td>Spill Prevention, Control &amp; Countermeasure (SPCC) Plan</td>
<td>Stamped</td>
<td>PE No. 7794</td>
</tr>
<tr>
<td>US Fish and Wildlife Service (USFWS)</td>
<td>Letter of Authorization (LOA) for Incidental take of Polar Bear</td>
<td>Submitted</td>
<td>USFWS is preparing LOA</td>
</tr>
<tr>
<td>US Army Corps of Engineers/ Alaska Division (USACOE)</td>
<td>Wetlands consultation</td>
<td>Complete</td>
<td>Wetlands not impacted</td>
</tr>
</tbody>
</table>

### 9 Subsistence Plan

The proposed pad is within the Nuiqsut Subsistence Use Area.

Emerald understands subsistence is a way of life for Nuiqsut residents and it is important to protect subsistence resources, uses and access. Emerald also understands that due to the high costs of goods, fuel and transportation, subsistence harvests reduce food costs and, more important, provides cultural identity and spirit. Emerald has completed consultation and a review of recent subsistence field surveys and inventories of prehistoric, historic, and archeological sites.

**PURPOSE & SCOPE**

The goal of Emerald is to provide measures to mitigate subsistence impacts and to ensure Project security and safety procedures do not unduly restrict or reduce access to wildlife by subsistence hunters during operations. This will be achieved by implementing the following.

**MEASURES to MITIGATE SUBSISTENCE IMPACTS**

Account for Subsistence Harvests When Scheduling Project Activities. This Project will take place in the area where there are active subsistence harvests by Nuiqsut. Therefore, Emerald has opted to delay the start of this Project until the colder and darker part of winter 2020/2021 when limited subsistence activities takes place, and is generally limited to trapping and hunting moose and/or caribou further south in the Umiat area.1 This can help reduce adverse impacts to subsistence use from this Project.

**Community and Agency Communication.** Emerald also has already established a dialog with the NSB, local villages, and affected public on its exploration programs.

Additional Project meetings and updates will be held, as necessary, with the NSB Planning and Community Services Department and with stakeholders in Nuiqsut as well. These discussions will help with the development of a plan of cooperation regarding Emerald operations on the North Slope.

The purpose of this dialog will help identify and implement measures that will be taken to minimize adverse effects on the availability of fish and wildlife for commercial and subsistence uses, and to ensure that operations have no negative effect on the quality of life for Alaskans. Emerald will work with all concerned stakeholders to maintain efficient and effective communications with the affected communities for the duration of the project.

**Subsistence Representatives and Access.** Emerald is negotiating with Umiaq Environmental LLC, Ukpik Inupiat Corporation (UIC) and ASRC Energy Services (AES) for Subsistence Representatives during the winter drilling program to ensure that activities are conducted to minimize potential impact to local subsistence activities. Emerald has worked with representatives from both companies in the past.

Emerald also will construct the staging pad and snow road approaches and shoulders to allow for smooth and easy transition for snow machines traffic when crossing through the Project area and safety buffer zone along the ice road. With respect to access, Emerald will not restrict traditional and customary subsistence access to and harvesting in the Project area, except for a 100-foot safety zone around the PEP 2P Staging Pad. Note that although public access to the ice...
Plan of Operations: PEP 2P Staging Pad

pad must be restricted due to safety concerns, Emerald will provide shelter and assistance to all in emergency sit

**Documentation and Compliance.** If potential subsistence issues are identified, subsistence representatives will be contacted and updated during drilling and testing operations to minimize impacts. The permitting actions associated with the exploration well will be public noticed as part of the permitting processes. If there are concerns with regards to the Project, Emerald will be receptive and pro-active, and records of all concerns expressed by subsistence hunters during operations will be maintained.

**Responsibilities.** The Emerald Field Environmental Coordinator will be responsible implementing this plan and overseeing Subsistence Representatives during operation. The Emerald HSE Manager will be responsible for submitting required reports to State and local agencies; and for updating this plan.

10 Rehabilitation Plan

Upon completion of drilling and testing operations, and after demobilization of all facilities, the ice staging pad will be “tight banded” by grader to remove dark-colored drips missed by the ACS spill technician and the snow spoils will be thawed with resulting oily water disposed of at a permitted disposal facility. Trash and debris will be removed and transported for disposal at NSB SA-10. Emerald will conduct an inspection and “stick picking” operation via helicopter in Summer 2021 to ensure that NSB and State cleanup requirements have been met.

Although activities will be conducted only on the ice pad, impacts to vegetation and habitat may occur. Therefore, Emerald will inspect the Project area following snowmelt in 2021 during stick picking to confirm that tundra damage did not occur.

If tundra damage is discovered, Emerald will consult with the State and NSB to determine the appropriate methods for restoration and incorporate them into a Tundra Damage Rehabilitation/Remediation Plan that meets requirements found in NSBMC § 19.30, 19.500 and § 19.60, and specific State requirements found in LAS 32023. The Plan will address the area, type, and extent of damage and will be developed in accordance with the Alaska Coastal Revegetation & Erosion Control Guide (developed by the ADNR Plant Materials Center), the Streambank Revegetation and Protection Guide (developed by the Alaska Department of Fish and Game), and other relevant guidance documents. NSB and State personnel will be invited to verify that rehabilitation operations are complete and that any issues identified are addressed.

11 Measures to Minimize Adverse Effects

**HISTORIC & ARCHEOLOGICAL SITES**

Emerald has completed consultation and reviewed field survey reports submitted to ADNR/OHA State Historic Preservation Office ("SHPO") by others to inventory prehistoric, historic, and archeological sites on and around the proposed ice pad. This included reviewing SHPO Iliupiat History, Language & Culture (IHLC) Traditional Land Use Inventory (TLUI) data provided to other companies that constructed staging pads in the same location and/or same location area. No essential subsistence areas or cultural sites are found within 7 miles of the proposed ice staging pad. Emerald also has requested concurrence from the that “no historical properties are affected,” especially when PEP 2P Staging Pad activities are limited to winter with snow-covered tundra & frozen ground.

Based on the review recommendations and to further prevent impacts, Emerald located its snow road alignment and ice pad within a 500-foot buffer zone within which all Project activities will be conducted. Emerald’s intention is that historic, cultural or archeological resources (or suspected resources) discovered during Project activities are not to be disturbed under any circumstance.

This will include providing training to all field personnel on what to do as part of required Project orientation. If archeological sites are discovered during Project activities, the following steps will be taken.

1. Project personnel discovering suspected critical sites during operations will not disturb nor enter the site, and mark the area with flagging tape or some other means;
2. Project personnel will stop all activities and inform their job supervisor whom will contact Emerald onsite representatives;
3. Emerald will immediately report these properties to SHPO and NSB ILHC for identification and assessment;
4. Emerald will then use identification and assessment consultations to guide further planned activities in the site...
FISH & WILDLIFE HABITAT
Wildlife avoidance & interaction plans have been prepared, and are under review by the ADF&G and USFWS. These plans are adopted by reference and will be covered extensively in the site orientation training for all Project personnel.

Pads constructed of ice will only be used in winter months during the open winter tundra travel season. Emerald identified willow habitats and then moved the ice pad to avoid them. Emerald also focused on avoiding areas (especially south-southwest facing stream embankments, pingos and drained lakes) that appeared to be prime bear den habitat, keeping in mind required buffer zones.

Wildlife that also may be in the area during the winter season are owls, ravens, arctic fox, wolverine, musk ox, and possibly, over-wintering caribou. Grizzly bears are known to inhabit the general area of where the project will occur but are likely to be inactive during the winter season. Polar bear range and habitat is not within this program and they probably will not be encountered.

More detailed information is provided in the Emerald Wildlife Avoidance & Interaction Plan, Bear Avoidance Interaction Plan. All plans are adopted by reference.

Emend and its contractors will exercise caution during the Project. Should a grizzly bear or polar bear be encountered, Emerald will follow the procedures as outlined the Peregrine Exploration Program Bear Avoidance Interaction Plan. Any sightings will be reported immediately to the Company Man and Emerald Lead Field Environmental Coordinator to warn personnel of the bear. Agency reporting will follow within 24 hours to reporting contacts listed in the Plan.

TRAINING PROGRAM
All Operations. The Emerald training program has been designed to inform everyone assigned to the Project of the environmental, social, and cultural concerns that relate to their job functions. Training components include a review of permit stipulations and requirements, cultural awareness, spill prevention and reporting, wildlife interaction, site specific safety, waste management practices, etc.

All personnel will participate in a specific training program module for bear safety and a briefing of the Bear Avoidance, Interaction, and Mitigation Plan. In addition, Emerald employees and contractors are required to complete an 8-hour training program provided by the North Slope Training Cooperative (NSTC). The North Slope Field Environmental Handbook, Alaska Safety Handbook, and a North Slope Visitor’s Guide are used for the training. The latest versions of these handbooks are adopted by reference, and copies will be readily available to personnel in the field. The training program includes classes on the Alaska Safety Handbook, personal protective equipment, camp and safety orientation, hazard communication, HAZWOPER Level I, and Environmental Awareness.

Finally, Emerald also requires that all company personnel and contractors attend rig and location safety meetings (pre-tour, SIMOPS, and weekly), as well as participate in the contractor’s behavioral safety practice program (“RA/JSEA, PTW, STOP,” etc.) and on-site training orientation.

INTERACTING with LOCAL COMMUNITIES and COMMUNITY GROUPS.
As part of the permitting process, Emerald has published public notices detailing planned winter drilling program operations in Utqiagvik, Fairbanks and Anchorage, and has been responding to requests for additional information (RFAI) from individuals and government as well as non-government organizations interested in the Project.

12 Emerald Project Contacts
In mid-November, Emerald will finalize a personnel contact list for drilling operations. In the interim, the following are available to answer questions and address concerns.

- Erik Opstad – Vice President
  907-244-5210
  erik.opstad@gmail.com

- Steve Rog – HSE Manager
  907-345-0022
  steverog@gci.net

- Rob Crotty – Lead Field Coordinator
  907-952-6803
  crottyrob@gmail.com

- Sonny Kula – Lead Field
13 Plans, Studies and References
The following completed studies, reference documents and consultations were utilized by Emerald in the planning and permitting efforts for the Peregrine Exploration Program:


   - Zoning District (Map B-2)
   - Distribution of Subsistence Use (Map B-5)
   - Anadromous Streams (Map B-6)
   - Caribou Summer & Winter Ranges (Map B-11)


6. **NSB TLUI 18-005 Clearance Certificate noting no TLUI data in immediate area** (October 2020)


8. Telephonic Conversation and Personal Communication with McKenzie Johnson/USF&WS-Marine Mammals Division regarding the Project area, polar bear dens, low probability of encountering polar bears within the Project alignment and LOA consultation. (17 November 2020).


11. **Peregrine Exploration Program Oil Discharge Prevention and Contingency Plan** (ADEC 20-CP-5256), Revision 0

12. **Emerald Well Control and Emergency Response Plan** (ELKO International LLC, 2020)
PEREGRINE Exploration Program:
NSB LMR Development Permit for PEP 2P Staging Pad Application Fee
Check Request Form
Complete and return to Erik Opstad

<table>
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<th>Requested by:</th>
<th>Rob Crotty</th>
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<tr>
<td>CC:</td>
<td>Steve Rog &amp; Lauren Camron</td>
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<tr>
<td>Approval</td>
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<td></td>
<td>Department of Planning &amp; Community</td>
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<tr>
<td></td>
<td>Services</td>
</tr>
<tr>
<td></td>
<td>Attn: LAND MANAGEMENT ADMINISTRATOR</td>
</tr>
<tr>
<td></td>
<td>P.O. BOX 69</td>
</tr>
<tr>
<td></td>
<td>BARROW, AK</td>
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☑ APPROVED
ELKO INTERNATIONAL, LLC

E. OPSTAD MANAGING DIRECTOR
Attachment 1

Maps

MAP SUMMARY

Figure 1: General Vicinity
Figure 2: General Land Status
Figure 3: Proposed Overall Project
Figure 4: Proposed PEP 2P Staging Pad
Figure 5: PEP 2P Staging Pad Layout
Attachment 2

Plan of Operations for PEP 2P Ice Staging Pad

Peregrine Exploration Program
December 14, 2020

ConocoPhillips Alaska, Inc. (CPAI)
C/O Jennifer Collins, Senior Environmental Coordinator
P.O. Box 100360
Anchorage, Alaska 99510-0360
Email: Jennifer.Collins@ConocoPhillips.com

RE: NSB 21-153, Administrative Approval, (Minor Alteration to an approved NSB 19-313)
Greater Mooses Tooth 2/ Mooses Tooth 7 (GMT2/MT7) Chemical Storage Tank Farm, T10N,
R2E, Section 32, Umiat Meridian, Alpine Satellite Unit, Resource Development District.

Dear Ms. Collins:

We have reviewed your application dated December 11, 2020, in which you have requested authorization
for a minor alteration to an approved NSB 19-313 Drill Site Pad to include various drilling and
production fluids on the GMT2/MT7 pad located within the Alpine Satellite Resource Development
District.

Project Description

The tanks will contain standard liquids for North Slope oil field operations such as weathered crude,
diesel, crude, drilling waste (e.g. cuttings and mud) and other hydrocarbon products, recycled water,
mineral oil, brine, seawater, methanol, corrosion inhibitor, scale inhibitor, emulsion breaker, glycol,
mutual solvent, and foam inhibitor, as well as other fluid used in well drilling, well workovers, well
treatments, and associated well operations, and other fluids used in North Slope oil and gas operations. If
the tanks contain weathered crude, it would be used for freeze protection of piping and wells during
shutdowns.

The GMT2/MT7 permanent fluid storage includes three nominal 750 barrel tanks (847 barrel capacity) at
the Chemical Tank Farm tanks will be equipped with electronic liquid level protection devices as well as
high level alarms. The truck loading area will be equipped with instrumentation to monitor transfer
volume between tank truck and a tank and to activate automatic shut off and/or valve closure with audible
and visual alarms to prevent overfill. Activation of level alarms triggers a beacon light at the truck loading
area and sends a notification alarm to the board operator in the main control room.

The permitted Chemical Tank Farm tanks will be installed within permanent secondary containment. The
secondary containment will be a lined containment basin with concrete walls and will be sized to hold the
contents of the largest tank in the containment with additional capacity to allow for local precipitation.
The associated oil piping will be installed above ground to support tank loading and unloading. All
project work connected to the tanks on the existing pad and was previously authorized under NSB 19-313.

CPAI holds a Spill Prevention and Countermeasure Control (SPCC) plan for its oil storage and has an approved Oil Discharge Prevention and Contingency Plan (ODPCP) to control and clean up any accidental discharges of oils. All oil storage and handling will follow the CPAI procedures and best management practices. Oil and hazardous substance spills will be communicated to the proper agencies and landowners, as appropriate. CPAI maintains rigorous fuel transfer protocols and procedures, including the use of secondary containment devices during all fueling operations.

The expanded list of drilling and production fluids will begin to be utilized as early as February 1, 2021. The tanks will be utilized until the end of field life.

**Purpose of Project**

The purpose of this project is to increase field flexibility to respond to operational needs to support Western North Slope oil and gas operations.

This project is scheduled to commence on February 1, 2021 with a completion date of the end of field life.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Resource Development District.

We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

**GENERAL STIPULATIONS**

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kalook@north-slope.org, herbert.ipalook@north-slope.org and/or rodney.ahtuangaruak@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of
absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(f)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Lilly Kilapsuk Land Management Specialist at (907) 852-0320 ext. 5411 or by email at lilly.kilapsuk@north-slope.org.

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Arnold Brower Jr., Executive Director, AEWC
Olivia Cavinboy, Nuiqsut Village Deputy Assistant, NSB
Jeanne Proulx, AKDNR, Fairbanks
Lee McKenley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewell Bennett, Louise Smith, USDF&W, Fairbanks
Jeanne Hanson, USDI/MMFS, Anchorage
Josephina Delgado-Plikat, DCOM, Juneau
dewater.oilandgas@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.Mccoy@usace.army.mil
Donna Wixson, USDI/BLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AKDNR/DOG, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
dog.permitting@alaska.gov
Mark Major, Kuukpik Corporation, majorinor@live.com
Willow Hetrick, Kuukpik Corporation, willow@kuukpik.com
Minor Alteration to an approved NSB 19-313

CPAI

Page 4

Joseph Nukapigak, President, Kuukpik Village Corporation
Mamie Pardue Mayor, City of Nuiqsut
Raymond Ipalook, President, Native Village of Nuiqsut
Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspectors, Nuiqsut
Alyson Atos, Lead Field Inspector, Utqiagvik
Leroy Oenga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Files

NSB21-153/GRB/ml/pdi LMR Manager/lk
Land Management
Regulations Permit Application

Permit Number: 21-153

Applicant: ConocoPhillips Alaska, Inc

Address: P.O. Box 100360
Anchorage, AK 99510-0360

Contact Person: Jennifer Collins

Location (TRS): T10N, R2E Section 32

Zoning District: Alpine Satellite RDD

Proposed Start Date: 2/1/2021

Proposal Development:
ConocoPhillips Alaska, Inc. (CPAI) requests a minor alteration to North Slope Borough (NSB) 19-313 to include various drilling and production fluids on the Greater Mooses Tooth 2, also known as Mooses Tooth 7 (GMT2/MIT7) pad.

Purpose of Development:
The purpose of this project is to increase field flexibility to respond to operational needs to support Western North Slope oil and gas operations.

☐ Fill/Dredge

☐ Oil & Gas Wells
Number of New Surface Holes:

☐ Temp. Water Use
Source: N/A
Access: N/A

☐ Off Road Travel
Period: N/A
Site Access: N/A

☒ Fuel Storage
Type: See attached
Handling: See attached
Amount: See attached

☒ Hazardous Material Storage
Type: See attached
Handling: See attached
Amount: See attached

☐ Solid Waste
Treatment: N/A

☐ Mining
Habitat: N/A

☐ Air Emissions
Type: N/A
Amount: N/A

☐ Noise/Vibration
Type: N/A
Amount: N/A

☐ Sensitive Habitat
Floodplain: N/A
Shoreline: N/A

☐ Transportation
Type: N/A

☐ Marine Tanker Facility
☐ Seismic Work
☐ Utility Development

☐ Recreational Development

☐ Causeway Construction
☐ Offshore Drilling
☐ Residential Development

☐ CD-ROM Included

☐ Temporary Airport
☐ Oil Transport System
☐ Snow Removal

☒ Maps Included

Permit Type: Administrative Approval

Date: December 10, 2020

State ID: 

Phone: (907) 265-6509

Project Name: GMT2/MIT7 Chemical Storage Tank Farm

Field Name & Pad: Alpine Satellite RDD / GMT2/MIT7 Pad

Completion Date: End of Field
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES. THE PROJECTION SHOULD BE NAD 27 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED)

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLLFREE (IN STATE): (800) 478-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT

Authorized Signature

Jennifer Collins

Name

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING
☐ DEVELOPMENT PERMIT
☒ ADMINISTRATIVE APPROVALS
☐ CONDITIONAL DEVELOPMENT PERMITS

AMOUNT PAID: $1,500

Fee to be paid monthly by Electronic Funds Transfer.

12/10/2020

Date

Senior Environmental Coordinator

Title

DECISION
☒ ADMINISTRATIVELY APPROVED
☐ REZONING APPROVED
This is a minor amendment to a development permit or is a use of land listed under administrative approvals for this zoning district.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan conditions, lease stipulations, and provision of state and federal law and permits served hereunder.

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory policies, represents the Developer’s best efforts to implement all relevant best efforts and minimization policies, and as long as any conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter).

☐ PERMIT DENIED
(See accompanying letter)

Land Management Administrator

Date

12/14/20

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect.
NSMBC §19.30.130.
GMT2/MT7 Chemical Storage Tank Farm
Alpine Satellite Resource Development District
Minor Alteration to NSB 19-313
Greater Mooses Tooth Unit – BLM Sundry

Project Description

ConocoPhillips Alaska, Inc. (CPAI) requests a minor alteration to North Slope Borough (NSB) 19-313 to include various drilling and production fluids on the Greater Mooses Tooth 2, also known as Mooses Tooth 7 (GMT2/MT7) pad. The purpose of this project is to increase field flexibility to respond to operational needs to support Western North Slope oil and gas operations.

The tanks will contain standard liquids for North Slope oil field operations such as weathered crude, diesel, crude, drilling waste (e.g. cuttings and muds) and other hydrocarbon products, recycled water, mineral oil, brine, seawater, methanol, corrosion inhibitor, scale inhibitor, emulsion breaker, glycol, mutual solvent, and foam inhibitor, as well as other fluid used in well drilling, well workovers, well treatments, and associated well operations, and other fluids used in North Slope oil and gas operations. If the tanks contain weathered crude, it would be used for freeze protection of piping and wells during shutdowns.

The GMT2/MT7 permanent fluid storage includes three nominal 750 barrel tanks (847 barrel capacity) at the Chemical Tank Farm. These tanks were previously authorized under NSB 19-313.

The permitted Chemical Tank Farm tanks will be equipped with electronic liquid level protection devices as well as high level alarms. The truck loading area will be equipped with instrumentation to monitor transfer volume between the tank truck and a tank and to activate automatic shutoff and/or valve closure with audible and visual alarms to prevent overfill. Activation of level alarms triggers a beacon light at the truck loading area and sends a notification alarm to the board operator in the main control room.

The permitted Chemical Tank Farm tanks will be installed within permanent secondary containment area. The secondary containment will be a lined containment basin with concrete walls and will be sized to hold the contents of the largest tank in the containment with additional capacity to allow for local precipitation. The associated oil piping will be installed above grade to support tank loading and unloading. All project
work connected to the tanks will occur on the existing pad and was previously authorized under NSB 19-313.

CPAI holds a Spill Prevention and Countermeasure Control (SPCC) plan for its oil storage and has an approved Oil Discharge Prevention and Contingency Plan (ODPCP) to control and clean up any accidental discharges of oils. All oil storage and handling will follow the CPAI procedures and best management practices. Oil and hazardous substance spills will be communicated to the proper agencies and landowners, as appropriate. CPAI maintains rigorous fuel transfer protocols and procedures, including the use of secondary containment devices during all fueling operations.

The expanded list of drilling and production fluids will begin to be utilized as early as February 1, 2021. The tanks will be utilized until the end of field life.
December 11, 2020

Great Bear Pantheon LLC (GBP)
C/O Patrick Galvin, Chief Commercial Officer
3705 Arctic Blvd, Suite 2324
Anchorage, Alaska 99503
Email: pat@greatbearpetro.com

RE: NSB 21-154, Administrative Approval, 5 Mile Ice Road, T6N R13E, Sections 25-29, Transportation Corridor.

Dear Mr. Galvin:

We have reviewed your application dated December 11, 2020, in which you have requested authorization to construct a 5 mile ice road located within the Transportation Corridor.

Roads

Approximately 8 miles of ice road connected to the Dalton Highway at Milepost 386.7 will be required to access the Talitha A site. The ice road will be approximately 35 feet wide and will have a minimum of 0.5 feet of ice cover over the tundra. A diagram of the driveway at the Dalton Highway is shown in the attachments.

Standard methods will be used to minimize impacts to vegetation, such as filling in small streambeds with extra snow for additional insulation. The routes will be surveyed to ensure that the approved route is followed during construction activities. Some minor re-routes may be required depending on site specific conditions at the time of construction. Great Bear plans to have thermistor strings placed along ice road routes and at proposed ice pad locations and will be used to monitor ground temperatures.

Ice roads will be built using a combination of existing snow along the route, water, and ice chips from approved water sources. Ice construction activities, including any pre-packing, will be performed in accordance with DNR approvals. Additional water and ice from permitted sources will be used to maintain ice roads in good condition throughout the winter drilling season.

The first five miles are permitted under NSB 21-154 and last three are under NSB 21-147.

Purpose

This project is needed in support of the Talitha A Exploration Project.

This project is scheduled to commence on December 15, 2020, with a completion date of May 15, 2021.
It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Resource Development District.

We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

**WILDLIFE STIPULATION**

1. The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Land Management Divisions before the start of any field activities.

**ICE ROADS AND PADS STIPULATIONS**

1. Water may be extracted only from sources approved by the Alaska Department of Natural Resources.

2. Onshore ice roads/pads construction is not to commence until frost has penetrated the ground to a depth of one-foot. The ice road/pad is to be maintained at a minimum thickness of six (6) inches. NSBMC 19.50.030(J); NSBMC 19.60.040(O).

3. Spills of fuels, hydrocarbons, or chemicals on ice roads/pads shall be cleaned up thoroughly prior to break-up to prevent damage to the underlying tundra when the ice road/pad melts. NSBMC 19.50.030(J); NSBMC 19.60.040(O).

4. In the event that an alternate ice road route is required, all surface vehicles are to confine travel as much as possible to only those areas and times of year with sufficient (6 inches) snow cover in order to protect the underlying tundra. NSBMC 19.60.040(O).

**SPILL RESPONSE REQUIREMENTS**

1. GBP shall have an approved spill response and contingency plan. The approved Plan shall be attached to this file for reference. NSBMC 19.70.050 I (11)

**SPILL RESPONSE TACTICS**

1. Place drip pans under vehicles parked over 5 minutes.

2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks.

3. Impermeable lining and diking is required for fuel storage facilities with a capacity greater than 660 gallons.
Pink dye is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by GBP.

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050 K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 I. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 I. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. GBP shall consult with ICAS Realty Director, at (907) 852-4227 and when seeking permits must meet requirements of ICAS prior to commencement of project. Communications with ICAS Realty must be submitted to NSB Planning Dept for further review.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.
11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

   o Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.

   o A list of vehicles used for any off-road travel, which may have taken place.

   o Statement of clean-up activities.

   o Methods of disposal of garbage, and other camp debris.

   o A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.

   o Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuanguaruk Jr., Field Inspector at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.

   o Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Lang Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cells, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, and/or herbert.ipalook@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at
all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Anaktuvuk Pass at (907) 661-3612 and Nunamiut Corporation at (907) 661-3036 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer’s compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Ralph Burke, Land Management Specialist at (907) 852-0320 ext. 5414 or by email at ralph.burke@north-slope.org

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Della Tagarook, Anaktuvuk Pass Village Deputy Assistant, NSB
Jeanne Proulx, AKDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDI/FWS, Fairbanks
Jeanne Hanson, USDI/NMFS, Anchorage
Josephina Delgado-Pilikat, DCOM, Juneau
deg.water.oilandgas@alaska.gov
Reese Thiene, Industrial Facility Specialist, ADEC, reese.thiene@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.McCoy@usace.army.mil
Donna Wixon, USDI/BLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AKDNR/DOG, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
doel.permitting@alaska.gov
Lawrence Burrett, President, Nunamiss Corporation
Mayor, City of Anaktuvuk Pass
Tommy Nageak, Cultural Resource Specialist, NSB
Darren W. Aiken, TLUI Technician, NSB
Herbert Ipaloak Jr., Field Inspector, Nuiqsut
Allyson Atos, Lead Field Inspector, Utqiagvik
Leroy Oonga Jr., Ralph Kakeak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Inupiat Community of the Arctic Slope Village Liaison, Anaktuvuk Pass
Files

NSB21154/-GRB/mic/pdL LMR Manager/rjb
**Land Management Regulations (LMR) Permit Application**

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<tr>
<td>Applicant:</td>
<td>Great Bear Petroleum LLC</td>
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<tr>
<td>Address:</td>
<td>3705 Arctic Blvd, Suite 2324, Anchorage, AK 99503</td>
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<tr>
<td>Contact Person:</td>
<td>Patrick Galvin</td>
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<td>Email:</td>
<td><a href="mailto:pat@greatbearpetro.com">pat@greatbearpetro.com</a></td>
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</table>
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES
- SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NAD 1988 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 453-0400 TOLL FREE (IN-STATE): (800) 476-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

Authorized Signature

Date: 12/11/2020

Patrick Galvin
Name

□ SPECIAL PLANNING COMMISSION MEETING
□ DEVELOPMENT PERMIT
□ ADMINISTRATIVE APPROVALS
□ CONDITIONAL DEVELOPMENT PERMITS

FEE PAID
$12,000
$2,000, plus $500/well
$1,500
$3,600

AMOUNT PAID

DEcision
□ ADMINISTRATIVELY APPROVED
This is a minor alteration to a previously approved development permit for commercialization.

□ REZONING APPROVED
This revised development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan conditions, lease stipulations, and provisions of the state and federal laws and permit issued thereafter.

□ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable zoning policies, represents the developer's best efforts to implement all relevant lease conditions, and complies with the condition set forth in the accompanying letter. (See accompanying letter.)

□ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land that is listed as conditional development for this zoning district or has been deemed by the NSB Land Management Administrator to the Planning Commission.

□ PERMIT DENIED
(See accompanying letter)

NSB Land Management Administrator

Date: 12/14/20

If you wish to appeal this decision, you must submit written notice to the Community Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect. NSMBC §19.30.130.
Talitha A Well
Winter 2020/2021

Project Overview
Great Bear Pantheon intends to drill the Talitha A well this winter. The well will be located approximately eight miles west of the Dalton Highway, approximately 25 miles south of Deadhorse, adjacent to Franklin Bluffs.

The drillsite will be located on state oil and gas lease ADL 391658, at Umiat Meridian, Township 05N, Range 12E, Section 03; at coordinates 69° 49' 23.11" N, -149° 5' 25.90 W. It will be accessed via an 8-mile ice road that will have a driveway on the Dalton Highway at approximately Milepost 386.7, as shown below.

The Well
The Talitha A well will be drilled as winter ice road/pad supported operation. It will be drilled using the Nordic-Calista Rig #3. Targetted spud date is 1/25/21. It will be a vertical well drilled to the base of the Kuparuk sand to approximately 10,200’. There are multiple targets in the Brookian and Kuparuk intervals that will be evaluated. The well will be logged, cased, and will
likely be fracture stimulated at the most prospective interval encountered. If logistically possible, a small lateral may be drilled into a prospective interval as well. A decision on a lateral and/or stimulation will be made based on seasonal timing and logging results. The log suites are expected to include: Quad Combo, FMI, RFT, rotary sidewall cores, NMRI, Caliper, and possibly others. Unless the results are significantly below expectations, the well is expected to be suspended for potential use as a producer.
Pad Layout
The ice drill pad will be approximately 520' x 240' (124,800 sq ft, 2.86 acres) as the working surface, larger at the base, and is expected to be approximately 3 feet thick. Support facilities will include a satellite office camp, with an 11-bed capacity for the Company Man and alternate (sufficient for the entire crew to shelter in place in case of emergency need), storage areas (e.g., fuel storage, drilling waste or fluid components storage), and maintenance buildings. The crew will be housed at a camp (or the Aurora Hotel) in Deadhorse and shuttled to the well site for their shifts. The layout of the buildings on the ice pad is shown above.

Fuel and Hazardous Materials
Fuel will be stored on the drilling pads and possibly at emergency shelters (if used). Fuel storage tanks will include secondary containment that will hold a minimum of 110 percent (110%) of the single largest tank or any group of tanks permanently manifold together. Fuel storage, handling, transfers, and spill reporting will be conducted in accordance with the regulatory requirements as described in the Great Bear Exploration Project C-Plan, North Slope Environmental Field Handbook, and Alaska Safety Handbook. All bulk fuel and fluid transfers in excess of 500 gallons will be monitored by an Alaska Clean Seas (ACS) Spill Technician. The size of the day tank on the rig may vary, but it will be less than a 10,000-gallon capacity. The maximum amount of fuel stored at a drill site will be 9,000 gallons. All fuel and hazardous materials stored at the drill site will be kept more than 100 feet from a waterbody. Drip pans will be placed under vehicles and equipment capable of leaking hazardous fluid. No vehicle refueling will take place in an active river floodplain. All independent fuel and hazardous substance containers will be marked with the contents and the lessee’s or contractor’s name using paint or a permanent label.

Solid Waste
All waste disposal procedures will conform to local, state and federal requirements. The general approach to waste management will be to temporarily store wastes and periodically haul waste materials to existing North Slope facilities for proper treatment and disposal.

Solid, non-burnable waste will be deposited in dumpsters located at each site. These containers will be hauled to the NSB landfill at Prudhoe Bay. The food waste that could attract wildlife will be stored in enclosed containers pending periodic hauling, and such wastes will be hauled each day to an approved disposal center (such as PBU). To reduce the amount of trash that must be hauled from the drilling location, all solid, burnable waste may be incinerated at the location in accordance with 18 AAC 50. The ash will be hauled to the NSB landfill. Camp wastewater will be hauled to an approved disposal facility on the North Slope. The satellite office camp should generate less than 500 gallons per day of domestic wastewater.

Drill cuttings will be promptly trucked to an approved G&I facility when generated. Waste drilling fluids and produced reservoir fluids will be processed on-site for reuse where possible or trucked to an approved facility in Prudhoe Bay for injection. Used oil will be recycled or packaged in drums and hauled to Prudhoe Bay for shipment to an approved recycle facility.
metal temporary drill cuttings storage container will be located on the pad to facilitate backhaul operations and continuity of off-site annular injection, if permitted by AOGCC.

Wastewater will be stored in tanks until taken to the Prudhoe Bay Unit (PBU) Grind & Inject (G&I) facility for disposal. The wastewater will be hauled off to G&I as frequently as possible so as not to create build-up at site location. The PBU G&I is a Class II facility. The majority of wastewater will be sent there for disposal. A small amount of wastewater will be Class I and will be sent to a facility at Prudhoe Bay Pad 3. Cuttings will be immediately hauled to G&I for disposal when generated.

After the removal of drilling waste from the storage area, a visual site inspection will be performed to verify that all drilling waste has been removed. A final site inspection report including drilling waste volume and final disposition of waste will submitted to ADEC within seven days of the site inspection as required under 18 AAC 60.430. All drilling waste will be disposed of prior to completion of winter operations.

Water Use
Potable water will be obtained from service providers in Deadhorse. The remaining water will be obtained from permitted waterbodies near the ice road route or the drill site. Great Bear has current Temporary Water Use Authorizations for some of the intended water sources, and will acquire permits for additional sources, as necessary.

Roads
Approximately 8 miles of ice road connected to the Dalton Highway at Milepost 386.7 will be required to access the Talitha A site. The ice road will be approximately 35 feet wide and will have a minimum of 0.5 feet of ice cover over the tundra. A diagram of the driveway at the Dalton Highway is shown below.
Standard methods will be used to minimize impacts to vegetation, such as filling in small streambeds with extra snow for additional insulation. The routes will be surveyed to ensure that the approved route is followed during construction activities. Some minor re-routes may be required depending on site specific conditions at the time of construction. Great Bear plans to have thermistor strings placed along ice road routes and at proposed ice pad locations and will be used to monitor ground temperatures.

Ice roads will be built using a combination of existing snow along the route, water, and ice chips from approved water sources. Ice construction activities, including any pre-packing, will be performed in accordance with DNR approvals. Additional water and ice from permitted sources will be used to maintain ice roads in good condition throughout the winter drilling season.

Other Facilities

Twenty-four-hour phone service and internet will be available at the site. Operational radio communications will be provided using fixed base stations and truck-mounted, mobile “breadboard” radios. Operational frequencies will be coordinated between the various Great Bear field supervisors, ice road and support contractors, and well service providers. Small communications towers will be placed at the site. All communication towers are temporary and will be removed at demobilization. In the event of a serious emergency, resources would be mobilized from Deadhorse. Medical evacuation, if necessary, would be provided to the clinic in Deadhorse for patient stabilization and/or transfer to Fairbanks or Anchorage hospital facilities.
Site Rehabilitation
Upon completion of drilling and evaluation operations, wells will either be plugged and abandoned or suspended in accordance with AOGCC regulations. All equipment will be removed, and the site closed. As part of site closure activities, any remaining debris will be hauled to an approved disposal site. Any spills discovered as part of site closure activities, or ice pads and roads with contaminated ice or snow, will be chipped or scraped to remove the contaminated material. This material will be transported to an appropriate facility for disposal.

Once all the equipment is removed from the pad, cleanup, rehab, and remediation is estimated to take approximately 3 days. Additional cleanup operations (“stick picking”) will be conducted the summer (June or July) after the winter drilling program to remove any remaining debris not identified and removed during demobilization activities and to identify any issues not identified during the winter drilling program. Stick picking is expected to take only a day or two. Agency personnel will be invited on site visits to verify that cleanup operations are complete and that any issues identified are addressed.

In the event that tundra damage is discovered at any point during the winter drilling program or during summer cleanup operations, Great Bear will notify DNR and NSB in accordance with permit requirements (DNR will be notified within 72 hours of discovery; NSB will be notified within 24 hours of discovery). Reports of tundra damage will include the date, time, and location of damage, the size of the impacted area, and cause of damage (if known). Great Bear will coordinate with DNR to identify the level of tundra damage and develop a plan for restoration, rehabilitation, and monitoring. The plan will address the area, type, and extent of damage and will be developed in accordance with the Alaska Coastal Revegetation & Erosion Control Guide developed by the State of Alaska Plant Materials Center, the Streambank Revegetation and Protection Guide developed by the Alaska Department of Fish and Game, and other relevant guidance documents.
LMR Application
First 5 Miles of Ice Road
December 16, 2020

ConocoPhillips Alaska, Inc. (CPAI)
C/O Matthew Kale, Associate Environmental Engineer
P.O Box 100360
Anchorage, Alaska 99510
Email: matthew.d.kale@conocophillips.com & gkaenvpermitting@conocophillips.com

RE: NSB 21-157, Administrative Approval, Ice Road Bypass, T11N, R9E, Sections 32-33, T10N, R9E, Section 5, Kuparuk River Unit, Resource Development District.

Dear Mr. Kale:

We have reviewed your application dated December 15, 2020, in which you have requested authorization for the construction of a bypass ice road located within the Kuparuk River Unit, Resource Development District.

Project Description

CPAI will construct an ice road between Drill Site 2F and Drill Site 2G. The ice road will provide a safe travel corridor between the two pads while excavation maintenance is performed at the pad access roads. The ice road will be three miles long.

Pullout areas or wide sections of ice road will be constructed at certain locations depending on construction technique, field conditions, and safety considerations. The ice road will be refined in the field to avoid hazards such as steep terrain or environmental sensitive areas, including willow habitat, areas with thin snow cover, and culturally sensitives sites. The ice road will be constructed and maintained using water and ice chips from permitted sources.

Purpose

This project is needed to provide a travel corridor between DS-2F and DS-2G.

This project is scheduled to commence on January 1, 2021, with a completion date of September 15, 2021.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Resource Development District.
We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

PROJECT SPECIFIC STIPULATIONS

1. CPAI shall get a Non-Objection letter from all land owners and provide a copy to the North Slope Borough Land Management Division.

2. CPAI shall have two trained fuel handlers on sight during all fueling/refueling activities.

SPILL RESPONSE TACTICS

1. Place drip pans under vehicles parked over 5 minutes.

2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks.

Pink dye is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by CPAI.

ICE ROADS AND PADS STIPULATIONS

1. Water may be extracted only from sources approved by the Department of Natural Resources.

2. Onshore ice road construction is not to commence until frost has penetrated the ground to a depth of one-foot. The ice road is to be maintained at a minimum thickness of six (6) inches. NSBMC 19.50.030(J); NSBMC 19.60.040(O).

3. Spills of fuels, hydrocarbons, or chemicals on ice pads shall be cleaned up thoroughly prior to break-up to prevent damage to the underlying tundra when the ice pad melts. NSBMC 19.50.030(J); NSBMC 19.60.040(O).

4. In the event that an alternate ice road route is required, all surface vehicles are to confine travel as much as possible to only those areas and times of year with sufficient (6 inches) snow cover in order to protect the underlying tundra. NSBMC 19.60.040(O).

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.
2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 L. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 L. 11.

7. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

8. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

9. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

10. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

11. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

12. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:
   o Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.
   o A list of vehicles used for any off-road travel, which may have taken place.
   o Statement of clean-up activities.
   o Methods of disposal of garbage, and other camp debris.
   o A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.
Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspector at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.

Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(1)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellsars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, herbert.ipalook@north-slope.org and/or rodney.ahtuangaruak@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(l)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070
8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Ralph Burke, Land Management Specialist at (907) 852-0320 ext. 5414 or by email at ralph.burke@north-slope.org

Sincerely,

[Signature]

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Olivia Cabinboy, Nuiqsut Village Deputy Assistant, NSB
Jeanne Proulx, AkDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Bruce, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USD/F&WS, Fairbanks
Jeanne Hanson, USD/NMFS, Anchorage
Josephina Delgado-Pilik, DCOM, Juneau
dep.water.oilandgas@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Donna Wixon, USD/BLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AkDNR/DO&G, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
Dog.permitting@alaska.gov
Mark Major, Kuukpik Corporation, majorino@live.com
Willow Hetrick, Kuukpik Corporation, willow@kuukpik.com
Mamie Pardue Mayor, City of Nuiqsut
Raymond Ipalook, President, Native Village of Nuiqsut
Tommy Nageak, Cultural Resource Specialist, NSB
Darren W. Aiken, TLUI Technician, NSB
Herbert Ipalook Jr., Rodney Ahtuangarkuk Jr., Field Inspectors, Nuiqsut
Allison Atos, Lead Field Inspector, Utqiagvik
Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Files

NSB21-157/GRB/mk/pdl LMR Manager/1jb
Land Management
Regulations Permit Application

Permit Number: 21-157
Applicant: ConocoPhillips Alaska, Inc.
Address: P.O. Box 100360, Anchorage, AK 99510
Contact Person: Matthew Kale
Location (TRS): See Project Description
Zoning District: Resource Development District
Proposed Start Date: 1/1/2021

Permit Type: Administrative Approval
Date: 12/15/2020
State ID: N/A
Phone: (907) 265-6462

Project Name: DS-2F to DS-2G Bypass Ice Road
Field Name & Pad: Kuparuk / DS-2F & DS-2G
Completion Date: 9/15/2021

Proposed Development: Construct an ice road.

Purpose of Development: To provide safe access to the pads while excavation work is occurring at the access roads. Please see the attachments for more information.

- [ ] Fill/Dredge
  - Material: N/A
  - Acres: N/A

- [ ] Oil & Gas Wells
  - Number of New Surface Holes: N/A

- [ ] Temp. Water Use
  - Source: Permitted sources
  - Access: Existing infrastructure

- [ ] Off Road Travel
  - Purpose: Ice road construction
  - Maximum Amount: N/A
  - Period: Winter tundra travel season
  - Equipment: Water trucks, graders, etc.
  - Site Access: N/A

- [ ] Fuel Storage
  - Type: N/A
  - Amount: N/A
  - Handling: N/A

- [ ] Hazardous Material Storage
  - Type: N/A
  - Amount: N/A
  - Handling: N/A

- [ ] Solid Waste
  - Treatment: N/A

- [ ] Mining
  - Habitat: N/A

- [ ] Air Emissions
  - Type: Construction Equipment
  - Amount: Minor

- [ ] Noise/Vibration
  - Type: Construction Equipment
  - Amount: Normal

- [ ] Sensitive Habitat
  - Floodplain: N/A
  - Shoreline: N/A

- [ ] Transportation
  - Type: N/A

- [ ] Marine Tanker Facility
  - Seismic Work: N/A
  - Utility Development: N/A
  - Recreational Development: N/A

- [ ] Causeway
  - Offshore Drilling: N/A
  - Residential Development: N/A
  - CD-ROM Included: N/A

- [ ] Temporary Airport
  - Oil Transport System: N/A
  - Snow Removal: N/A
  - Maps Included: N/A
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES.
- A DIGITAL GIS SHAPE FILE OR GEOBASE WITH NO ATTRIBUTES. THE PROJECTION SHOULD BE NAD 27 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED)

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLLFREE (IN STATE); (800) 478-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT

Authorized Signature
Matthew Kale
Name

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING
☐ DEVELOPMENT PERMIT
☒ ADMINISTRATIVE APPROVALS
☐ CONDITIONAL DEVELOPMENT PERMITS
AMOUNT PAID: $1,500.00

DECISION
☒ ADMINISTRATIVELY APPROVED
☐ REZONING APPROVED
This is a minor amendment to a development permit or is a use of land listed under administrative approvals for this zoning district.

☐ DEVELOPMENT PERMIT APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan conditions, lease stipulations, and provision of state and federal law and permits served thereunder.

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land this is listed as a conditional development for this zoning district or has been elevated by the Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

Land Management Administrator

Date 12/15/2020
Associate Environmental Engineer
Name
Title

Date 12/18/20

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect.

NSMBC §19.30.130.
DS-2F to DS-2G Bypass Ice Road

Project Description

ConocoPhillips Alaska, Inc. (CPAI) requests authorization to construct an ice road between Drill Site 2F and Drill Site 2G (DS-2F and DS-2G, respectively) in the Kuparuk River Resource Development District. The ice road will provide a safe travel corridor between the two pads while excavation maintenance is performed at the pad access roads. The ice road will measure up to 3 miles long.

Pullout areas or wide sections of ice road will be constructed at certain locations depending on construction technique, field conditions, and safety considerations. The ice road will be refined in the field to avoid hazards such as steep terrain or environmental sensitive areas, including willow habitat, areas with thin snow cover, and culturally sensitive sites. The ice road will be constructed and maintained using water and ice chips from permitted sources. The work will be conducted at the following location(s):

<table>
<thead>
<tr>
<th>Township(s)</th>
<th>Range(s)</th>
<th>Section(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>T11N</td>
<td>R09E</td>
<td>32, 33</td>
</tr>
<tr>
<td>T10N</td>
<td>R09E</td>
<td>5</td>
</tr>
</tbody>
</table>

The proposed work is scheduled to begin January 1, 2021 or as soon as tundra conditions allow. The ice road will be completed by September 15, 2021 and will end when stick picking and agency inspections have been completed.

Please see the attachments for additional details. The figures represent the project plan and will be adjusted if needed for varying field conditions.
This Project is Located in BEECHLEY POINT B-5 Quadrangle.
December 18, 2020

ConocoPhillips Alaska, Inc. (CPAI)
C/O Jennifer Collins, Senior Environmental Coordinator
P.O. Box 100360
Anchorage, Alaska 99510-0360
Email: Jennifer.Collins@ConocoPhillips.com


Dear Ms. Collins:

We have reviewed your application dated December 18, 2020, in which you have requested authorization to prepack the 2020-2021 Alpine Resupply Lake L9308 ice spur to prepare the tundra from construction of ice feature located within the Alpine Satellite Resource Development District.

Project Description

Prepacking will be conducted by compressing snow with snow machines, rolligons, smooth tracked tuckers or other tundra travel approved vehicles in order to promote freeze down of the tundra. Side-casting of water will also be performed; water for side casting will be obtained from permitted sources.

The ice spur location is shown on the attached map and in the table below. The ice spur will support Western North Slope oil and gas activities. Minor site-specific variations will occur due to field conditions.

CPAI has reviewed the databases of Traditional Land Use Inventory (TLUI), Alaska Heritage Resource Survey, Native Allotments, and cabins used for subsistence purposes and there are no known sites located within 500 feet of the project area. CPAI believes there would be no impact to cultural resources from this project.

Prepacking will begin upon receipt of permit approvals or when conditions for prepacking are suitable, whichever comes later. The project will end by September 15, 2021 or when stick picking and agency inspections have been completed.
All activities will be conducted in accordance with federal, state, and local regulations, permit stipulations and general concurrence stipulations as appropriate. See attached project description and figures for additional details.

**Purpose of Project**

The ice spur will support Western North Slope oil and gas activities. Minor site-specific variations will occur due to field conditions.

This project is scheduled to commence upon approval of this permit with a completion date of September 15, 2021.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Resource Development District.

We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

**PROJECT SPECIFIC STIPULATION**

1. CPAI must obtain a letter of non-objection from all land owners and submit a copy to NSB Land Management Division.

2. CPAI must have two trained fuel handlers onsite during refueling operations.

**WILDLIFE STIPULATION**

1. The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Planning and Community Services Department before the start of any field activities.

**SPILL RESPONSE TACTICS**

1. Place drip pans under vehicles parked over 5 minutes.
2. Placement of adequate surface liners is required under all valves or connections to diesel fuel tanks.

3. Impermeable lining and diking is required for fuel storage facilities with a capacity greater than 660 gallons.

Pink dye is added to all fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by CPAI.

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (*Salix*) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 I. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 I. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner, CPAI shall consult with ICAS Realty Director at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.
9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

   o Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.

   o A list of vehicles used for any off-road travel, which may have taken place.

   o Statement of clean-up activities.

   o Methods of disposal of garbage, and other camp debris.

   o A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.

   o Any tundra damages that have occurred shall be reported to the Permitting Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspectors at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.

   o Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.
GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, herbert.ipalook@north-slope.org and/or rodney.ahluugaruak@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer’s compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with
the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Lilly Kilapsuk, Land Management Specialist at (907) 852-0320 ext. 5411 or by email at lilly.kilapsuk@north-slope.org.

Sincerely,

Gordon R. Brower, Land Management Administrator

cc: NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Olivia Cabimboy, Nuiqsut Village Deputy Assistant, NSB
Jeanne Proulx, AkDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDI/F&WS, Fairbanks
Jeanne Hanson, USDI/NMFS, Anchorage
Josephina Delgado-Plikat, DCOM, Juneau
Tonya Bear, AkDEC, Fairbanks
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, shane.mooney@usace.army.mil
Donna Wixon, USDI/BLM
Shelby Jones, BLM District Manager
Jeanne Frazier, AkDNR/DOG, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
Dog.permitting@alaska.gov
Mark Major, Kuukpik Corporation, majormor@z1ive.com
Willow Hettick, Kuukpik Corporation, willow@kuukpik.com
Joseph Nukapigak, President, Kuukpik Village Corporation
Mamie Pardue Mayor, City of Nuiqsut
Raymond Ipalook, President, Native Village of Nuiqsut
Tommy Nageak, Cultural Resource Specialist, NSB
Darren W. Aiken, TLLU Technician, NSB
Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspectors, Nuiqsut
Allyson Atos, Lead Field Inspector, Utqiaġvik
Leroy Ongia Jr. Ralph Kaleak Sr., Field Inspectors, Utqiaġvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GHS, NSB
Files

NSB21-159/GRB/mk/pdl LMR Manager/lk
Land Management
Regulations Permit Application

Permit Number: 21-159

Applicant: ConocoPhillips Alaska, Inc
Address: P.O. Box 100360
Anchorage, AK 99510-0360

Contact Person: Jennifer Collins

Location (TRS): T11N, R04E, Section 16 and 17
Zoning District: Alpine Satellite RDD

Proposed Start Date: Upon receipt of permit approval
Completion Date: September 15, 2021

Proposed Development: ConocoPhillips Alaska, Inc. (CPAI) requests authorization to prepack the 2020-2021 Alpine Resupply Lake L9308 ice spur to prepare the tundra for construction of the ice feature.

Purpose of Development: The ice spur will support Western North Slope oil and gas activities. Minor site-specific variations will occur due to field conditions.

☐ Fill/Dredge
☐ Oil & Gas Wells
☐ Temp. Water Use
☐ Off Road Travel
☐ Fuel Storage
☐ Hazardous Material Storage
☐ Solid Waste
☐ Mining
☐ Air Emissions
☐ Noise/Vibration
☐ Sensitive Habitat
☐ Transportation
☐ Marine Tanker Facility
☐ Causeway Construction
☐ Temporary Airport
☐ Seismic Work
☐ Offshore Drilling
☐ Oil Transport System
☐ Utility Development
☐ Residential Development
☐ Snow Removal
☐ Recreational Development
☐ CD-ROM Included
☐ Maps Included

Material: N/A
Number of New Surface Holes: N/A
Source: Permitted Sources
Purpose: Prepacking of ice features.
Period: Winter Season
Site Access: Existing infrastructure and Alpine Resupply Ice road.

Access: N/A
Maximum Amount: N/A
Equipment: Snow machines, rolligons, etc.

Type: N/A
Handling: N/A

Type: N/A
Handling: N/A

Treatment: N/A

Habitat: N/A

Type: Vehicles and equipment; turbine
Amount: Normal

Type: Vehicles and equipment
Amount: Normal

Floodplain: N/A
Shoreline: N/A

Miscellaneous land-based vehicles to support construction.
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES.
- A DIGITAL GIS SHAPE FILE OR GEDATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES. THE PROJECTION SHOULD BE NAD 27 ALASKA ALBERS OR GEOREGIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED)

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLLFREE (IN STATE): (800) 478-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT

Authorized Signature: [Signature]

Date: 12/18/2020

Jennifer Collins
Name

Senior Environmental Coordinator
Title

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING
☐ DEVELOPMENT PERMIT
☒ ADMINISTRATIVE APPROVALS
☐ CONDITIONAL DEVELOPMENT PERMITS

AMOUNT PAID:
$1,500
$1,500

Fee to be paid monthly by Electronic Funds Transfer.

DECISION
☒ ADMINISTRATIVELY APPROVED
This is a minor amendment to a development permit or a use of land listed under administrative approvals for this zoning district.

☐ REZONING APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan conditions, lease stipulations, and provision of state and federal law and permits served thereunder.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory Policies, represents the Developer's best efforts to implement all relevant best efforts and minimization policies, and as long as any conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter).

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land this is listed as a conditional development for this zoning district or has been elevated by the Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

Land Management Administrator: [Signature]

Date: 12/21/20

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect.

NSMBC §19.30.130.
Alpine Resupply Ice Road System
Prepacking – Lake L9308 Ice Spur

Project Description

ConocoPhillips Alaska, Inc. (CPAI) requests authorization to prepack the 2020-2021 Alpine Resupply Lake L9308 ice spur to prepare the tundra for construction of the ice feature.

Prepacking will be conducted by compressing snow with snow machines, rolligons, smooth tracked tuckers or other tundra travel approved vehicles in order to promote freeze down of the tundra. Side-casting of water will also be performed; water for side casting will be obtained from permitted sources.

The ice spur location is shown on the attached map and in the table below. The ice spur will support Western North Slope oil and gas activities. Minor site-specific variations will occur due to field conditions.

CPAI has reviewed the databases of Traditional Land Use Inventory (TLUI), Alaska Heritage Resource Survey, Native Allotments, and cabins used for subsistence purposes and there are no known sites located within 500 feet of the project area. CPAI believes there would be no impact to cultural resources from this project.

Prepacking will begin upon receipt of permit approvals or when conditions for prepacking are suitable whichever comes later. The project will end by September 15, 2021 or when stick picking and agency inspections have been completed.

All activities will be conducted in accordance with federal, state and local regulations, permit stipulations and general concurrence stipulations as appropriate. Please see the attached overview map for details.

<table>
<thead>
<tr>
<th>Ice Spur</th>
<th>Length (Miles)</th>
<th>MTR</th>
<th>Section(s)</th>
<th>RDD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake L9308</td>
<td>0.2</td>
<td>U011N004E</td>
<td>16-17</td>
<td>Alpine Satellite</td>
</tr>
</tbody>
</table>
Land Management
Regulations Permit Application

Permit Number

Applicant: ConocoPhillips Alaska, Inc
Address: P.O. Box 100360
Anchorage, AK 99510-0360

Contact Person: Jennifer Collins
Location (TRS): T11N, R4E, Sections 16 and 17
Zoning District: Alpine Satellite RDD

Permit Type: Administrative Approval
Date: December 18, 2020
State ID: (907) 265-6509
Phone: Project Name: Alpine Resupply – Lake L9308 Ice Spur
Field Name & Pad: Alpine; CD5 road

Proposed Start Date: Upon receipt of permit approval
Completion Date: September 15, 2021

Proposed Development: ConocoPhillips Alaska, Inc. (CPAI) requests authorization to construct, maintain and utilize the Lake L9308/N77097/Oil Lake ice spur. The proposed Lake L9308 ice spur will be 0.2 miles long.

Purpose of Development: The ice spur will support Western North Slope oil and gas activities. Minor site-specific variations will occur due to field conditions.

☐ Fill/Dredge
☐ Oil & Gas Wells
☐ Temp. Water Use
☐ Off Road Travel
☐ Fuel Storage
☐ Hazardous Material Storage
☐ Solid Waste
☐ Mining
☐ Air Emissions
☐ Noise/Vibration
☐ Sensitive Habitat
☐ Transportation
☐ Marine Tanker Facility
☐ Causeway Construction
☐ Temporary Airport

Material: N/A
Number of New Surface Holes: N/A
Source: Permitted Sources
Access: N/A
Purpose: Construction and maintenance of ice feature.
Maximum Amount: N/A
Period: Winter Season
Equipment: Water trucks, graders, etc.
Site Access: Existing infrastructure and Alpine Resupply Ice road.
Type: N/A
Amount: N/A
Handling: N/A
Type: N/A
Amount: N/A
Handling: N/A
Treatment: N/A
Habitat: N/A
Type: Vehicles and equipment
Amount: Minor
Type: Vehicles and equipment
Amount: Normal
Floodplain: N/A
Shoreline: N/A
Type: Miscellaneous land-based vehicles to support construction.

☐ Seismic Work
☐ Utility Development
☐ Recreational Development
☐ Offshore Drilling
☐ Residential Development
☐ CD-ROM Included
☐ Oil Transport System
☐ Snow Removal
☐ Maps Included
ATTACH TO THIS APPLICATION THE FOLLOWING:

- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES. THE PROJECTION SHOULD BE NAD 27 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED)

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLLFREE (IN STATE): (800) 478-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT

Authorized Signature: [Signature]
Date: 12/18/2020

Jennifer Collins
Senior Environmental Coordinator
Name
Title

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING
☐ DEVELOPMENT PERMIT
☒ ADMINISTRATIVE APPROVALS
☐ CONDITIONAL DEVELOPMENT PERMITS

AMOUNT PAID:
$1,500
$1,500

Fee to be paid monthly by Electronic Funds Transfer.

DECISION
☐ ADMINISTRATIVELY APPROVED
This is a minor amendment to a development permit or is a use of land listed under administrative approvals for this zoning district.

☐ REZONING APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan conditions, lease stipulations, and provision of state and federal law and permits served thereunder.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory Policies, represents the Developer’s best efforts to implement all relevant best efforts and minimization policies, and as long as any conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter).

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land this is listed as a conditional development for this zoning district or has been elevated by the Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

Land Management Administrator
Date

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect.
NSMBC §19.30.130.
ConocoPhillips Alaska, Inc. (CPAI) requests authorization to construct, maintain and utilize the Lake L9308/N77097/Oil Lake ice spur. The proposed Lake L9308 ice spur will be 0.2 miles long. The ice spur will support Western North Slope oil and gas activities. Pullout areas or wide sections of ice spur will be constructed at certain locations depending on construction technique, field conditions, and safety considerations. The ice spur will be refined in the field to avoid hazards such as steep terrain or environmentally sensitive areas, including willow habitat, areas with thin snow cover, and culturally sensitive sites. Minor site-specific variations will occur due to field conditions.

The location of the ice spur is provided in the table below:

<table>
<thead>
<tr>
<th>Ice Spur Name</th>
<th>Length (Miles)</th>
<th>Legal Description (T, R, S)</th>
<th>Zoning District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake L9308</td>
<td>0.2</td>
<td>11N, 4E, Sections 16 and 17</td>
<td>Alpine Satellite RDD</td>
</tr>
</tbody>
</table>

The ice spur will be constructed and maintained using water and ice chips from permitted water sources. CPAI will obtain a separate authorization for prepacking activities.

CPAI has reviewed the databases of Traditional Land Use Inventory (TLUI), Alaska Heritage Resource Survey, Native Allotments, and cabins used for subsistence purposes and there are no known sites located within 500 feet of the project area. CPAI believes there would be no impact to cultural resources from this project. CPAI has applied for a Certificate of TLUI Clearance.

Ice spur construction will begin upon receipt of permit approvals or when conditions for ice spur construction are suitable, whichever comes later. The project will end by September 15, 2021 or when stick picking and agency inspections have been completed.

All activities will be conducted in accordance with federal, state and local regulations, permit stipulations and general concurrence stipulations as appropriate. See the attached Lake L9308 ice spur map for additional details.
December 18, 2020

Hilcorp Alaska, LLC (Hilcorp)
C/O Anna Dugan, Environmental Specialist
3800 Centerpoint Drive, Suite 1400
Anchorage, Alaska 99503
Email: adugan@hilcorp.com


Dear Ms. Dugan:

We have reviewed your application dated December 7, 2020, in which you have requested authorization to extend the existing water injection header on L Pad to run polymer dilution water to injections wells located within the Milne Point Resource Development District.

Project Description

The project scope will consist of the following:

- Install approximately 250 feet of new 2” water piping from the header to each of these injection wells: MPL-51, 52, 53, 59, and 61;
- Install instrumentation, heat trace, tie-ins, and connections as needed to support polymer dilution at the well heads. This will mainly be inside the well houses.

Purpose of Project

The purpose of this project is to bring dilution water to the injection wells that will be using polymer so that the polymer can be diluted at the well head instead of in the polymer facility. The injection of polymer in these specific injection wells is being done to increase production from existing wells in the MPU.

This project is scheduled to commence upon approval with a completion date of March 1, 2021.
It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Resource Development District.

We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

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4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030
6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Lilly Kilapsuk, Land Management Specialist at (907) 852-0320 ext. 5411 or by email at lilly.kilapsuk@north-slope.org.

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Olivia Cahinboy, Nuiqsut Village Deputy Assistant, NSB
Jeanne Proulx, AKDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDI/FWS, Fairbanks
Jeanne Hanson, USDI/NMFS, Anchorage
Josephina Delgado-Pilcat, DCOM, Juneau
dec.water.ohandpns@alaska.gov
Reese Thiemel, Industrial Facility Specialist, ADEC, reese.thiemel@alaska.gov
Ryan Winn, US Army COE, ryan_h_winn@usace.army.mil
Mary R. Romero, US Army COE, Mary_R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane_McCoy@usace.army.mil
Donna Wixom, USDI/BLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AKDNR/DOE, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
Dog permitting@alaska.gov
Mark Major, Kuukpik Corporation, majorinor@jive.com
Willow Hetrick, Kuukpik Corporation, willow@kuukpik.com
Joseph Nukapigaq, President, Kuukpik Village Corporation
Mamie Pardue Mayor, City of Nuiqsut
Raymond Japook, President, Native Village of Nuiqsut
Herbert Japook Jr., Rodney Ahtuangarkuk Jr., Field Inspectors, Nuiqsut
Allyson Ato, Lead Field Inspector, Utqiagvik
Leroy Oengaa Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Files

NSB21-160/GRB/mk/pdl LMR Manager/lk
## Land Management Regulations (LMR) Permit Application

<table>
<thead>
<tr>
<th>Permit Number:</th>
<th>21-11160</th>
<th>Permit Type:</th>
<th>Administrative Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant:</td>
<td>Hilcorp Alaska, LLC</td>
<td>Date:</td>
<td>12/7/2020</td>
</tr>
<tr>
<td>Address:</td>
<td>3800 Centerpoint Dr, Suite 1400, Anchorage, AK 99503</td>
<td>State ID:</td>
<td></td>
</tr>
<tr>
<td>Contact Person:</td>
<td>Anna Dugan</td>
<td>Phone:</td>
<td>907-777-8322</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:adugan@hilcorp.com">adugan@hilcorp.com</a></td>
<td>Project Name:</td>
<td>L Pad Water Inj Header Ext</td>
</tr>
<tr>
<td>Location (TRS):</td>
<td>T: 13N R: 10E Sec: 8</td>
<td>Field Name &amp; Pad:</td>
<td>Milne Point Unit L Pad</td>
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<tr>
<td>Zoning District:</td>
<td>Resource Development District</td>
<td>Proposed Start Date:</td>
<td>12/14/2020</td>
</tr>
<tr>
<td>Proposed Development:</td>
<td></td>
<td>Completion Date:</td>
<td>3/1/2021</td>
</tr>
</tbody>
</table>

### Purpose of Development:
The conversion of this project is to be able to dilute polymer at the well heads. Polymer increases production from existing wells.

- Fill/Dredge
- Oil & Gas Wells
- Temp. Water Use
- Off Road Travel
- Fuel Storage
- Hazardous Material Storage
- Solid Waste
- Mining
- Air Emissions
- Noise/Vibrations
- Sensitive Habitat
- Transportation

- Marine Tanker Facility
- Causeway Construction
- Airport or Helicopter Pad

- Seismic Work
- Offshore Drilling
- Oil Transportation System

- Utility Development
- Residential Development
- Snow Removal

- Recreational Development
- CD-ROM Included
- Maps Included

---

North Slope Borough
Department of Planning and Community Services
Land Management Regulation Division

Page 1 of 2
Land Management Regulations - General Application
October 2011
ATTACH TO THIS APPLICATION THE FOLLOWING:

- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES
- SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NAD 1927 ALASKA A.LBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLL FREE (IN-STATE): (800) 476-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

[Signature]

Authorized Signature

12/7/2020

Date

Anna Dugan

Name

Environmental Specialist

Title

FEE PAID

- SPECIAL PLANNING COMMISSION MEETING $12,000
- DEVELOPMENT PERMIT $2,000, plus $500/well
- ADMINISTRATIVE APPROVALS $1,500
- CONDITIONAL DEVELOPMENT PERMITS $3,000

AMOUNT PAID

DECISION

☐ ADMINISTRATIVELY APPROVED
This is a minor alteration to a previously approved development permit for commercial recreation.

☐ REZONING APPROVED
This development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan Conditions, lease stipulations, and provisions of the state and federal law and permit issued heretofore.

☐ DEVELOPMENT PERMIT APPROVED
This proposed development meets all applicable mandatory policies, represents the developer's best efforts to implement all relevant best efforts and minimization policies, and as long as conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter.)

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land that is located in a conditional development area or is a generating unit that has been elevated by the NSB Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

[Signature]

NSB Land Management Administrator

12/18/20

Date

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect. NSMBC §19.30.130.
L Pad Water Injection Header Extension
Milne Point Unit
Project Description/Plan of Operations

Hilcorp Alaska, LLC, (Hilcorp), proposes to extend the existing water injection header on L Pad, located in the Milne Point Unit (MPU) to run polymer dilution water to injection wells. The proposed wells that will be serviced by the extended water injection header are MPL-51, 52, 53, 59, and 61.

Purpose

The purpose of this project is to bring dilution water to the injection wells that will be using polymer so that the polymer can be diluted at the well head instead of in the polymer facility. The injection of polymer in these specific injection wells is being done to increase production from existing wells in the Milne Point Unit.

Scope of Proposed Activities

The project scope will consist of the following:

- Install approximately 250 feet of new 2" water piping from the header to each of these injection wells: MPL-51, 52, 53, 59, and 61;
- Install instrumentation, heat trace, tie-ins and connections as needed to support polymer dilution at the well heads. This will mainly be inside the well houses.

Schedule

Construction is scheduled to start on January 4, 2020. The completion date of the overall project is anticipated to be April 1, 2021.
Project Location:
Milne Point Unit - L Pad

Latitude (Decimal Degrees): 70.496717, NAD 1983
Longitude (Decimal Degrees): -146.63554, NAD 1983

Alaska State Plane Zone 4, NAD 1983
X = 1685008.82
Y = 6031280.49

Sec. 7-8, T13N, R10E, Umiat Meridian

ADL#: 025509
Adjacent Property Owner: State of Alaska

Legend
- Existing Pipeline (Above Ground)
- Gravel Footprint
- Oil and Gas Unit Boundary

Milne Point Unit
MPU PAD-L
Water Injection Header Extension
Vicinity Map
December 18, 2020

ConocoPhillips Alaska, Inc. (CPAI)
C/O Kate Dodson, Environmental Engineer-GKA Permitting
P.O. Box 100360
Anchorage, Alaska 99510
Email: kate.dodson@conocophillips.com

RE: NSB 21-161, Administrative Approval, Drill Site 3S (DS-3S) Microwave Tower, T12N, R8E, Section 18, Kuparuk River Unit (KRU) Resource Development District.

Dear Ms. Dodson:

We have reviewed your application dated December 18, 2020, in which you have requested authorization to install 3 vertical support members (VSMs), associated appurtenances, a grounding ring, and a microwave tower on the DS-3S pad within the Resource Development District.

The three VSMs will measure 20 inches in diameter and will be installed via set and slurry methods. The VSMs will support the tower. A grounding ring will be installed around the base of the tower. Power will be supplied to the tower via protected above-ground cables.

All work will be conducted from the existing pad. CPAI will utilize typical construction equipment, which includes a pile driver. Please see attachments for additional details. The figures represent the project plan and will be adjusted if needed for varying field conditions.

**Purpose of Project**

The purpose of this project is to provide a backup communications tower.

This project is scheduled to commence on January 18, 2021 with a completion date of December 21, 2021.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Resource Development District.
We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

**GENERAL STIPULATIONS**

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, herbert.ipalook@north-slope.org and/or rodney.ahitungaruak@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100
7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Darylynn Aveoganna, Land Management Specialist at (907) 852-0320 ext. 5418 or by email at darylynn.aveoganna@north-slope.org

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Torce, Assessing Division, NSB
Olivia Cabimbo, Nuiqsut Village Deputy Assistant, NSB
Scott Danner, Public Works, NSB
Jeanne Proulx, AKDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDI/F&WS, Fairbanks
Jeanne Hanson, USDI/NMFS, Anchorage
Josephina Delgado-Pikat, DCOM, Juneau
dec.water.oilandgas@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary.R.Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.Mccoy@usace.army.mil
Donna Wixon, USDI/BLM
Shelley Jones, BLM District Manager
Jeanne Frazier, AKDNR/DOG, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
Dog.permitting@alaska.gov
Mark Major, Kuukpik Corporation, majorm@live.com
Willow Hetrick, Kuukpik Corporation, willow@kuukpik.com
Joseph Nukapigak, President, Kuukpik Village Corporation
Mamie Pardue Mayor, City of Nuiqsut
Raymond Ipalook, President, Native Village of Nuiqsut
Herbert Ipalook Jr., Rodney Ahtuangark Jr., Field Inspectors, Nuiqsut
Allyson Atos, Lead Field Inspector, Utqiagvik
Leroy Oenga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPDGIS, NSB
Files
# Land Management Regulations Permit Application

**Permit Number:** 21-161  
**Applicant:** ConocoPhillips Alaska, Inc  
**Address:** P.O. Box 100360, Anchorage, AK 99510  
**Contact Person:** Kate Dodson  
**Location (TRS):** T12N, R08E, Section 18  
**Zoning District:** Resource Development District  
**Proposed Start Date:** 1/18/2021  
**Project Name:** DS-3S Microwave Tower  
**Field Name & Pad:** Kuparuk / DS-3S  
**Administrative Approval:** Date: 12/18/2020  
**Phone:** (907) 265-6181  
**State ID:** N/A  
**Completion Date:** 12/31/2021

**Purpose of Development:** Install 3 VSMs, a grounding ring, and a microwave tower on the DS-3S pad.

**Fill/Dredge:**  
- **Material:** N/A  
- **Acres:** N/A

**Oil & Gas Wells:**  
- **Number of New Surface Holes:** N/A  
- **Source:** N/A  
- **Access:** N/A  
- **Purpose:** N/A  
- **Maximum Amount:** N/A  
- **Period:** N/A  
- **Equipment:** N/A

**Off Road Travel:**  
- **Site Access:** N/A

**Fuel Storage:**  
- **Type:** N/A  
- **Amount:** N/A  
- **Handling:** N/A

**Hazardous Material Storage:**  
- **Type:** N/A  
- **Amount:** N/A  
- **Handling:** N/A

**Solid Waste:**  
- **Treatment:** N/A

**Mining:**  
- **Habitat:** N/A

**Air Emissions:**  
- **Type:** Construction Equipment  
- **Amount:** Minor

**Noise/Vibration:**  
- **Type:** Construction Equipment  
- **Amount:** Normal

**Sensitive Habitat:**  
- **Floodplain:** N/A  
- **Shoreline:** N/A

**Transportation:**  
- **Type:** N/A

**Marine Tanker Facility:**  
- **Seismic Work:** No  
- **Utility Development:** No  
- **Recreational Development:** No

**Causeway Construction:**  
- **Offshore Drilling:** No  
- **Residential Development:** No  
- **CD-ROM Included:** No

**Temporary Airport:**  
- **Oil Transport System:** No  
- **Snow Removal:** No  
- **Maps Included:** Yes
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES.
- A DIGITAL GIS SHAPE FILE OR GEOBASE OF THE PERMIT AREA WITH NO ATTRIBUTES. THE
  PROJECTION SHOULD BE NAD 27 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED)

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLLFREE (IN STATE): (800) 478-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT

[Signature]
Authorized Signature

Kate Dodson
Name

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING
☐ DEVELOPMENT PERMIT
☒ ADMINISTRATIVE APPROVALS
☐ CONDITIONAL DEVELOPMENT PERMITS
AMOUNT PAID: $1,500.00

12/18/2020
Date
Environmental Engineer – GKA
Permitting
Title

DECISION
☒ ADMINISTRATIVELY APPROVED
☐ REZONING APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan conditions, lease stipulations, and provision of state and federal law and permits served thereunder.

☐ DEVELOPMENT PERMIT APPROVED
This is a use of land this is listed as a conditional development for this zoning district or has been elevated by the Land Management Administrator to the Planning Commission.

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land this is listed as a conditional development for this zoning district or has been elevated by the Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

[Signature]
Land Management Administrator

12/21/20
Date

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect.

NSMBC §19.30.130.
ConocoPhillips Alaska, Inc. (CPAI) requests authorization to install three vertical support members (VSMs), associated appurtenances, a grounding ring, and a microwave communications tower on the Drill Site 3S (DS-3S) pad in the Kuparuk River Resource Development District. The three VSMs will measure 20 inches in diameter and will be installed via set-and-slurry methods. The VSMs will support the tower. A grounding ring will be installed around the base of the tower. Power will be supplied to the tower via protected above-ground cables.

The proposed work is scheduled to begin on January 18, 2021 and to be completed by December 31, 2021. All work will be conducted from the existing pad. CPAI will utilize typical construction equipment, which includes a pile driver.

Please see the attachments for additional details. The figures represent the project plan and will be adjusted if needed for varying field conditions.
December 22, 2020

UMIAQ Environmental on behalf of the U.S. Navy
C/O Emily McDonald, Environmental Specialist II
6700 Arctic Spur Road
Anchorage, Alaska 99518
Email: Emily.McDonald@UICCS.com

RE: NSB 21-162, Administrative Approval, Utqiagvik Bulk Fuel Tank Farm (BFTF), T23N, R18W, Section 14, Conservation District.

Dear Ms. McDonald:

We have reviewed your application dated December 21, 2020, in which you have requested authorization for remediation of contaminated soils at the former Utqiagvik Bulk Fuel Tank Farm near NARL within Utqiagvik, Alaska, Conservation District.

Project Description

This project is a continuation of work that occurred under NSB 19-568 in the summer of 2019.

The former Utqiagvik Bulk Fuel Tank Farm, also known as Site 13, is no U.S. Navy-owned property two miles northeast of the NARL complex. Site 13 covers five acres and is known to be contaminated with hydrocarbons from previous fueling operations. Numerous investigations starting in 1986 have confirmed four Areas of Concern (AOCs): gravel pad, historical location 90, south bank area, and turnaround area, as shown on Figure 1. Remedial actions performed at this site include the 1991 removal of fuel storage tanks, and most recently the 2019 excavation and land farming effort.

Activities to take place in 2021 include limited soil sampling to occur in frozen conditions in April, as well as land farming from a stockpile and disposal of contaminated soil to take place in July. Excavations will be backfilled with treated soil.

Land Farming is a bioremediation process that uses naturally occurring microorganisms to breakdown petroleum hydrocarbons in the soils. Stimulation of microbial growth and activity for hydrocarbon removal is accomplished primarily through the addition of air through tiling and addition of nutrients. The land farming area this year is considerably smaller than areas utilized in 2019. In preparation, soil sampling will occur in the land farming area, and a liner will be placed to protect the underlying soil. Contaminated soil from a stockpile will be moved to the land farming area to be treated, monitored, aerated, and sampled for contaminants. Signage will be deployed around the perimeter of the land farming areas to discourage trespassers. When land farming is complete and the liner is removed, soil will be sampled again to ensure no contamination of the proposed land farming areas has occurred.
Frozen conditions are required for sampling two wetland locations which were inundated and not sampled in 2019. A drill will be used to sample underlying soils and limit disturbance to the tundra.

A U.S. Army Corps of Engineers permit has been applied for in accordance with Section 404 of the Clean Water Act, and a copy of the authorization will be made available to NSB Planning. This project requires drilling in areas that appear to be previously undisturbed tundra. An Inupiat History, Language and Culture (IHLC) Traditional Land Use Inventory (TLUI) Clearance application is being submitted concurrently with this LMR Application and will be obtained prior to disturbance of tundra.

A polar bear avoidance and human interaction plan has been developed for this project and is available upon request. Authorization for polar bear deterrence activities issued by the U.S. Fish and Wildlife Service. All employees will receive copies of the plan and discuss safety procedures at the worksite during a daily toolbox meeting.

Schedule

Project activities will occur in two phases: limited soil sampling to occur in frozen conditions, and land farming/disposal of contaminated soil to occur in the summer. Mobilization will occur April 1, and site activities will be complete by September 30, 2021.

Purpose of Project

The purpose of this project is for contaminated soil remedial action.

This project is scheduled to commence on April 1, 2021 with a completion date of September 30, 2021.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Conservation District.

We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

PROJECT SPECIFIC STIPULATIONS

1. UMIAQ Environmental shall obtain a letter of non-objection from all landowners prior to commencement of this project and provide a copy to the NSB Department of Planning and Community Services.

WILDLIFE STIPULATION

1. The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Planning and Community Services Department before the start of any field activities.
TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow ruffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

4. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:
   o Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.
   o A list of vehicles used for any off-road travel, which may have taken place.
   o Statement of clean-up activities.
   o Methods of disposal of garbage, and other camp debris.
   o A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.
   o Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipafook Jr., Rodney Ahtuanganauk Jr., Field Inspectors at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0440.
   o Report any tundra damage within 24 hours and consult with NSB Permitting staff with any questionable activity unsure of.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(1)(4)&(5)
2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cells, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, herbert.ipalook@north-slope.org and/or rodney.ahtuangaruak@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(f)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the Native Village of Barrow at (907) 852-4411 and Uqngvik Inupiat Corporation at (907) 852-4460, also the Savaat Center (907) 852-0465 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Darylynn Aveoganna, Land Management Specialist at (907) 852-0320 ext. 5413 or by email at darylynn.aveoganna@north-slope.org

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Harry Brower, Jr., NSB Mayor
Craig George, NSB Wildlife (bowhead/fish)
Brian Person, NSB Wildlife (caribou/fox/geese/vegetation)
Robert Suydam, NSB Wildlife (Birds/Bowhead/ Beluga)
Arnold Brower Jr., Executive Director, AEWC
Selene Tirre, Assessing Division, NSB
Scott Danner, Public Works, NSB
Jeanne Proulx, AkDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDA/F&W, Fairbanks
Jeanne Hanson, USDI/NMFS, Anchorage
Josephina Delgado-Pikat, DCOM, Juneau
dec.water.oilandsgas@alaska.gov.
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.Mccoy@usace.army.mil
Donna Wixon, USDI/BLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AkDNR/DO&G, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
Dog.permittin@alaska.gov
Lloyd Paningona, Inupiat Community of the Arctic Slope
Flossie Mongoyak, Realty Director, Native Village of Barrow
Rex Rock Sr., President, Arctic Slope Regional Corporation
Delbert Rexford, President, Utqiagvik Inupiat Corporation
Fannie Svulu, CAO/Mayor, City of Utqiagvik
Anne Jensen, UIC Real Estate/Science Division/Cultural Resources Management
Michelle Weyiouanna, Land Services, UIC
Tommy Nageak, Cultural Resource Specialist, NSB
Darren W. Aiken, TLU Technician, NSB
Herbert Ipalook Jr., Rodney Ahungaruk Jr., Field Inspectors, Nuiqsut
Allyson Atos, Lead Field Inspector, Utqiagvik
Leroy Oenga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Files

NSB21-162/GRB/mk/pdl LMR Manager/da
# Land Management Regulations (LMR) Permit Application

<table>
<thead>
<tr>
<th>Permit Number:</th>
<th>21·162</th>
<th>Permit Type:</th>
<th>A A</th>
</tr>
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<tbody>
<tr>
<td>Applicant:</td>
<td>UIMAQ Environmental on behalf of the U.S. Navy</td>
<td>Date:</td>
<td>12/21/2020</td>
</tr>
<tr>
<td>Address:</td>
<td>6700 Arctic Spur Road, Anchorage AK 99518</td>
<td>State ID:</td>
<td>N/A</td>
</tr>
<tr>
<td>Contact Person:</td>
<td>Emily McDonald</td>
<td>Phone:</td>
<td>(907) 677-8288</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:Emily.McDonald@UICCS.com">Emily.McDonald@UICCS.com</a></td>
<td>Project Name:</td>
<td>BFTF Remediation 2021</td>
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<td>Location (TRS):</td>
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<td>Field Name &amp; Pad:</td>
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<td>Zoning District:</td>
<td>Conservation</td>
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<td>Proposed Start Date:</td>
<td>4/1/2021</td>
<td>Completion Date:</td>
<td>9/30/2021</td>
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<tr>
<td>Proposed Development:</td>
<td>Limited soil sampling by drill, landfarming of stockpiled soil, and disposal of contaminated soil.</td>
<td></td>
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<tr>
<td>Purpose of Development:</td>
<td>Contaminated soil remedial action.</td>
<td></td>
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**Off Road Travel**
- Period: April 1 - 30, 2021
- Equipment: Soil sampling drill
- Site Access: Stevenson St. near old Barrow Bulk Fuel Tank Farm

**Fill/Dredge**
- Material: 
- Acres: 

**Oil & Gas Wells**
- Number of New Surface Holes: 

**Temp. Water Use**
- Sources: 
- Access: 
- Purpose: 
- Maximum Amount: 

**Fuel Storage**
- Type: 
- Handling: 
- Amount: 

**Hazardous Material Storage**
- Type: 
- Handling: 
- Amount: 

**Solid Waste**
- Treatment: 

**Mining**
- Habitat: 

**Air Emissions**
- Type: 
- Amount: 

**Noise/Vibrations**
- Type: 
- Amount: 

**Sensitive Habitat**
- Floodplain: 
- Shoreline: 

**Transportation**
- Type: 

**Marine Tanker Facility**
- Seismic Work
- Utility Development
- Recreational Development

**Causeway Construction**
- Offshore Drilling
- Residential Development
- CD-ROM Included

**Airport or Helicopter Pad**
- Oil Transportation System
- Snow Removal
- Maps Included
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES
- SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GIS SHAPE FILE OR GEDATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NAD 1927 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PILOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLL FREE (IN-STATE): (800) 476-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

Authorized Signature
Emily McDonald, UMAIAQ Environmental
Name

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<td>CONDITIONAL DEVELOPMENT PERMITS</td>
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<tr>
<td>AMOUNT PAID</td>
<td>$1,500</td>
</tr>
</tbody>
</table>

Date
12/21/2020

Environmental Specialist II
Title

DECISION

☒ ADMINISTRATIVELY APPROVED
This is a minor alteration to a previously approved development permit for commercial recreation.

☐ REZONING APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan Conditions, lease stipulations, and provisions of the state and federal law and permit issued thereunder.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory policies, represents the developer's best efforts to implement all relevant best efforts and minimization policies, and as long as conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter.)

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land that is listed as a conditional development for the zoning district or has been elevated by the NSB Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

Date
12/22/20

NSB Land Management Administrator

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect.

NISMBC §19.30.130
December 18, 2020

Mr. Gordon Brower, Director
Dept. of Planning and Community Services
North Slope Borough
P.O. Box 69
Utqiagvik, AK 99723

Re: Former Barrow Bulk Fuel Tank Farm Site 13 Remedial Action
Application for Land Management Regulation (LMR) Permit

Dear Mr. Brower,

UMIAQ Environmental, LLC (UMIAQ Environmental), acting as agent to the U.S. Navy, hereby submits this LMR application for remediation of contaminated soils at the former Barrow Bulk Fuel Tank Farm near NARL in Utqiagvik, Alaska (Figure 1). This project is a continuation of work that occurred under NSB-19-568 in the summer of 2019.

Project Description

The former Barrow Bulk Fuel Tank Farm, also known as Site 13, is on U.S. Navy-owned property approximately two miles northeast of the NARL complex. Site 13 covers five acres and is known to be contaminated with hydrocarbons from previous fueling operations. Numerous investigations starting in 1986 have confirmed four Areas of Concern (AOCs): gravel pad, historical location 90, south bank area, and turnaround area, as shown on Figure 1. Remedial actions performed at this site include the 1991 removal of fuel storage tanks, and most recently the 2019 excavation and landfarming effort.

Activities to take place in 2021 include limited soil sampling to occur in frozen conditions in April, as well as landfarming from a stockpile and disposal of contaminated soil to take place in July. Excavations will be backfilled with treated soil.

Landfarming is a bioremediation process that uses naturally occurring microorganisms to breakdown petroleum hydrocarbons in the soils. Stimulation of microbial growth and activity for hydrocarbon removal is accomplished primarily through the addition of air through tilling and addition of nutrients. The landfarming area this year is considerably smaller than areas utilized in 2019. In preparation, soil sampling will occur in the landfarming area, and a liner will be placed to protect the underlying soil. Contaminated soil from a stockpile will be moved to the landfarming area to be treated, monitored, aerated, and sampled for contaminants. Signage will be deployed around the perimeter of the landfarming areas to discourage trespassers. When landfarming is complete and the liner is removed, soil will be sampled again to ensure no contamination of the proposed landfarming areas has occurred.

Frozen conditions are required for sampling two wetland locations which were inundated and not sampled in 2019. A drill will be used to sample underlying soils and limit disturbance to the tundra.
A U.S. Army Corps of Engineers permit has been applied for in accordance with Section 404 of the Clean Water Act, and a copy of the authorization will be made available to NSB Planning. This project requires drilling in areas that appear to be previously undisturbed tundra. An Inupiat History, Language and Culture (IHLC) Traditional Land Use Inventory (TLUI) Clearance application is being submitted concurrently with this LMR application and will be obtained prior to disturbance of tundra.

A Polar Bear Avoidance and Human Interaction Plan has been developed for this project and is available upon request. Authorization for polar bear deterrence activities issued by the U.S. Fish and Wildlife Service. All employees will receive copies of the plan and discuss safety procedures at the worksite during a daily toolbox meeting.

Schedule

Project activities will occur in two phases: limited soil sampling to occur in frozen conditions, and landfarming/ disposal of contaminated soil to occur in the summer. Mobilization will occur April 1, and site activities will be complete by September 30, 2021.

Attached please find the LMR permit application, site location and vicinity map, and check for the permit fee of $1500. Should you have any questions or require additional information you may reach me at (907) 677-8288 or by email at Emily.McDonald@UICCS.com.

Sincerely,

Emily McDonald
Environmental Specialist II

Attachments: LMR permit application
            Figure 1: Site Location and Vicinity Map
            Check No. 3007633

cc: Kendra Clubb, U.S. Navy
December 21, 2020

Alaska West Express Inc. dba Lynden Oilfield Services (AWE)
C/O Tyler Bones, Director of HSSE
1048 Whitney Road
Anchorage, Alaska 99501
Email: tbones@lynden.com

RE: NSB 21-163 Administrative Approval, Tundra Travel From The (CWAT) To Inigok Airstrip & To Umiat, Various Townships, Ranges & Sections, Conservation District.

Dear Mr. Bones:

We have reviewed your application dated December 21, 2020, in which you have requested authorization to conduct tundra travel located within the Conservation District.

Project Description

Alaska West Express, Inc. will conduct tundra travel for access to Inigok and Umiat airports. The purpose of this permit is to transport winter freight deliveries to and from these two locations. Alaska West Express, Inc. would transport freight along the NSB CWAT trail to SEC 16, T9N, R1E, UM, at which point new trails would be developed to Inigok (SEC 36, T9N, R1W, UM) and Umiat (SEC 9, T1S, R1W, UM). There are currently no plans to transport hazardous materials, to include fuel, but in the event that hazardous materials are transported they will be transported in USDOT approved containers that are purpose built for the intended use.

The Lynden Oilfield Services Freight Services Plan and LOIL HSSE Plan and Wildlife Interaction Plan apply to this project. (Please see attachments for tundra travel locations).

Purpose

This project is needed to provide commercial freight delivery to and from LOIL Facility in Deadhorse to Inigok Airstrip and Umiat.

This project is scheduled to commence on February 1, 2021, with a completion date of May 15, 2023.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Conservation District.
We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

**PROJECT SPECIFIC STIPULATIONS**

1. AWE shall get a Non-Objection letter from all land owners and provide a copy to the North Slope Borough Land Management Division.

2. AWE shall have two trained fuel handlers on sight during all fueling operations.

**WILDLIFE STIPULATION**

The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Land Management Divisions before the start of any field activities.

**TUNDRA STIPULATIONS**

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags. NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible. NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility. NSBMC 19.70.050 L. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 L. 11.
7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. AWE shall consult with ICAS Realty Director at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations. NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams are to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas. NSBMC 19.70.050 K. 2.

12. After April 15 of each year, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. *A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:*

   - Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.
   - A list of vehicles used for any off-road travel, which may have taken place.
   - Statement of clean-up activities.
   - Methods of disposal of garbage, and other camp debris.
   - A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.
   - Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuanenuak Jr., Field Inspectors at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.
   - Report any tundra damage within 24 hours and consult with NSB Land Management staff with any questionable activity unsure of.
GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, herbert.ipalook@north-slope.org and/or rodney.ahtuangnak@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the Native Village of Barrow at (907) 852-4411 and Uqpeagvik Inupiat Corporation at (907) 852-4460, also the Savaat Center (907) 852-0465, the village of Atqasuk at (907) 633-6811; the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100
If you should have any questions please contact Ralph Burke, Land Management Specialist at (907) 852-0320 ext. 5414 or by email at ralph.burke@north-slope.org

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Titre, Assessing Division, NSB
Della Shuglik, Atqasuk Village Deputy Assistant, NSB
Jeanne Proulx, AKNR, Fairbanks
Lee McKinley, ADFG JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDI/F&WS, Fairbanks
Jeanne Hanson, USDI/NMFS, Anchorage
Josephina Delgado-Plikat, DCOM, Juneau
dec.water.ilm@saligna.gov
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Wron, US Army COE, ryan.h.wron@usace.army.mil
Mary R. Romero, US Army COE, Mary R. Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.McCoy@usace.army.mil
Donna Wixon, USDI/BLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AKNR/DOG, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
dog.permittings@alaska.gov
Lloyd Paningona, Inupiat Community of the Arctic Slope
Flossie Mongoyak, Realty Director, Native Village of Barrow
Rex Rock Sr., President, Arctic Slope Regional Corporation
Margaret Atigasuk, President, Atqasuk Inupiat Corporation
Delbert Rexford, President, Utqiaġvik Inupiat Corporation
Doug Whiteman, Mayor, City of Atqasuk
Fannie Suviaq, CAO/Mayor, City of Utqiaġvik
Elizabeth Bordeaux, President, Native Village of Atqasuk
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Allyson Atos, Lead Field Inspector, Utqiaġvik
Leroy Oenga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiaġvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB

Files

NSB21-163/GRB/mk/ik Acting LMR Manager/rjb
## Land Management Regulations (LMR) Permit Application

**Permit Number:** 21-163  
**Applicant:** Alaska West Express, Inc dba Lynden Oilfield Services  
**Address:** 1048 Whitney Road, Anchorage 99501  
**Contact Person:** Tyler Bones  
**Email:** tbono@lynden.com  
**Location (TRS):**  
T: attached  
R:  
Sec:  
**Zoning District:** Res. Development/Conservation/Industrial  

**Proposed Start Date:** 2/1/2021  
**Proposed Development:** Winter access to the Inigok Airstrip and Umiat via the CWAT and a winter snow trail.  
**Purpose of Development:** To provide commercial freight delivery to and from LOIL Facility in Deadhorse to Inigok Airstrip and Umiat. This is part of an existing project permitted by NSB under 18-363 and 20-327.

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<td>Oil &amp; Gas Wells</td>
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<tr>
<td>Airport or Helicopter Pad</td>
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**Permit Type:** Transportation  
**Date:** 11/24/2020  
**State ID:** N/A  
**Phone:** (907) 328-4332  
**Project Name:** Western NS Winter Trails  
**Field Name & Pad:** N/A
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES
- SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NAD 1983 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLL FREE (IN-STATE): (800) 476-6866 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

[Signature]
Authorized Signature

11/24/2020
Date

Tyler Bones
Name

Director of HSSE
Title

☐ SPECIAL PLANNING COMMISSION MEETING $12,000
☐ DEVELOPMENT PERMIT $2,000, plus $500/well
☑ ADMINISTRATIVE APPROVALS $1,500
☐ CONDITIONAL DEVELOPMENT PERMITS $3,000

AMOUNT PAID

---

DECISION

☑ ADMINISTRATIVELY APPROVED
This is a minor variation to a previously approved development permit for commercial recreation.

☐ REZONING APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan Conditions, lease stipulations, and provisions of the state and federal law and permit served hereunder.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory policies, represents the developer’s best efforts to implement all relevant best efforts and minimization policies, and as long as conditions set forth in the accompanying letter are complied with, will represent a net public benefit (See accompanying letter.)

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land that is listed as a conditional development for this zoning district or has been elevated by the NSB Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

[Signature]
NSB Land Management Administrator

12/22/20
Date

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect. NSMBC §19.30.130.
RE: Alaska West Express, Inc. dba Lynden Oilfield Services Project Description

Alaska West Express, Inc. is requesting a Land Management Regulations (LMR) Permit for access to Inigok and Umiat airports. The purpose of this permit is to transport winter freight deliveries to and from these two locations. Alaska West Express, Inc. would transport freight along the NSB CWAT trail to SEC 16, T9N, R1E, UM, at which point new trails would be developed to Inigok (SEC 36, T9N, R1W, UM) and Umiat (SEC 0, T1S, R1W, UM). There are currently no plans to transport hazardous materials, to include fuel, but in the event that hazardous materials are transported they will be transported in USDOT approved containers that are purpose built for the intended use.

The Lynden Oilfield Services Freight Services Plan and LOIL HSSE Plan and Wildlife Interaction Plan apply to this project.
## Legal Description for New Snow Routes for 2021 Winter Freight Delivery

### Snow Road to Inigok Airstrip

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* Junction with CWAT

11/12/2020
Lynden Oilfield Services
2021 North Slope Winter Freight Delivery
Deadhorse to Inigok Airstrip and Umiat

Legend
- 2021 LOIL Snow Roads
- Native Allotments
- Native Owned Lands
- Village Surface Estate
- State Land
- Federal Conservation System
- Winter Trails

0 2 4 Miles
December 21, 2020

Hilcorp North Slope (Hilcorp)
C/O Keri Iles, Environmental Specialist-Land Use
3800 Centerpoint Drive, #1400
Anchorage, Alaska 99503
Email: keri.iles@hilcorp.com

RE: NSB 21-164, Administrative Approval, Vern Lake Ice Road, T10N, R15E, Section 2, Umiat Meridian, Prudhoe Bay Unit (PBU), Resource Development District.

Dear Ms. Iles:

We have reviewed your application dated December 21, 2020, in which you have requested authorization construct an ice road from Drill Site 9 (DS9) to Sagavanirktok (Sag) River located within the Prudhoe Bay Resource Development District.

Scope of Proposed Activities

- Construct an ice road 390 feet long by 50 feet wide from the northwest corner of DS9 to the Sag River.
- Use approximately 300,000 gallons of water from currently permitted sources.
- Typical ice road building equipment will be used including a loader, dozer, water trucks and dump trucks.

Purpose of Project

The ice road is being constructed for access to the outlet of Vern Lake. Gravel removal maintenance will occur at the Vern Lake outlet.

This project is scheduled to commence on January 1, 2021 with a completion date of April 30, 2021.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Resource Development District.
We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

**PROJECT SPECIFIC STIPULATION**

1. Hilcorp must obtain a letter of non-objection from all land owners and submit a copy to NSB Land Management Division.

2. Hilcorp must have two trained fuel handlers onsite during refueling operations.

**WILDLIFE STIPULATION**

1. The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Planning and Community Services Department before the start of any field activities.

**ICE ROADS AND PADS STIPULATIONS**

1. Water may be extracted only from sources approved by the Alaska Department of Natural Resources.

2. Onshore ice road construction is not to commence until frost has penetrated the ground to a depth of one-foot. The ice road is to be maintained at a minimum thickness of six (6) inches. NSBMC 19.50.030(J); NSBMC 19.60.040(O).

3. Spills of fuels, hydrocarbons, or chemicals on ice roads shall be cleaned up thoroughly prior to break-up to prevent damage to the underlying tundra when the ice pad melts. NSBMC 19.50.030) (J); NSBMC 19.60.040)(O).

4. In the event that an alternate ice road route is required, all surface vehicles are to confine travel as much as possible to only those areas and times of year with sufficient (6 inches) snow cover in order to protect the underlying tundra. NSBMC 19.60.040)(O).

**SPILL RESPONSE TACTICS**

1. Place drip pans under vehicles parked over 5 minutes.
2. Placement of adequate surface liners is required under all valves or connections to diesel fuel tanks.

3. Impermeable lining and diking is required for fuel storage facilities with a capacity greater than 660 gallons.

**Pink dye** is added to all fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by Hilcorp.

**TUNDRA STIPULATIONS**

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (**Salix**) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 I. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 I. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. Hilcorp shall consult with ICAS Realty Director at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.
9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

- Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.

- A list of vehicles used for any off-road travel, which may have taken place.

- Statement of clean-up activities.

- Methods of disposal of garbage, and other camp debris.

- A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.

- Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangularuak Jr., Field Inspectors at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.

- Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.
GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, herbert.ipalook@north-slope.org and/or rodney.ahtuanganarauk@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with
the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Lilly Kilapsuk, Land Management Specialist at (907) 852-0320 ext. 5411 or by email at lilly.kilapsuk@north-slope.org.

Sincerely,

[Signature]

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Terre, Assessing Division, NSB
Olivia Cabinboy, Nuiqsut Village Deputy Assistant, NSB
Jeanne Proulx, AKDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDA/F&WS, Fairbanks
Jeanne Hanson, USDA/NMF, Anchorage
Josephine Delgado-Pikat, DCOM, Juneau
dec.water.oilandgas@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shaine McCoy, US Army COE, Shane.Mccoy@usace.army.mil
Donna Wixon, USDA/BLM
Shelby Jones, BLM District Manager
Jeanne Frazier, AKDNR/DOG, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
dog.permitting@alaska.gov
Mark Major, Kuukpik Corporation, majormor@live.com
Willow Hetrick, Kuukpik Corporation, willow@kuukpik.com
Joseph Nukapigak, President, Kuukpik Village Corporation
Mamie Pardue Mayor, City of Nuiqsut
Raymond Ipalook, President, Native Village of Nuiqsut
Tommy Nageak, Cultural Resource Specialist, NSB
Darren W. Aiken, TLU Technician, NSB
Herbert Ipalook Jr., Rodney Ahtuawangrak Jr., Field Inspectors, Nuiqsut
Allyson Atos, Lead Field Inspector, Utqiagvik
Leroy Oenga Jr., Ralph Kalea Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Files

NSB21-164/GRB/mk/pdl LMR Manager/lk
Permit Number: 21-164
Applicant: Hilcorp North Slope
Address: 3800 Centerpoint Drive #1400, Anchorage, AK 99503
Contact Person: Keri Iles
Email: keri.iles@hilcorp.com
Location (TRS): T: 10N  R: 15E  Sec.: 2

Zoning District: Resource Development District

Proposed Start Date: January 2021
Completion Date: April 2021

Purpose Of Development: Please see attached project description.

Permit Type: Admin Approval
Date: 12/04/2020
State ID: 
Phone: (907) 777-8368
Name: Vern Lake Ice Road
Field Name and Pad: DS9, Eastern Operating Area, PBU

☐ Fill/Dredge
☐ Oil and Gas Wells
☐ Temp. Water Use
☐ Off Road Travel
☐ Fuel Storage
☐ Hazardous Materials Storage
☐ Solid Waste
☐ Mining
☐ Air Emissions
☐ Noise/Vibration
☐ Sensitive Habitat
☐ Transportation

Material: 
Acres: 
Number of New Surface Holes: N/A - Not Applicable
Sources: Permitted sources
Access: Via existing pads
Purpose: N/A - Not Applicable
Maximum Amount: N/A - Not Applicable
Period: N/A - Not Applicable
Equipment: N/A - Not Applicable
Site Access: N/A - Not Applicable
Amount: N/A - Not Applicable
Type: N/A - Not Applicable
Handling: N/A - Not Applicable
Amount: N/A - Not Applicable
Type: N/A - Not Applicable
Handling: N/A - Not Applicable
Treatment: N/A - Not Applicable
Habitat: N/A - Not Applicable
Type: N/A - Not Applicable
Amount: N/A - Not Applicable
Type: N/A - Not Applicable
Amount: N/A - Not Applicable
Type: N/A - Not Applicable
Shoreline: N/A - Not Applicable
Type: N/A - Not Applicable
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES.
- SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NAD 1927 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLL FREE (IN-STATE): (800) 478-6605 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

Authorized Signature
Keri Iles
Name

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING $12,000
☐ DEVELOPMENT PERMIT $2,000, plus $500/well
☑ ADMINISTRATIVE APPROVALS $1,500
☐ CONDITIONAL DEVELOPMENT PERMITS $3,000

AMOUNT PAID $1500.00

12/04/2020
Date

Environmental Specialist - Land Use
Title

DECISION
☑ ADMINISTRATIVELY APPROVED
This is a minor alteration to a previously approved development permit for commercial recreation.

☐ REZONING APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan conditions, lease stipulations, and provisions of state and federal law and permits served thereunder.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory policies, represents the developer's best efforts to implement all relevant best efforts and minimization policies, and as long as conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter.)

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land that is listed as a conditional development for this zoning district or has been elevated by the NSB Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter.)

NSB Land Management Administrator

12/22/20
Date

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect, NSMBC §19.30.130.
Project Description
Vern Lake Ice Road 2021
Prudhoe Bay Unit

Introduction
Hilcorp North Slope, LLC (Hilcorp) proposes to construct an ice road from Drill Site 9 (DS9) to the Sagavanirktok (Sag) River in the Prudhoe Bay Unit.

Purpose
The ice road is being constructed for access to the outlet of Vern Lake. Gravel removal maintenance will occur at the Vern Lake outlet.

Scope of Proposed Activities
- Construct an ice road 390 feet long by 50 feet wide from the northwest corner of DS9 to the Sag River.
- Use approximately 300,000 gallons of water from currently permitted sources.
- Typical ice road building equipment will be used including a loader, dozer, water trucks, and dump trucks.

Schedule
The ice road construction is expected to commence on January 1, 2020.
This map is based on U.S.G.S quad Beechey Point (A-3) and on the Unit Operator's Facility Maps.

PROJECT LOCATION:
PRUDHOE BAY UNIT - PROPOSED VERN LAKE ICE ROAD
NAD83
LAT. = 70° 14' 33.842" / DD 70.242734
LONG. = -148° 16' 25.602" / DD -148.273834

ALASKA STATE PLANE ZONE 4, NAD83
X = 1,854,113.61 FEET
Y = 5,941,219.86 FEET

ADL028327 SEC. 2 T10N, R15E UMIAT M.

DATUM: MEAN SEA LEVEL

ADJACENT PROPERTY OWNER:
STATE OF ALASKA

BP EXPLORATION (ALASKA) INC.
PRUDHOE BAY UNIT
VERN LAKE ICE ROAD
VICINITY MAP

DATE: November 2020
SCALE: 1" = 1 Mile
FIGURE: 1
December 22, 2020

ConocoPhillips Alaska, Inc. (CPAI)
C/O Jennifer Collins, Senior Environmental Coordinator
P.O. Box 100360
Anchorage, Alaska 99510-0360
Email: Jennifer.Collins@ConocoPhillips.com

RE: NSB 21-165, Administrative Approval, Alpine Survey Monuments, T11N, R4E, Section 24, T11N, R5E, Section 19, Alpine Unit, Resouce Development District.

Dear Ms. Collins:

We have reviewed your application dated December 21, 2020 in which you have requested authorization to install four survey monuments around the existing Colville Delta No. 4 (CD4) pad. The survey monuments are to prepare for potential future rig access to existing well slots at CD4. The project area is located within the Alpine Unit, Resource Development District (RDD). The surface land is privately owned.

Four frost-proof survey monuments will be installed using a 1.5-inch diameter iron pipe and positioned to a depth of 22 feet near the CD4 gravel pad. The survey monuments will be backfilled with up to 10 cubic yards of sand slurry. The total surface area disturbed by installing the monuments is 1.8 square feet (< 0.1 acres). The acreage to fill to wetlands will be 0.00005 (<0.1 acres). CPAI anticipates utilize the Hollow Stem Auger (HSA) installation method. Table 1 lists the proposed survey monument data gathering and installation details.

Each monument will be enclosed in a conductor casing that will extend up to 36-inches above the ground surface. Survey delineators with reflective tape measuring six feet in length and protruding five feet above the surface will be installed for visibility. Two existing thermistors north of CD4 will be cut below grade and abandoned in place. Table 2 lists the survey monument locations by township, range, and section.
The soil cuttings produced during drilling will be collected in a tote mounted on a Rolligon and will be disposed of in accordance with CPAI’s Alaska Waste Disposal and Reuse Guide (Redbook).

### Table 1: Survey Monument Summary and Locations

<table>
<thead>
<tr>
<th>Location</th>
<th>Monument No.</th>
<th>Type</th>
<th>Drilling Methods</th>
<th>Depth (ft.)</th>
<th>Est. Shift(s)</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD4</td>
<td>MON 1</td>
<td>Install</td>
<td>HSA</td>
<td>22</td>
<td>1</td>
<td>70.2904</td>
<td>150.9961</td>
</tr>
<tr>
<td></td>
<td>MON 2</td>
<td>Install</td>
<td>HSA</td>
<td>22</td>
<td>1</td>
<td>70.2926</td>
<td>150.9966</td>
</tr>
<tr>
<td></td>
<td>MON 3</td>
<td>Install</td>
<td>HSA</td>
<td>22</td>
<td>1</td>
<td>70.2935</td>
<td>150.9867</td>
</tr>
<tr>
<td></td>
<td>MON 4</td>
<td>Install</td>
<td>HSA</td>
<td>22</td>
<td>1</td>
<td>70.2921</td>
<td>150.9842</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
<td>88</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 2: Survey Monument Locations

<table>
<thead>
<tr>
<th>Project Component</th>
<th>Legal Description (T R S)</th>
<th>NSB Zoning District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey Monuments</td>
<td>11N, 4E, Sections 24</td>
<td>Alpine</td>
</tr>
<tr>
<td></td>
<td>11N, 5E, Sections 19</td>
<td></td>
</tr>
</tbody>
</table>

**MOBILIZATION AND ACCESS**

CPAI will access the project area by utilizing existing gravel roads, ice roads (permitted separately) and winter tundra travel. Tundra travel routes will be refined in the field to avoid hazards such as steep terrain or environmentally sensitive areas, including willow habitat, areas with thin snow cover, and culturally sensitive sites.

**EQUIPMENT AND MATERIALS**

Equipment to be utilized includes approved tundra travel vehicles, Tuckers, Steigers, Hagglunds, Rolligons, snowmachines, an enclosed soil exploration drilling rig, mobile fuel tanks, generators, pick-up trucks, and other heavy equipment to transport equipment and material. The materials include frost-proof survey monuments and fill to support slurry method installation.

The drill equipment is portable and built on a flexible sled with a smooth plastic bottom that is towed behind a low ground pressure vehicle such as a Rolligon. The drill is contained within a mobile enclosure which includes an electric generator and support tools.
FUEL STORAGE AND TRANSFER

Fuel storage includes a double-walled, mobile 2,500-gallon capacity tank with secondary containment. The total estimated fuel use for this project is up to 25,000 gallons.

Fuel storage of more than 1,320 gallons requires that a Spill Prevention and Countermeasure Control (SPCC) plan be maintained at all project activity areas. CPAI holds an SPCC plan for fuel storage and handling facilities associated with the mobile fuel tank and fuel transfer equipment. All fuel storage and handling will follow CPAI operations and management procedures and federal, state, and local regulations. Any spills will be reported to the appropriate agencies within the required timeframe. Secondary containment will be provided during all fueling operations.

HISTORICAL SITES AND CULTURAL RESOURCE

The project area has been examined in part by many previous cultural resource efforts during survey for proposed exploration drilling and development projects. CPAI has reviewed the database of Traditional Land Use Inventory (TLUI), Alaska Heritage Resource Survey (AHRS), Native Allotments, and cabins used for subsistence purpose and there are no known sites located within 500 feet of the project area. CPAI believes there would be no impact to cultural resources from this project. CPAI has applied for a Certified of TLUI Clearance.

Purpose of Project

The survey monuments are to prepare for potential future rig access to the existing well slots at CD4.

This project is scheduled to commence on February 15, 2021 with a completion date of August 31, 2021.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Resource Development District.

We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

PROJECT SPECIFIC STIPULATION

1. CPAI must obtain a letter of non-objection from all land owners and submit a copy to NSB Land Management Division.
2. CPAI must have two trained fuel handlers onsite during refueling operations.

WILDLIFE STIPULATION

The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Planning and Community Services Department before the start of any field activities.

SPILL RESPONSE REQUIREMENTS

1. CPAI shall have an approved spill response and contingency plan. The approved Plan shall be attached to this file for reference. NSBMC 19.70.050 1(11)

SPILL RESPONSE TACTICS

1. Place drip pans under vehicles parked over 5 minutes

2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks

3. Impermeable lining and diking is required for fuel storage facilities with a capacity greater than 660 gallons.

Pink dye is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by CPAI.

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist.
Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBM 19.60.040 O., NSBM 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBM 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBM 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBM 19.70.050 I. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBM 19.70.050 I. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. CPAI shall consult with ICAS Realty Director, at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBM 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBM 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBM 19.70.050 L. 3.
13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

- Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.
- A list of vehicles used for any off-road travel, which may have taken place.
- Statement of clean-up activities.
- Methods of disposal of garbage, and other camp debris.
- A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.
- Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspectors at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0440.
- Report any tundra damage within 24 hours and consult with NSB Land Management staff with any questionable activity unsure of.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, herbert.ipalook@north-slope.org and/or rodney.ahtuangaruak@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)
4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Darylynn Aveoganna, Land Management Specialist at (907) 852-0320 ext. 5413 or by email at darylynn.aveoganna@north-slope.org

Sincerely,

[Signature]

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Tipte, Assessing Division, NSB
Olivia Cabirnho, Nuiqsut Village Deputy Assistant, NSB
Jeanne Proulx, AkDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDI/F&WS, Fairbanks
Jeanne Hanson, USDI/NMFS, Anchorage
Josephine Delgado-Pikat, DCOM, Juneau
dee.water.oilandgas@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEQ, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCay, US Army COE, Shane.McCay@usace.army.mil
Donna Wixom, USDI/BLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AKDNR/DO&G, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
Dog permitting@alaska.gov
Mark Major, Kuukpik Corporation, majorinor@live.com
Willow Hetrick, Kuukpik Corporation, willow@kuukpik.com
Joseph Nukapigak, President, Kuukpik Village Corporation
Mamie Purdue Mayor, City of Nuiqsut
Raymond Ipalook, President, Native Village of Nuiqsut
Herbert Ipalook Jr., Rodney Ahtuanenuak Jr., Field Inspectors, Nuiqsut
Allyson Atos, Lead Field Inspector, Utqiagvik
Leroy Oenga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Files
Land Management Regulations Permit Application

Permit Number: 21-149
Applicant: ConocoPhillips Alaska, Inc
Address: P.O. Box 100360
Anchorage, AK 99510-0360
Contact Person: Jennifer Collins
Location (TRS): T11N, R4E, Section 24
T11N, R5E, Section 19
Zoning District: Alpine RDD

Permit Type: Administrative Approval
Date: 12/21/2020
State ID: (907) 265-6509
Phone: Alpine Survey Monuments

Proposed Start Date: 2/15/2021
Completion Date: 8/31/2021
Proposed Development: ConocoPhillips Alaska, Inc. (CPAI) requests authorization to install four survey monuments around the existing Colville Delta No. 4 (CD4) pad. See project description for further detail.

Purpose of Development: The survey monuments are to prepare for potential future rig access to the existing well slots at CD4.

☐ Fill/Dredge
Material: Sand Slurry
Acres: <0.1

☐ Oil & Gas Wells
Number of New Surface Holes: N/A

☐ Temp. Water Use
Source: N/A
Purpose: N/A
Access: N/A
Maximum Amount: N/A

☐ Off Road Travel
Period: Winter Season
Equipment: Approved tundra travel vehicles
Site Access: Access to the project area will by tundra travel.

☐ Fuel Storage
Type: Arctic Diesel
Amount: Not to exceed 1000 bbl.
Handling: Fuel storage will be handled in accordance with federal, state, and local regulations.

☐ Hazardous Material Storage
Type: N/A
Amount: N/A
Handling: N/A

☐ Solid Waste
Treatment: N/A

☐ Mining
Habitat: N/A

☐ Air Emissions
Type: Vehicles and equipment
Amount: Minor

☐ Noise/Vibration
Type: Vehicles and equipment
Amount: Normal

☐ Sensitive Habitat
Floodplain: N/A
Shoreline: N/A

☐ Transportation
Type: N/A

☐ Marine Tanker Facility
☐ Seismic Work
☐ Utility Development
☐ Recreational Development
☐ Causeway
☐ Offshore Drilling
☐ Residential Development
☐ CD-ROM Included
☐ Construction
☐ Temporary Airport
☐ Oil Transport System
☐ Snow Removal
☒ Maps Included
ATTACH TO THIS APPLICATION THE FOLLOWING:

- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES. THE PROJECTION SHOULD BE NAD 27 ALASKA ALBERS OR GEOREFERENCED.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED)

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLLFREE (IN STATE): (800) 478-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT

[Signature]
Jennifer Collins

Authorized Signature

Date
12/21/2020

Senior Environmental Coordinator

Title

☐ SPECIAL PLANNING COMMISSION MEETING
☐ DEVELOPMENT PERMIT
☒ ADMINISTRATIVE APPROVALS
☐ CONDITIONAL DEVELOPMENT PERMITS

AMOUNT PAID: $1,500

Fee to be paid monthly by Electronic Funds Transfer.

DECISION
☒ ADMINISTRATIVELY APPROVED
☐ REZONING APPROVED
☐ DEVELOPMENT PERMIT APPROVED
☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
☐ PERMIT DENIED

(See accompanying letter)

Land Management Administrator

Date
12/22/20

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect.

NSMBC §19.30.130.
ConocoPhillips Alaska, Inc. (CPAI) requests authorization to install four survey monuments around the existing Colville Delta No. 4 (CD4) pad. The survey monuments are to prepare for potential future rig access to existing well slots at CD4. The project area is located within the North Slope Borough (NSB) Resource Development District (RDD). The surface land is privately owned.

Four frost-proof survey monuments will be installed using a 1.5-inch diameter iron pipe and positioned to a depth of 22 feet near the CD4 gravel pad. The survey monuments will be backfilled with up to 10 cubic yards of sand slurry. The total surface area disturbed by installing the monuments is 1.8 square feet (< 0.1 acres). The acreage to fill to wetlands will be 0.00005 (<0.1 acres). CPAI anticipates utilize the Hollow Stem Auger (HSA) installation method. Table 1 lists the proposed survey monument data gathering and installation details.

Each monument will be enclosed in a conductor casing that will extend up to 36-inches above the ground surface. Survey delineators with reflective tape measuring six feet in length and protruding five feet above the surface will be installed for visibility. Two existing thermistors north of CD4 will be cut below grade and abandoned in place. Table 2 lists the survey monument locations by township, range, and section.

The soil cuttings produced during drilling will be collected in a tote mounted on a Rolligon and will be disposed of in accordance with CPAI’s Alaska Waste Disposal and Reuse Guide (Redbook).

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<th>Location</th>
<th>Monument No.</th>
<th>Type</th>
<th>Drilling Methods</th>
<th>Depth (ft.)</th>
<th>Est. Shift(s)</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD4</td>
<td>MON 1</td>
<td>Install</td>
<td>HSA</td>
<td>22</td>
<td>1</td>
<td>70.2904</td>
<td>150.9961</td>
</tr>
<tr>
<td></td>
<td>MON 2</td>
<td>Install</td>
<td>HSA</td>
<td>22</td>
<td>1</td>
<td>70.2926</td>
<td>150.9966</td>
</tr>
</tbody>
</table>
Table 2: Survey Monument Locations

<table>
<thead>
<tr>
<th>Project Component</th>
<th>Legal Description (T R S)</th>
<th>NSB Zoning District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Survey Monuments</td>
<td>11N, 4E, Sections 24</td>
<td>Alpine</td>
</tr>
<tr>
<td></td>
<td>11N, 5E, Sections 19</td>
<td></td>
</tr>
</tbody>
</table>

MOBILIZATION AND ACCESS

CPAI will access the project area by utilizing existing gravel roads, ice roads (permitted separately) and winter tundra travel. Tundra travel routes will be refined in the field to avoid hazards such as steep terrain or environmentally sensitive areas, including willow habitat, areas with thin snow cover, and culturally sensitive sites.

EQUIPMENT AND MATERIALS

Equipment to be utilized includes approved tundra travel vehicles, Tuckers, Steigers, Hagglunds, Rolligons, snowmachines, an enclosed soil exploration drilling rig, mobile fuel tanks, generators, pick-up trucks, and other heavy equipment to transport equipment and material. The materials include frost-proof survey monuments and fill to support slurry method installation.

The drill equipment is portable and built on a flexible sled with a smooth plastic bottom that is towed behind a low ground pressure vehicle such as a Rolligon. The drill is contained within a mobile enclosure which includes an electric generator and support tools.

FUEL STORAGE AND TRANSFER

Fuel storage includes a double-walled, mobile 2,500-gallon capacity tank with secondary containment. The total estimated fuel use for this project is up to 25,000 gallons.

Fuel storage of more than 1,320 gallons requires that a Spill Prevention and Countermeasure Control (SPCC) plan be maintained at all project activity areas. CPAI holds an SPCC plan for fuel storage and handling facilities associated with the mobile fuel tank and fuel transfer equipment. All fuel storage and handling will follow CPAI operations and management procedures and federal, state, and local regulations. Any spills will be reported to the
appropriate agencies within the required timeframe. Secondary containment will be provided during all fueling operations.

HISTORICAL SITES AND CULTURAL RESOURCE

The project area has been examined in part by many previous cultural resource efforts during survey for proposed exploration drilling and development projects. CPAI has reviewed the database of Traditional Land Use Inventory (TLUI), Alaska Heritage Resource Survey (AHRS), Native Allotments, and cabins used for subsistence purpose and there are no known sites located within 500 feet of the project area. CPAI believes there would be no impact to cultural resources from this project. CPAI has applied for a Certified of TLUI Clearance.

PERMIT LIST AND AUTHORIZATIONS

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>PERMIT/APPROVALS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FEDERAL PERMITS</strong></td>
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</tr>
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<td>USACE</td>
<td>Nationwide Permits 6 and 18</td>
</tr>
<tr>
<td></td>
<td>Section 106 Consultation of the National Historic Preservation Act</td>
</tr>
<tr>
<td>USFWS</td>
<td>Letter of Authorizations (LOA)</td>
</tr>
<tr>
<td></td>
<td>- New project specific incidental take of polar bears</td>
</tr>
<tr>
<td></td>
<td>- Permit No. 18-INT-15 – Potential intentional take of polar bears, Expires 1/14/2021 (permit is in the process of being renewed)</td>
</tr>
<tr>
<td></td>
<td>Section 7 Consultation of the Endangered Species</td>
</tr>
<tr>
<td><strong>STATE PERMITS</strong></td>
<td></td>
</tr>
<tr>
<td>ADNR</td>
<td>Unit Plan of Operations Amendment</td>
</tr>
<tr>
<td><strong>LOCAL PERMITS</strong></td>
<td></td>
</tr>
<tr>
<td>NSB</td>
<td>Administrative Approval</td>
</tr>
<tr>
<td>NSB TLUI</td>
<td>Traditional Land Use Inventory Clearance</td>
</tr>
</tbody>
</table>

Project work is expected to begin February 15, 2021 and be completed by August 31, 2021 and will include inspections, reporting, seeding (if necessary) and clean-up activities. Project start and end dates will be revised as necessary based on winter tundra travel conditions. Ground disturbing activities and tundra travel will occur in the winter months. All activities will be conducted in accordance with federal, state and local regulations, permit stipulations and general concurrence stipulations as appropriate.
CD4 PAD - SURVEY MONUMENTS

CD4 PAD MONUMENT LOCATIONS

<table>
<thead>
<tr>
<th>MONUMENT</th>
<th>NORTHING</th>
<th>EASTING</th>
<th>LATITUDE</th>
<th>LONGITUDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MON 1</td>
<td>69669666a</td>
<td>1517366a</td>
<td>N70° 17' 25.58&quot;</td>
<td>W150° 59' 46.31&quot;</td>
</tr>
<tr>
<td>MON 2</td>
<td>59674766a</td>
<td>1517324a</td>
<td>N70° 17' 33.63&quot;</td>
<td>W150° 59' 47.89&quot;</td>
</tr>
<tr>
<td>MON 3</td>
<td>59677661a</td>
<td>1518549a</td>
<td>N70° 17' 36.63&quot;</td>
<td>W150° 59' 12.34&quot;</td>
</tr>
<tr>
<td>MON 4</td>
<td>59672566a</td>
<td>1518650a</td>
<td>N70° 17' 31.71&quot;</td>
<td>W150° 59' 03.31&quot;</td>
</tr>
</tbody>
</table>

NOTE:
1. COORDINATES ARE PROVIDED IN NAD83 DATUM, ALASKA STATE PLANE, ZONE 4, US FEET.
2. THE LOCATIONS SHOWN FOR RELOCATED MONUMENTS ARE APPROXIMATE.
3. EXACT LOCATIONS WILL BE DETERMINED BY SURVEYORS BASED ON FIELD OBSERVATIONS, TO ENSURE THAT WET AREAS AND UNSTABLE GROUND IS AVOIDED.

REFERENCE: POA—XXXX—XXXX
APPLICANT: CPAI
PROPOSED: ALPINE SURVEY MONUMENTS AND GEOTECH SURVEY
AT: ALASKA
SHEET 2 of 4 12/14/2020
INSTALL 1EA. 6 FOOT CARSONITE SURVEY MARKER (CRM-375 OR EQUAL) AND 2EA. SNOW PROBE WITH REFLECTIVE TAPE, MOUNTED ON TRIANGLE BASE

CASING CAP

HDPE OR APS COUPLER

WELD SEAL (FULL PENETRATION) TOP OF PIPE AND ETCH CROSS ON TOP FOR REFERENCE HIGH POINT

TOP OF SILICONE FLUID

GUIDE PLATE, USE 3/8 inch THICK HDPE OR ABS PLATE WITH 2.0 inch HOLE IN CENTER. FRICTION FIT ON INSIDE OF CASING

MOUNDED SOIL CUTTINGS

GROUND SURFACE

1.5 inch SCHEDULE 80 BLACK IRON PIPE (1.9 inch O.D.) (PIPE)

FILL ANNULUS BETWEEN PIPE AND 4 inch CASING WITH SILICONE FLUID

HDPE OR ABS CASING - 4 inch SDR 17

4" x 2" ABS REDUCING COUPLER WITH 1.88 inch SEAL

SAND SLURRY (CAN BE MADE BY POURING THAWED, DRY, SAND INTO WARM, FRESH WATER TO ACHIEVE SATURATION)

3 inch DIAMETER BY 3/8 inch THICK PLATE STEEL DISK (THREADED TO BASE OF PIPE)

BOREHOLE DIAMETER 6" MAX.

NOTES:
1. DRAWING PROVIDED BY KUUKPIKCMF AND MODIFIED BY GOLDER.
2. NOT TO SCALE.

CLIENT
CONOCOPHILLIPS ALASKA INC.

PROJECT
NORTH SLOPE, ALASKA

TITLE
FROST PROOF MONUMENT FOR NATURAL TUNDRA INSTALLATION

CONSULTANT
GOLDER

DEIGNED
JBD

PREPARED
APG

REVIEWS
APG

APPROVED
JBD

PROJECT NO.

REV.
A

FIGURE
1
December 22, 2020

ConocoPhillips Alaska, Inc. (CPAI)
C/O Jennifer Collins, Senior Environmental Coordinator
P.O. Box 100360
Anchorage, Alaska 99510-0360
Email: Jennifer.Collins@ConocoPhillips.com


Dear Ms. Collins:

We have reviewed your application dated December 18, 2020, in which you have requested authorization to construct, maintain and utilize the Lake L9308/N77097/Oil Lake ice spur located within the Alpine Satellite Resource Development District.

Project Description

The ice spur will support Western North Slope oil and gas activities. Pullout areas or wide sections of ice spur will be constructed at certain locations depending on construction technique, field conditions, and safety considerations. The ice spur will be refined in the field to avoid hazards such as steep terrain or environmentally sensitive areas, including willow habitat, areas with thin snow cover, and culturally sensitive sites. Minor site-specific variations will occur due to field conditions.

The ice spur will be constructed and maintained using water and ice chips from permitted water sources. CPAI will obtain a separate authorization for prepacking activities.

CPAI has reviewed the databases of Traditional Land Use Inventory (TLUI), Alaska Heritage Resource Survey, Native Allotments, and cabins used for subsistence purposes and there are no known sites located within 500 feet of the project area. CPAI believes there would be no impact to cultural resources from this project. CPAI has applied for a Certificate of TLUI Clearance.
Ice spur construction will begin upon receipt of permit approvals or when conditions for ice spur construction are suitable, whichever comes later. The project will end by September 15, 2021 or when stick picking and agency inspections have been completed.

All activities will be conducted in accordance with federal, state and local regulations, permit stipulations and general concurrence stipulations as appropriate. See the attached project description and figures for additional details.

**Purpose of Project**

The ice spur will support Western North Slope oil and gas activities. Minor site-specific variations will occur due to field conditions.

This project is scheduled to commence upon approval of this permit with a completion date of September 15, 2021.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Resource Development District.

We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

**PROJECT SPECIFIC STIPULATION**

1. CPAI must obtain a letter of non-objection from all land owners and submit a copy to NSB Land Management Division.

2. CPAI must have two trained fuel handlers onsite during refueling operations.

**WILDLIFE STIPULATION**

The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Planning and Community Services Department before the start of any field activities.
ICE ROADS AND PADS STIPULATIONS

1. Water may be extracted only from sources approved by the Alaska Department of Natural Resources.

2. Onshore ice spur construction is not to commence until frost has penetrated the ground to a depth of one-foot. The ice road is to be maintained at a minimum thickness of six (6) inches. NSBMC 19.50.030(J); NSBMC 19.60.040) (O).

3. Spills of fuels, hydrocarbons, or chemicals on ice spur shall be cleaned up thoroughly prior to break-up to prevent damage to the underlying tundra when the ice pad melts. NSBMC 19.50.030) (J); NSBMC 19.60.040) (O).

4. In the event that an alternate ice road route is required, all surface vehicles are to confine travel as much as possible to only those areas and times of year with sufficient (6 inches) snow cover in order to protect the underlying tundra. NSBMC 19.60.040) (O).

SPILL RESPONSE TACTICS

1. Place drip pans under vehicles parked over 5 minutes.

2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks

Pink dye is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by CPAI.

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.
3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 I. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 I. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. CPAI shall consult with ICAS Realty Director, at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:
o Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.

o A list of vehicles used for any off-road travel, which may have taken place.

o Statement of clean-up activities.

o Methods of disposal of garbage, and other camp debris.

o A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.

o Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspectors at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.

o Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.

**GENERAL STIPULATIONS**

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cells, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, herbert.ipalook@north-slope.org, and/or rodney.ahtuangaruak@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)
4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Lilly Kilapsuk, Land Management Specialist at (907) 852-0320 ext. 5411 or by email at lilly.kilapsuk@north-slope.org.

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Olivia Cymbitok, Nuiqsut Village Deputy Assistant, NSB
Jeanne Prouty, AKDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDI/F&WS, Fairbanks
Jeanne Hanson, USDI/NMFS, Anchorage
Josephina Delgado-Plikat, DCOM, Kuparuk
Tonya Bear, AkDEC, Fairbanks
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Donna Wison, USDI/BLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AKDNR/DO&G, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
Dog permitting@alaska.gov
Mark Major, Kuukpik Corporation, majorinoro@live.com
Joseph Nukapigak, President, Kuukpik Village Corporation
Manie Pardue Mayor, City of Nuiqsut
Margaret Pardue, President, Native Village of Nuiqsut
Herbert Ipalook Jr., Rodney Ahtusngurusuk Jr., Field Inspectors, Nuiqsut
Allyson Atos, Lead Field Inspector, Utqiagvik
Leroy Oenga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Files

NSB21-167/GRB/mk/lk-acting LMR Manager/lk
Land Management
Regulations Permit Application

Permit Number: 21-161

Applicant: ConocoPhillips Alaska, Inc
Address: P.O. Box 100360, Anchorage, AK 99510-0360

Contact Person: Jennifer Collins

Location (TRS): T11N, R4E, Sections 16 and 17
Zoning District: Alpine Satellite RDD

Permit Type: Administrative Approval
Date: December 18, 2020
State ID: (907) 265-6509
Phone: Alpine Resupply – Lake L9308 Ice Spur

Completion Date: September 15, 2021

Proposal Start Date: Upon receipt of permit approval

Proposed Development: ConocoPhillips Alaska, Inc. (CPAI) requests authorization to construct, maintain and utilize the Lake L9308/N77097/Oil Lake ice spur. The proposed Lake L9308 ice spur will be 0.2 miles long.

Purpose of Development: The ice spur will support Western North Slope oil and gas activities. Minor site-specific variations will occur due to field conditions.

Fill/Dredge
Material: N/A
Number of New Surface Holes: N/A

Oil & Gas Wells
Number of New Surface Holes: N/A

Temp. Water Use
Source: Permitted Sources
Access: N/A
Purpose: Construction and maintenance of ice feature.
Maximum Amount: Existing infrastructure and Alpine Resupply Ice road.

Off Road Travel
Period: Winter Season
Equipment: Water trucks, graders, etc.
Site Access: Existing infrastructure and Alpine Resupply Ice road.

Fuel Storage
Type: N/A
Amount: N/A
Handling: N/A

Hazardous Material Storage
Type: N/A
Amount: N/A
Handling: N/A

Solid Waste
Treatment: N/A

Mining
Habitat: N/A

Air Emissions
Type: Vehicles and equipment
Amount: Minor

Noise/Vibration
Type: Vehicles and equipment
Amount: Normal

Sensitive Habitat
Floodplain: N/A
Shoreline: N/A

Transportation
Type: Miscellaneous land-based vehicles to support construction.

Marine Tanker Facility
Seismic Work: N/A
Utility Development: N/A

Causeway Construction
Offshore Drilling: N/A
Residential Development: N/A

Temporary Airport
Oil Transport System: N/A
Snow Removal: N/A

Recreational Development
CD-ROM Included
Maps Included
ATTACH TO THIS APPLICATION THE FOLLOWING:

- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES. THE PROJECTION SHOULD BE NAD 27 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED)

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLLFREE (IN STATE): (800) 478-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT

Authorized Signature
Jennifer Collins
Name

Fee to be paid monthly by Electronic Funds Transfer.

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING
☐ DEVELOPMENT PERMIT
☒ ADMINISTRATIVE APPROVALS
☐ CONDITIONAL DEVELOPMENT PERMITS

$1,500 AMOUNT PAID

12/18/2020
Date
Senior Environmental Coordinator
Title

DECISION
☒ ADMINISTRATIVELY APPROVED
This is a minor amendment to a development permit or is a use of land listed under administrative approvals for this zoning district.

☐ REZONING APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan conditions, lease stipulations, and provision of state and federal law and permits served thereunder.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory Policies, represents the Developer’s best efforts to implement all relevant best efforts and minimization policies, and as long as any conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter).

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land this is listed as a conditional development for this zoning district or has been elevated by the Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

Land Management Administrator
Date

12/28/20

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect.

NSMBC §19.30.130.
Alpine Resupply Ice Spurs
Lake L9308
(Note: A similar ice spur was previously permitted under NSB 19-123)

Project Description

ConocoPhillips Alaska, Inc. (CPAI) requests authorization to construct, maintain and utilize the Lake L9308/N77097/Oil Lake ice spur. The proposed Lake L9308 ice spur will be 0.2 miles long.

The ice spur will support Western North Slope oil and gas activities. Pullout areas or wide sections of ice spur will be constructed at certain locations depending on construction technique, field conditions, and safety considerations. The ice spur will be refined in the field to avoid hazards such as steep terrain or environmentally sensitive areas, including willow habitat, areas with thin snow cover, and culturally sensitive sites. Minor site-specific variations will occur due to field conditions.

The location of the ice spur is provided in the table below:

<table>
<thead>
<tr>
<th>Ice Spur Name</th>
<th>Length (Miles)</th>
<th>Legal Description (T, R, S)</th>
<th>Zoning District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake L9308</td>
<td>0.2</td>
<td>11N, 4E, Sections 16 and 17</td>
<td>Alpine Satellite RDD</td>
</tr>
</tbody>
</table>

The ice spur will be constructed and maintained using water and ice chips from permitted water sources. CPAI will obtain a separate authorization for prepacking activities.

CPAI has reviewed the databases of Traditional Land Use Inventory (TLUI), Alaska Heritage Resource Survey, Native Allotments, and cabins used for subsistence purposes and there are no known sites located within 500 feet of the project area. CPAI believes there would be no impact to cultural resources from this project. CPAI has applied for a Certificate of TLUI Clearance.

Ice spur construction will begin upon receipt of permit approvals or when conditions for ice spur construction are suitable, whichever comes later. The project will end by September 15, 2021 or when stick picking and agency inspections have been completed.

All activities will be conducted in accordance with federal, state and local regulations, permit stipulations and general concurrence stipulations as appropriate. See the attached Lake L9308 ice spur map for additional details.
December 29, 2020

ConocoPhillips Alaska, Inc. (CPAI)
C/O Jennifer Collins, Senior Environmental Coordinator
P. O. Box 100360
Anchorage, Alaska 99510-0360
Email: jennifer.collins@conocophilips.com


Dear Ms. Collins:

We have reviewed your application dated December 28, 2020, in which you have requested authorization to construct an ice pad designated as MSIP-2 located within the Alpine Satellite Unit, Resource Development District.

Project Description

CPAI will construct, maintain and utilize a multi-season ice pad (MSIP), designated MSIP 2, near the Greater Mooses Tooth 2, also known as Mooses Tooth 7 (GMT2/MT7) pad. MSIP 2 will be used to support Western North Slope (WNS) oil and gas activities. Minor site-specific variations will occur due to field conditions.

The ice pad will be constructed on the tundra and will have a footprint of 4.0 acres with an effective storage area of 3.1 acres. The ice will be covered with a visqueen sheeting (reinforced 12 mil polyethylene sheeting) and structural foam-core insulated panels (SIPs) will be placed on top of the sheeting. The SIPs will be covered by interlocking rig mats to provide a durable working surface. The perimeter of the SIPs will be anchored into the ice using fabricated anchors frozen into the ice pad.

The edges of MSIP 2 will be covered by a white fabric to minimize solar thermal gain and reduce rainwater infiltration. The fabric will be attached to steel tubing or other temporary fastening device to prevent movement and will be rolled back during weekly ice melt inspections as the pad recedes. MSIP 2 will be at the same elevation and flush with the GMT2/MT7 road and fencing will be used as required.

An ice berm will be installed on the tundra at the outside edge of the ice pad and allowed to melt at the end of the season. The ice berm is designed to protect the ice pad from degradation and erosion on exposed sides during spring breakup, based upon local hydrology models and studies. It will be 1.0 acres or less in addition to the MSIP footprint. The berm will be reconstructed during the next winter season, depending on study results of the prior spring breakup.
The ice pad will be constructed and maintained using water and ice chips from permitted sources. CPAI will not require pre-packing activities for this MSIP.

CPAI has reviewed the databases of Traditional Land Use Inventory (TLUI), Alaska Heritage Resource Survey, Native Allotments, and cabins used for subsistence purposes and there are no known sites located within 500 feet of the project areas. CPAI believes there would be no impact to cultural resources from this project. CPAI has applied for a Certificate of TLUI Clearance.

Ice pad construction will begin January 15, 2021 and the MSIP will be utilized until May 2022. The sheeting, SIPs, rig mats, fabric, and all other materials will be removed by June 2022. The project will end by September 15, 2022 or when stick picking and agency inspections have been completed.

All activities will be conducted in accordance with federal, state and local regulations, permit stipulations and general concurrence stipulations as appropriate. Please see the attached MSIP 2 maps for details.

**Purpose**

This project is needed in support of oil and gas development.

This project is scheduled to commence on January 15, 2021, with a completion date of September 15, 2022.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Resource Development District.

We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

**PROJECT SPECIFIC STIPULATIONS**

1. CPAI shall get a Non-Objection letter from all land owners and provide a copy to the North Slope Borough Land Management Division.

2. CPAI shall have two trained fuel handler on site during all fueling operations.

**SPILL RESPONSE TACTICS**

1. Place drip pans under vehicles parked over 5 minutes.

2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks.

*Pink dye* is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by CPAI.

**ICE ROADS AND PADS STIPULATIONS**

1. Water may be extracted only from sources approved by the Department of Natural Resources.
2. Onshore ice road construction is not to commence until frost has penetrated the ground to a depth of one-foot. The ice road is to be maintained at a minimum thickness of six (6) inches. NSBMC 19.50.030(J); NSBMC 19.60.040(O).

3. Spills of fuels, hydrocarbons, or chemicals on ice pads shall be cleaned up thoroughly prior to breakup to prevent damage to the underlying tundra when the ice pad melts. NSBMC 19.50.030) (J); NSBMC 19.60.040(O).

4. In the event that an alternate ice road route is required, all surface vehicles are to confine travel as much as possible to only those areas and times of year with sufficient (6 inches) snow cover in order to protect the underlying tundra. NSBMC 19.60.040(O).

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 L. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 L. 11.

7. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

8. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.
9. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

10. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

11. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

12. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

- Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.
- A list of vehicles used for any off-road travel, which may have taken place.
- Statement of clean-up activities.
- Methods of disposal of garbage, and other camp debris.
- A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.
- Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspector at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.
- Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)
3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, Rodney.ahtuangaruak@north-slope.org and/or herbert.ipalook@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(1)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Ralph Burke, Land Management Specialist at (907) 852-0320 ext. 5414 or by email at ralph.burke@north-slope.org

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Olivea Cabinboy, Nuiqsut Village Deputy Assistant, NSB
Jeanne Proulx, AKDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDA/T&WS, Fairbanks
Jeanne Hanson, USD/NMFS, Anchorage
Josephina Delgado-Pikat, DCOM, Juneau
dcc.water.oilandgas@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Shane McCoy, US Army COE, Shane.McCoy@usace.army.mil
Donna Wixon, USD/BLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AkDNR/DO&G, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
Dog.permitting@alaska.gov
Mark Major, Kuukpik Corporation, majorinor@live.com
Willow Hetrick, Kuukpik Corporation, willow@kuukpik.com
Joseph Nukapigak, President, Kuukpik Village Corporation
Mamie Pardue Mayor, City of Nuiqsut
Raymond Ipalook, President, Native Village of Nuiqsut
Tommy Nageak, Cultural Resource Specialist, NSB
Darren W. Aiken, TLUI Technician, NSB
Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspectors, Nuiqsut
Allyson Atos, Lead Field Inspector, Utqiagvik
Leroy Oenga Jr. Ralph Kalcak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Files
### Land Management
#### Regulations Permit Application

<table>
<thead>
<tr>
<th>Permit Number</th>
<th>Permit Type</th>
<th>Administrative Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-1069</td>
<td></td>
<td>December 28, 2020</td>
</tr>
</tbody>
</table>

**Applicant:** ConocoPhillips Alaska, Inc  
**Address:** P.O. Box 100360, Anchorage, AK 99510-0360  
**Contact Person:** Jennifer Collins

**Location (TRS):** T10N R02E Sections 32 and 33  
**Zoning District:** Alpine Satellite RDD

**Proposed Start Date:** January 15, 2021  
**Completion Date:** September 15, 2022

**Proposed Development:** ConocoPhillips Alaska, Inc. (CPAI) requests authorization to construct, maintain and utilize a multi-season ice pad (MSIP), designated MSIP 2, near the Greater Mooses Tooth 2, also known as Mooses Tooth 7 (GMT2/MT7) pad.

**Purpose of Development:** The MSIP 2 will be used to support Western North Slope (WNS) oil and gas activities. Minor site-specific variations will occur due to field conditions.

<table>
<thead>
<tr>
<th>Material</th>
<th>N/A</th>
<th>Acres</th>
<th>N/A</th>
</tr>
</thead>
</table>

**Temp. Water Use**  
**Source:** Permitted Sources  
**Purpose:** Construction and maintenance of ice feature.

**Off Road Travel**  
**Site Access:** Existing infrastructure and Alpine Resupply Ice road.

**Fuel Storage**  
**Type:** N/A  
**Handling:** N/A

**Hazardous Material Storage**  
**Type:** N/A  
**Handling:** N/A

**Solid Waste**  
**Treatment:** N/A

**Mining**  
**Habitat:** N/A

**Air Emissions**  
**Type:** Vehicles and equipment  
**Amount:** Minor

**Noise/Vibration**  
**Type:** Vehicles and equipment  
**Amount:** Normal

**Sensitive Habitat**  
**Floodplain:** N/A  
**Shoreline:** N/A

**Transportation**  
**Type:** Miscellaneous land-based vehicles to support construction.

**Marine Tanker Facility**  
**Seismic Work:** No  
**Utility Development:** No  
**Recreational Development:** No

**Causeway Construction**  
**Offshore Drilling:** No  
**Residential Development:** No  
**CD-ROM Included:** No

**Temporary Airport**  
**Oil Transport System:** Yes  
**Snow Removal:** No  
**Maps Included:** No
ATTACH TO THIS APPLICATION THE FOLLOWING:

- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES. THE PROJECTION SHOULD BE NAD 27 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED)

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLLFREE (IN STATE): (800) 478-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT

12/28/2020

Authorized Signature
Jennifer Collins
Name

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING
☐ DEVELOPMENT PERMIT
☒ ADMINISTRATIVE APPROVALS
☐ CONDITIONAL DEVELOPMENT PERMITS
AMOUNT PAID:
$1,500
$1,500
Fee to be paid monthly by Electronic Funds Transfer.

DECISION
☒ ADMINISTRATIVELY APPROVED
This is a minor amendment to a development permit or is a use of land listed under administrative approvals for this zoning district.
☐ REZONING APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan conditions, lease stipulations, and provision of state and federal law and permits served hereunder.
☐ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory policies, represents the Developer’s best efforts to implement all relevant best efforts and minimization policies, and as long as any conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter).
☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land this is listed as a conditional development for this zoning district or has been elevated by the Land Management Administrator to the Planning Commission,
☐ PERMIT DENIED
(See accompanying letter)

Land Management Administrator

12/27/20

Date

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect.

NSMBC §19.30.130.
ConocoPhillips Alaska, Inc. (CPAI) requests authorization to construct, maintain and utilize a multi-season ice pad (MSIP), designated MSIP 2, near the Greater Mooses Tooth 2, also known as Mooses Tooth 7 (GMT2/MT7) pad. MSIP 2 will be used to support Western North Slope (WNS) oil and gas activities. Minor site-specific variations will occur due to field conditions.

The ice pad will be constructed on the tundra and will have a footprint of 4.0 acres with an effective storage area of 3.1 acres. The ice will be covered with a visqueen sheeting (reinforced 12 mil polyethylene sheeting) and structural foam-core insulated panels (SIPs) will be placed on top of the sheeting. The SIPs will be covered by interlocking rig mats to provide a durable working surface. The perimeter of the SIPs will be anchored into the ice using fabricated anchors frozen into the ice pad.

The edges of MSIP 2 will be covered by a white fabric to minimize solar thermal gain and reduce rainwater infiltration. The fabric will be attached to steel tubing or other temporary fastening device to prevent movement and will be rolled back during weekly ice melt inspections as the pad recedes. MSIP 2 will be at the same elevation and flush with the GMT2/MT7 road and fencing will be used as required.

An ice berm will be installed on the tundra at the outside edge of the ice pad and allowed to melt at the end of the season. The ice berm is designed to protect the ice pad from degradation and erosion on exposed sides during spring break up, based upon local hydrology models and studies. It will be 1.0 acres or less in addition to the MSIP footprint. The berm will be reconstructed during the next winter season, depending on study results of the prior spring breakup.

The table below lists the location of the proposed ice pad.

<table>
<thead>
<tr>
<th>Ice Pad</th>
<th>Size (acres)</th>
<th>Legal Description (T, R, S)</th>
<th>Zoning District</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSIP 2</td>
<td>4.0</td>
<td>10N, 2E, Sections 32 and 33</td>
<td>Alpine Satellite RDD</td>
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The ice pad will be constructed and maintained using water and ice chips from permitted sources. CPAI will not require pre-packing activities for this MSIP.

CPAI has reviewed the databases of Traditional Land Use Inventory (TLUI), Alaska Heritage Resource Survey, Native Allotments, and cabins used for subsistence purposes and there are no known sites located within 500 feet of the project areas. CPAI believes there would be no
impact to cultural resources from this project. CPAI has applied for a Certificate of TLUI Clearance.

Ice pad construction will begin January 15, 2021 and the MSIP will be utilized until May 2022. The sheeting, SIPs, rig mats, fabric, and all other materials will be removed by June 2022. The project will end by September 15, 2022 or when stick picking and agency inspections have been completed.

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December 29, 2020

ConocoPhillips Alaska, Inc. (CPAI)
C/O Jennifer Collins, Senior Environmental Coordinator
P.O. Box 100360
Anchorage, Alaska 99510-0360
Email: jennifer.collins@conocophillips.com

RE: NSB 21-170, Administrative Approval, Western North Slope (WNS) Multi-Season Ice Pad (MSIP) – MSIP-1, T11N, R4E, Section 17, Alpine Satellite Unit, Resource Development District.

Dear Ms. Collins:

We have reviewed your application dated December 28, 2020 in which you have requested authorization to construct, maintain and utilize a multi-season ice pad designated MSIP 1 near Colville Delta No. 5 (CD5) pad within the Resource Development District.

Project Description

The ice pad will be constructed on the tundra and will have a footprint of 6.3 acres with an effective storage area of 5.2 acres. The ice will be covered with a Visqueen sheeting (reinforced 12 mil polyethylene sheeting) and structural foam-core insulated panels (SIPs) will be placed on top of the sheeting. The SIPs will be covered by interlocking rig mats to provide a durable working surface. The perimeter of the SIPs will be anchored into the ice using fabricated anchors frozen into the ice pad.

The edges of MSIP 1 will be covered by a white fabric to minimize thermal gain and reduce rainwater infiltration. The fabric will be attached to steel tubing or other temporary fastening device to prevent movement and will be rolled back during weekly ice melt inspections as the pad recedes. MSIP 1 will be at the same elevation and flush with the CD5 road and fencing will be used as required.

An ice berm will be installed on the tundra at the outside edge of the ice pad and allow to melt at the end of the season. The ice berm is designed to protect the ice pad from degradation and erosion on exposed sides during spring break up, based upon local hydrology models and studies. It will be 1.0 acres or less in addition to the MSIP footprint. The berm will be reconstructed during the next winter season, depending on study results of the prior spring breakup.

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All activities will be conducted in accordance with federal, state and local regulations, permit stipulations and general concurrence stipulations as appropriate. Please see attached MSIP 1 maps for details.

**Purpose of Project**

The MSIP 1 will be used to support WNS oil and gas activities. Minor-site specific variations will occur due to field conditions.

This project is scheduled to commence on January 15, 2021 with a completion date of September 15, 2022.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Resource Development District.

We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

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5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBM 19.70.050 I. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. CPAI shall consult with ICAS Realty Director, at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

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the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15 of each year, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

- Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.
- A list of vehicles used for any off-road travel, which may have taken place.
- Statement of clean-up activities.
- Methods of disposal of garbage, and other camp debris.
- A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.
- Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr. or Rodney Ahtuangaruak Jr., Field Inspectors at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0440.
- Report any tundra damage within 24 hours and consult with NSB Land Management staff with any questionable activity unsure of.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Lang Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management
Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, Rodney.ahtuangaruak@north-slope.org and/or herbert.ipalook@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuitqat at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Darylynn Aveoganna, Land Management Specialist at (907) 852-0320 ext. 5413 or by email at darylynn.aveoganna@north-slope.org

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Olivia Cabinboy, Nuqat Village Deputy Assistant, NSB
Jeanne Proulx, AkDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDI/FWS, Fairbanks
Jeanne Hanson, USDI/NMFS, Anchorage
Josephina Delgado-Pilcat, DCOM, Juneau
dcc.water.oilandgas@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R. Romero, US Army COE, Mary R. Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.McCoy@usace.army.mil
Donna Wixson, USDI/BLM
Shelley Jones, BLM District Manager
Jeanne Frazier, AkDNR/DO&G, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
dog.permitting@alaska.gov
Mark Major, Kuukpik Corporation, majorinor@live.com
Willow Hetrick, Kuukpik Corporation, willow@kuukpik.com
Joseph Nukapigak, President, Kuukpik Village Corporation
Mamie Pardey Mayor, City of Nuiqsut
Raymond Ipalook, President, Native Village of Nuiqsut
Herbert Ipalook Jr., Rodney Ahtuanenuak Jr., Field Inspectors, Nuiqsut
Allyson Atos, Lead Field Inspector, Ulukhaktok
Leroy Oenga Jr. Ralph Kaleak Sr., Field Inspectors, Ulukhaktok
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Files
Land Management
Regulations Permit Application

Permit Number: 21-170

Applicant: ConocoPhillips Alaska, Inc
Address: P.O. Box 100360
Anchorage, AK 99510-0360

Contact Person: Jennifer Collins
Location (TRS): T11N R04E Section 17
Zoning District: Alpine Satellite RDD

Proposed Start Date: January 15, 2021
Completion Date: September 15, 2022

Proposed Development: ConocoPhillips Alaska, Inc. (CPAI) requests authorization to construct, maintain and utilize a multi-season ice pad (MSIP), designated MSIP 1, near the Colville Delta No. 5 (CD5) pad.

Purpose of Development: The MSIP 1 will be used to support Western North Slope (WNS) oil and gas activities. Minor site-specific variations will occur due to field conditions.

- Fill/Dredge
- Oil & Gas Wells
- Temp. Water Use
- Off Road Travel
- Fuel Storage
- Hazardous Material Storage
- Solid Waste
- Mining
- Air Emissions
- Noise/Vibration
- Sensitive Habitat
- Transportation
- Marine Tanker Facility
- Causeway Construction
- Temporary Airport
- Seismic Work
- Utility Development
- Offshore Drilling
- Residential Development
- Oil Transport System
- Snow Removal
- Recreational Development
- CD-ROM Included
- Maps Included

Material: Material: N/A
Number of New Surface Holes: N/A
Source: Permitted Sources
Access: Existing infrastructure and Alpine Resupply Ice road.
Purpose: Construction and maintenance of ice feature.
Maximum Amount: Maximum allowable by ADNR temporary water use permits.
Period: Winter Season
Equipment: Water trucks, graders, etc.
Site Access: Existing infrastructure and Alpine Resupply Ice road.
Type: N/A
Handling: N/A
Amount: N/A
Type: N/A
Handling: N/A
Amount: N/A
Type: N/A
Handling: N/A
Type: Vehicles and equipment
Amount: Minor
Type: Vehicles and equipment
Amount: Normal
Floodplain: N/A
Shoreline: N/A
Type: Miscellaneous land-based vehicles to support construction.
ATTACH TO THIS APPLICATION THE FOLLOWING:

- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES. THE PROJECTION SHOULD BE NAD 27 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED)

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLLFREE (IN STATE): (800) 478-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT

[Authorized Signature]
Jennifer Collins

Name

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING
☐ DEVELOPMENT PERMIT
☒ ADMINISTRATIVE APPROVALS
☐ CONDITIONAL DEVELOPMENT PERMITS
AMOUNT PAID: $1,500

[Date]
12/28/2020

Senior Environmental Coordinator
Title

Fee to be paid monthly by Electronic Funds Transfer.

DECISION
☒ ADMINISTRATIVELY APPROVED
This is a minor amendment to a development permit or is a use of land listed under administrative approvals for this zoning district.

☐ REZONING APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan conditions, lease stipulations, and provision of state and federal law and permits served thereunder.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory Policies, represents the Developer’s best efforts to implement all relevant best efforts and minimization policies, and as long as any conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter).

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land this is listed as a conditional development for this zoning district or has been elevated by the Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

[Authorized Signature]
Land Management Administrator

[Date]
12/29/20

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect.

NSMBC §19.30.130.
ConocoPhillips Alaska, Inc. (CPAI) requests authorization to construct, maintain and utilize a multi-season ice pad (MSIP), designated MSIP 1, near the Colville Delta No. 5 (CD5) pad. MSIP 1 will be used to support Western North Slope (WNS) oil and gas activities. Minor site-specific variations will occur due to field conditions.

The ice pad will be constructed on the tundra and will have a footprint of 6.3 acres with an effective storage area of 5.2 acres. The ice will be covered with a visqueen sheeting (reinforced 12 mil polyethylene sheeting) and structural foam-core insulated panels (SIPs) will be placed on top of the sheeting. The SIPs will be covered by interlocking rig mats to provide a durable working surface. The perimeter of the SIPs will be anchored into the ice using fabricated anchors frozen into the ice pad.

The edges of MSIP 1 will be covered by a white fabric to minimize solar thermal gain and reduce rainwater infiltration. The fabric will be attached to steel tubing or other temporary fastening device to prevent movement and will be rolled back during weekly ice melt inspections as the pad recedes. MSIP 1 will be at the same elevation and flush with the CD5 road and fencing will be used as required.

An ice berm will be installed on the tundra at the outside edge of the ice pad and allowed to melt at the end of the season. The ice berm is designed to protect the ice pad from degradation and erosion on exposed sides during spring break up, based upon local hydrology models and studies. It will be 1.0 acres or less in addition to the MSIP footprint. The berm will be reconstructed during the next winter season, depending on study results of the prior spring breakup.

The table below lists the location of the proposed ice pad.

<table>
<thead>
<tr>
<th>Ice Pad</th>
<th>Size (acres)</th>
<th>Legal Description (T, R, S)</th>
<th>Zoning District</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSIP 1</td>
<td>6.3</td>
<td>11N, 4E, Section 17</td>
<td>Alpine Satellite RDD</td>
</tr>
</tbody>
</table>

The ice pad will be constructed and maintained using water and ice chips from permitted sources. CPAI will not require pre-packing activities for this MSIP.

CPAI has reviewed the databases of Traditional Land Use Inventory (TLUI), Alaska Heritage Resource Survey, Native Allotments, and cabins used for subsistence purposes and there are no known sites located within 500 feet of the project areas. CPAI believes there would be no
impact to cultural resources from this project. CPAI has applied for a Certificate of TLUI Clearance.

Ice pad construction will begin January 15, 2021 and the MSIP will be utilized until May 2022. The sheeting, SIPs, rig mats, fabric, and all other materials will be removed by June 2022. The project will end by September 15, 2022 or when stick picking and agency inspections have been completed.

All activities will be conducted in accordance with federal, state and local regulations, permit stipulations and general concurrence stipulations as appropriate. Please see the attached MSIP 1 maps for details.
January 7, 2021

Hilcorp Alaska, LLC (Hilcorp)
C/O Shauna Holben, Permitting Specialist
3800 Centerpoint Dr., Suite 1400
Anchorage, Alaska 99503
Email: SHolben@hilcorp.com

RE: NSB 21-172, Administrative Approval, Northstar Ice Road & Trails, Various Townships, Ranges, Sections, Northstar Unit, Resource Development District.

Dear Ms. Holben:

We have reviewed your application dated January 4, 2021 in which you have requested authorization to support production and well work over activities within the Resource Development District.

Introduction

Hilcorp has prepared this project description for the Northstar Production Facility Ice Road planned for winter 2020-2021 to support production and drilling activities at Northstar.

The Northstar Ice Road is needed to provide personnel transportation, emergency response, transport of project materials and delivery of consumables (food, fuel, and supplies) to the Northstar Production Facility. The road will also be used to access the pipeline right-of-way (ROW) for surveillance and monitoring activities. Hilcorp plans to use the same route and construction techniques that were used by Hilcorp during the 2019-2020 winter season (the last time an ice road was constructed to Northstar) and which are described herein.

Route and Construction

The 2020-2021 ice road plans includes construction of an improved direct ice road connecting Point McIntyre No. 2 (PM-2) at West Dock to the Northstar Production Facility. This improved ice road will allow Hilcorp to supply and staff the facility throughout the winter. The ice road route departs from the West Dock Causeway at PM-2 and travels northwest to Northstar Island (See Figures 1 and 2). The meridian, township, range and sections through which the ice road travels are listed below.
## ICE ROAD

<table>
<thead>
<tr>
<th>Townships</th>
<th>Ranges</th>
<th>Sections</th>
</tr>
</thead>
<tbody>
<tr>
<td>T13N</td>
<td>R13E</td>
<td>12</td>
</tr>
<tr>
<td>T13N</td>
<td>R13E</td>
<td>11</td>
</tr>
<tr>
<td>T12N</td>
<td>R14E</td>
<td>3</td>
</tr>
<tr>
<td>T13N</td>
<td>R13E</td>
<td>24</td>
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<tr>
<td>T13N</td>
<td>R13E</td>
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<td>T12N</td>
<td>R14E</td>
<td>11</td>
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<td>T12N</td>
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<td>R14E</td>
<td>19</td>
</tr>
<tr>
<td>T13N</td>
<td>R14E</td>
<td>30</td>
</tr>
<tr>
<td>T13N</td>
<td>R14E</td>
<td>31</td>
</tr>
</tbody>
</table>

There will also be routes on unimproved ice paths from the Northstar Production Facility to the pipeline shore crossing near Point Storkersen, from PM-2 to the shore crossing, and from the Hovercraft Tent at Dockhead 2 connecting to the primary ice road. The unimproved ice path from the ice road to the shore crossing will be the most direct route to the shore crossing. The unimproved ice path from the island to the shore crossing will be in proximity to the pipeline corridor. These routes will be used to survey the sub-sea pipeline and to access the Remote Terminal Unit (RTU) gravel pad for inspection and maintenance. One unimproved ice path from the hovercraft Tent at Dockhead 2 will go under the causeway bridge and the other will go around the Seawater Treatment Plant (STP). The meridian, township, range and sections through which the ice paths travel are listed below.

## ICE PATHS

<table>
<thead>
<tr>
<th>Township</th>
<th>Range</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>T13N</td>
<td>R13E</td>
<td>35</td>
</tr>
<tr>
<td>T13N</td>
<td>R13E</td>
<td>23</td>
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<td>T13N</td>
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<tr>
<td>T12N</td>
<td>R14E</td>
<td>7</td>
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<tr>
<td>------</td>
<td>------</td>
<td>----</td>
</tr>
<tr>
<td>T13N</td>
<td>R14E</td>
<td>32</td>
</tr>
</tbody>
</table>

**Ice Road Construction**

The improved ice road from PM-2 to the Northstar Production Facility will have typical dimensions of 200 feet width with a drivable area of 75-100 feet and will be constructed using the following methods:

- Clear snow.

- Grade or drag to smooth the ice surface (rubble ice would be incorporated into or moved outside the expected road surface approximately 200 feet either side of the centerline).

- Drill holes through floating ice along the planned ice road route.

- Pump seawater from drilled holes over floating ice.

- Flood the ice road. Flooding techniques are dependent on the conditions of the sea ice (i.e., grounded vs. floating). Grounded ice typically requires limited flooding with fresh water to either cap or repair cracks. Floating ice requires flooding with seawater until a desired thickness is achieved. Thickness of floating ice will be determined by the required strength and integrity of the ice. After achieving desired thickness, floating ice will be determined by the required strength and integrity of the ice. After achieving desired thickness, floating ice areas will then be flooded with fresh water to either cap or repair cracks. This technique minimizes the usage of fresh water while obtaining the desired thickness of the ice road.

The unimproved ice road paths will be constructed by knocking down ice rubble in the path of the planned road and flooding the rough areas only as needed to allow tracked vehicles, rolligons, and the hovercraft to travel the road. Sea ice in the unimproved roads will be allowed to thicken through natural freeze up. Road access will be maintained by performing snow removal and any necessary surface modifications (such as flooding or ridge removal) needed to facilitate travel.

**Water Use**

Fresh water will be required to construct and maintain the ice roads. The amount of water that will be required is estimated between 3 and 5 million gallons. If fresh water is required, Hilcorp will use permitted fresh water sources to construct the Northstar ice roads. Water will be transported by truck to the ice roads via existing roads.
Schedule

Ice road construction will be in mid-January 2020. Depending on weather, maintenance of the ice roads is predicted to take place through May 2020. The seasonal construction of offshore ice roads is anticipated to continue for the duration of the Northstar Development.

Purpose of Project

The Northstar Ice Road and Ice Trails are necessary to provide personnel transportation, emergency response, and delivery of consumables (food, fuel, and supplies) to the Northstar Production Facility.

This project is scheduled to commence on January 15, 2021 with a completion date of June 30, 2021.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Resource Development District.

We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

PROJECT SPECIFIC STIPULATION

1. Hilcorp must obtain a letter of non-objection from all land owners and submit a copy to NSB Land Management Division.

2. Hilcorp must have two trained fuel handlers onsite during refueling operations.

ICE ROADS AND PADS STIPULATIONS

1. Water may be extracted only from sources approved by the Alaska Department of Natural Resources.

2. Onshore ice road construction is not to commence until frost has penetrated the ground to a depth of one-foot. The ice road is to be maintained at a minimum thickness of six (6) inches. NSBMC 19.50.030(J); NSBMC 19.60.040(O).

3. Spills of fuels, hydrocarbons, or chemicals on ice pads shall be cleaned up thoroughly prior to break-up to prevent damage to the underlying tundra when the ice pad melts. NSBMC 19.50.030) (J); NSBMC 19.60.040(O).

4. In the event that an alternate ice road route is required, all surface vehicles are to confine travel as much as possible to only those areas and times of year with sufficient (6 inches) snow cover in order to protect the underlying tundra. NSBMC 19.60.040(O).

SPILL RESPONSE TACTICS

1. Place drip pans under vehicles parked over 5 minutes.
2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks.

3. Impermeable lining and diking is required for fuel storage facilities with a capacity greater than 660 gallons.

*Pink dye* is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by Hilcorp.

**WILDLIFE STIPULATION**

1. The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Planning and Community Services Department before the start of any field activities.

**TUNDRA STIPULATIONS**

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2 and 3.

3. Movement of equipment through willow (*Salix*) stands shall be avoided where possible NSBMC 19.70.050 K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 I. 4 and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 I. 11.
7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. Hilcorp shall consult with ICAS Realty Director, at (907) 852-4227 and when seeking permits must meet requirements of ICAS prior to commencement of project. Communications with ICAS Realty must be submitted to NSB Land Management Division for further review.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

   o Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.

   o A list of vehicles used for any off-road travel, which may have taken place.

   o Statement of clean-up activities.

   o Methods of disposal of garbage, and other camp debris.

   o A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.

   o Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspectors at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.

   o Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.
GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Lang Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, Rodney.ahtuanaruak@north-slope.org and/or herbert.ipalook@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

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19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Darylynn Aveoganna, Land Management Specialist at (907) 852-0320 ext. 5413 or by email at darylynn.aveoganna@north-slope.org

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Olivia Cahinboy, Nuiqsut Village Deputy Assistant, NSB
Scott Danner, Public Works, NSB
Jeanne Proulx, AkDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Braek, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDl/F&WS, Fairbanks
Jeanne Hanson, USDl/NMFS, Anchorage
Josephina Delgado-Plikt, DCOM, Juneau
dec.water.oilandgas@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R.Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.McCoy@usace.army.mil
Donna Wixon, USDl/BLM
Shelly Jones, BL M District Manager
Jeanne Frazier, AkDNR/DO&G, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
dog.permittings@alaska.gov
Mark Major, Kuukpik Corporation, majorinor@live.com
Willow Hetrick, Kuukpik Corporation, willow@kuukpik.com
Joseph Nukapiagak, President, Kuukpik Village Corporation
Mamie Pardue Mayor, City of Nuiqsut
Raymond Ipalook, President, Native Village of Nuiqsut
Tommy Nageak, Cultural Resource Specialist, NSB
Darren W. Aiken, TLUI Technician, NSB
Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspectors, Nuiqsut
Allyson Ato, Lead Field Inspector, Utqiagvik
Leroy Oenja Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmainne Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Files

NSB 21-172/GRB/mk/ik-acting LMR Manager/da
Land Management Regulations (LMR) Permit Application

Permit Number: 21-172

Applicant: Hilcorp Alaska, LLC
Address: 3800 Centerpoint Dr, Suite 1400, Anchorage, AK 99503
Contact Person: Shauna Holben
Email: SHolben@hilcorp.com
Location (TRS): T: attached  R: attached  Sec: see attached
Zoning District: Resource Development District

Proposed Start Date: 1/15/2021
Completion Date: 6/30/2021
Proposed Development: Northstar Production Facility Ice Road and Ice Trails to support production and well work over-activities.
Purpose of Development: The Northstar Ice Road and Ice Trails are necessary to provide personnel transportation, emergency response, and delivery of consumables (food, fuel, and supplies) to the Northstar Production Facility.

Fill/Dredge
Material: Not applicable
Acres: Not applicable

Oil & Gas Wells
Number of New Surface Holes: N/A

Temp. Water Use
Sources: Previously permitted
Purpose: Ice road building

Off Road Travel
Period: ~1/15/21 to 6/30/2021
Site Access: Existing roads

Fuel Storage
Type: Not applicable
Handling: Not applicable
Amount: Not applicable

Hazardous Material Storage
Type: Not applicable
Handling: Not applicable
Amount: Not applicable

Solid Waste
Treatment: Not applicable

Mining
Habitat: Not applicable

Air Emissions
Type: Not applicable
Amount: Not applicable

Noise/Vibrations
Type: Not applicable
Amount: Not applicable

Sensitive Habitat
Floodplain: Not applicable

Transportation
Type: Standard winter tundra travel vehicles

Marine Tanker Facility
Seismic Work
Utility Development

Causeway Construction
Offshore Drilling
Residential Development

Airport or Helicopter Pad
Oil Transportation System
Snow Removal

Permit Type: Administrative Approval
Date: 1/4/2020
State ID: 
Phone: 907-947-9137
Project Name: Northstar Ice Road & Trails
Field Name & Pad: Northstar Unit

Access:
Existing roads
Maximum Amount: 5 million gallons
Equipment: Standard ice road and tundra

North Slope Borough
Department of Planning and Community Services
Land Management Regulation Division
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES
- SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NAD 1983 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLL FREE (IN-STATE): (800) 476-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

Authorized Signature: ____________________________  Date: 1/4/2020

Shauna Holben
Permitting Specialist

Name: Shauna Holben  Title: Permitting Specialist

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING $12,000
☐ DEVELOPMENT PERMIT $2,000, plus $500/well
☐ ADMINISTRATIVE APPROVALS $1,500
☐ CONDITIONAL DEVELOPMENT PERMITS $3,000

AMOUNT PAID $1,500

DECISION
☐ ADMINISTRATIVELY APPROVED
☐ REZONING APPROVED
☐ DEVELOPMENT PERMIT APPROVED
☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
☐ PERMIT DENIED

NSB Land Management Administrator

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect.
NSMBC §19 30 130.
PROJECT DESCRIPTION
FOR
NORTHSTAR ICE ROAD
WINTER 2020-2021

DECEMBER 2020
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5.0 Permits/Approvals..................................................................................................... 3

LIST OF FIGURES

Figure 1 Northstar Development Offshore Ice Road Vicinity Map
Figure 2 Northstar Development Offshore Ice Road Routes
1.0 INTRODUCTION

Hilcorp Alaska, LLC (Hilcorp) has prepared this Project Description for the Northstar Production Facility Ice Road planned for winter 2020-2021 to support production and drilling activities at Northstar.

The Northstar Ice Road is needed to provide personnel transportation, emergency response, transport of project materials and delivery of consumables (food, fuel, and supplies) to the Northstar Production Facility. The road will also be used to access the pipeline right-of-way (ROW) for surveillance and monitoring activities. Hilcorp plans to use the same route and construction techniques that were used by Hilcorp during the 2019-2020 winter season (the last time an ice road was constructed to Northstar) and which are described herein.

2.0 ROUTE AND CONSTRUCTION

2.1 Ice Road Route

The 2020-2021 ice road plan includes construction of an improved direct ice road connecting Point McIntyre No. 2 (PM-2) at West Dock to the Northstar Production Facility. This improved ice road will allow Hilcorp to supply and staff the facility throughout the winter. The ice road route departs from the West Dock Causeway at PM-2 and travels northwest to Northstar Island (See Figures 1 and 2). The meridian, township, range and sections through which the ice road travels are listed below.

<table>
<thead>
<tr>
<th>Ice Road</th>
<th>Meridian/Township/Range</th>
<th>Section</th>
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<tbody>
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<td>U013N014E</td>
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</tbody>
</table>

There will also be routes on unimproved ice paths from the Northstar Production Facility to the pipeline shore crossing near Point Storkersen, from PM-2 to the shore crossing, and from the Hovercraft Tent at Dockhead 2 connecting to the primary ice road. The unimproved ice path from the ice road to the shore crossing will be the most direct route to the shore crossing. The unimproved ice path from the island to the shore crossing will be in proximity to the pipeline corridor. These routes will be used to survey the sub-sea pipeline and to access the Remote Terminal Unit (RTU) gravel pad for inspection and maintenance. One unimproved ice path from the hovercraft Tent at Dockhead 2 will go under the causeway bridge and the other will go around the Seawater Treatment Plant (STP). The meridian, township, range and sections through which the ice paths travel are listed below.
### Ice Paths

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<td>U012N014E</td>
<td>7</td>
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<tr>
<td>U013N013E</td>
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</tbody>
</table>

#### 2.2. Ice Road Construction

The improved ice road from PM-2 to the Northstar Production Facility will have typical dimensions of 200 feet width with a drivable area of 75-100 feet and will be constructed using the following methods:

- Clear snow.
- Grade or drag to smooth the ice surface (rubble ice would be incorporated into or moved outside the expected road surface approximately 200 feet either side of the centerline).
- Drill holes through floating ice along the planned ice road route.
- Pump seawater from drilled holes over floating ice.
- Flood the ice road. Flooding techniques are dependent on the conditions of the sea ice (i.e., grounded vs. floating). Grounded ice typically requires limited flooding with fresh water to either cap or repair cracks. Floating ice requires flooding with seawater until a desired thickness is achieved. Thickness of floating ice will be determined by the required strength and integrity of the ice. After achieving desired thickness, floating ice areas may then be flooded with fresh water to either cap or repair cracks. This technique minimizes the usage of fresh water while obtaining the desired thickness of the ice road.

The unimproved ice road paths will be constructed by knocking down ice rubble in the path of the planned road and flooding the rough areas only as needed to allow tracked vehicles, rolligons, and the hovercraft to travel the road. Sea ice in the unimproved roads will be allowed to thicken through natural freeze up. Road access will be maintained by performing snow removal and any necessary surface modifications (such as flooding or ridge removal) needed to facilitate travel.
3.0 WATER USE

Fresh water may be required to construct and maintain the ice roads. The amount of water that may be required is estimated between 3 and 5 million gallons. If fresh water is required, Hilcorp will use permitted fresh water sources to construct the Northstar ice roads. Water will be transported by truck to the ice roads via existing roads.

4.0 SCHEDULE

Ice road construction may begin in mid January 2020. Depending on weather, maintenance of the ice roads is predicted to take place through May 2020. The seasonal construction of offshore ice roads is anticipated to continue for the duration of the Northstar Development.

5.0 PERMITS/APPROVALS

Hilcorp will construct and operate the Northstar ice road under the following permits/approvals:

- Alaska Department of Natural Resources (ADNR) Division of Mining, Land, and Water (DMLW) Land Use Permit # LAS 29963
- North Slope Borough (NSB) Administrative Approval
- U.S. Army Corps of Engineers (USACE) approval in compliance with Special Condition No. 21 of Department of the Army Permit No. N-950372, Beaufort Sea 441.
- ADNR DMLW Temporary Water Use Authorizations and the associated Alaska Department of Fish and Game (ADF&G) Fish Habitat Permits as needed for fresh water sources.
FIGURES
January 11, 2021

Hilcorp North Slope (Hilcorp)
C/O Keri Iles, Environmental Specialist-Land Use
3800 Centerpoint Drive # 1400
Anchorage, Alaska 99503
keri.iles@hilcorp.com

RE: NSB 21-174, Administrative Approval, L-4 Reinstatement Ice Pad, T11N, R14E, Section 24, Prudhoe Bay Unit (PBU), Resource Development District.

Dear Ms. Iles:

We have reviewed your application dated January 8, 2021, in which you have requested authorization to construct an ice pad adjacent to the Drill Site L-4 access road within the PBU Resource Development District.

Scope of Work

- Construct (1) ice pad 1900 feet in length by 20 feet width adjacent to the existing roadway;
- Use 600,000 gallons of water from currently permitted sources;
- Typical ice road building equipment will be used including a loader, dozer, water trucks, and dump trucks.

Purpose

This ice pad is being constructed to support the Drill Site L-4 Reinstatement project and will allow for through traffic on the roads while maintenance work is underway.

This project is scheduled to commence in January 2021 with a completion date of January 2022.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Resource Development District.
We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

PROJECT SPECIFIC STIPULATIONS

1. Hilcorp shall get a Non-Objection letter from all land owners and provide a copy to the North Slope Borough Land Management Division.

2. Hilcorp must have two trained fuel handler on site during all refueling operations.

SPILL RESPONSE TACTICS

1. Place drip pans under vehicles parked over 5 minutes.

2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks.

Pink dye is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by Hilcorp.

ICE ROADS AND PADS STIPULATIONS

1. Water may be extracted only from sources approved by the Alaska Department of Natural Resources.

2. Onshore ice road construction is not to commence until frost has penetrated the ground to a depth of one-foot. The ice road is to be maintained at a minimum thickness of six (6) inches. NSBMC 19.50.030(J); NSBMC 19.60.040)(O).

3. Spills of fuels, hydrocarbons, or chemicals on ice pads shall be cleaned up thoroughly prior to breakup to prevent damage to the underlying tundra when the ice pad melts. NSBMC 19.50.030) (J); NSBMC 19.60.040)(O).

4. In the event that an alternate ice road route is required, all surface vehicles are to confine travel as much as possible to only those areas and times of year with sufficient (6 inches) snow cover in order to protect the underlying tundra. NSBMC 19.60.040)(O).

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.
2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 I. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 I. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. Hilcorp shall consult with ICAS Realty Director, at (907) 852-4227 and when seeking permits must meet requirements of ICAS prior to commencement of project. Communications with ICAS Realty must be submitted to NSB Planning Dept. for further review.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

   o Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.

   o A list of vehicles used for any off-road travel, which may have taken place.

   o Statement of clean-up activities.
- Methods of disposal of garbage, and other camp debris.

- A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.

- Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspector at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.

- Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.

**GENERAL STIPULATIONS**

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(4)(4)&(5)

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3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, Rodney.ahtuangaruak@north-slope.org and/or herbert.ipalook@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall
contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

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8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Darylynn Aveoganna, Land Management Specialist at (907) 852-0320 ext. 5413 or by email at darylynn.aveoganna@north-slope.org

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Titre, Assessing Division, NSB
Olivia Cabinboy, Nuiqsut Village Deputy Assistant, NSB
Jeanne Proulx, A&DN, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDA/F&WS, Fairbanks
Jeanne Hannon, USDIMPS, Anchorage
Josephina Delgado-Pikat, DCOM, Juneau
dec.water.oilanderns@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.winn@usace.army.mil
Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.McCoy@usace.army.mil
Donna Wison, USDIBLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AkDNR/DO&G, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
dog.permits@alaska.gov
Lloyd Panigina, Inupiat Community of the Arctic Slope
Fleecie Mongoyak, Realty Director, Native Village of Burrow
Rex Rock Sr., President, Arctic Slope Regional Corporation
Mark Major, Kuukpik Corporation, majorinor@live.com
Willow Hetrick, Kuukpik Corporation, willow@kuukpik.com
Joseph Nukapigak, President, Kuukpik Village Corporation
Mamie Pardue Mayor, City of Nuiqsut
Raymond Ipalook, President, Native Village of Nuiqsut
Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspectors, Nuiqsut
Allyson Atos, Lead Field Inspector, Utqiagvik
Leroy Oenga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Files
## Land Management Regulations (LMR) Permit Application

<table>
<thead>
<tr>
<th>Permit Number:</th>
<th>21-17A</th>
<th>Permit Type:</th>
<th>Administrative Approval</th>
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<tbody>
<tr>
<td>Applicant:</td>
<td>Hilcorp North Slope</td>
<td>Date:</td>
<td>1/6/2021</td>
</tr>
<tr>
<td>Address:</td>
<td>3800 Centerpoint Drive #1400, Anchorage, AK 99503</td>
<td>State ID:</td>
<td></td>
</tr>
<tr>
<td>Contact Person:</td>
<td>Keri Iles</td>
<td>Phone:</td>
<td>(907) 330-7732</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:keri.iles@hilcorp.com">keri.iles@hilcorp.com</a></td>
<td>Name:</td>
<td>L-4 Reinstatement Ice Pad</td>
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<td>Location (TRS):</td>
<td>T: 11N R: 14E Sec.: 24</td>
<td>Field Name and Pad:</td>
<td>Lisburne 4, Eastern Operating Area, PBU</td>
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<td>Resource Development District</td>
<td>Proposed Start Date:</td>
<td>January 2021</td>
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<td>Completion Date:</td>
<td>January 2022</td>
<td>Proposed Development:</td>
<td>Please see attached project description.</td>
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<tr>
<td>Purpose Of Development:</td>
<td>Please see attached project description.</td>
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</table>

### Fill/Dredge
- Material: N/A - Not Applicable
- Acres: [ ]

### Oil and Gas Wells
- Number of New Surface Holes: N/A - Not Applicable
- Sources: Permitted sources
- Access: Via existing roads
- Maximum Amount: 600,000 gallons
- Purpose: N/A - Not Applicable

### Temp. Water Use
- Purpose: N/A - Not Applicable
- Access: [ ]
- Maximum Amount: [ ]
- Source: [ ]
- N/A - Not Applicable

### Off Road Travel
- Period: N/A - Not Applicable
- Equipment: N/A - Not Applicable
- N/A - Not Applicable

### Fuel Storage
- Type: N/A - Not Applicable
- Handling: N/A - Not Applicable
- Amount: N/A - Not Applicable

### Hazardous Materials Storage
- Type: N/A - Not Applicable
- Handling: N/A - Not Applicable
- Amount: N/A - Not Applicable

### Solid Waste
- Treatment: N/A - Not Applicable

### Mining
- Habitat: N/A - Not Applicable

### Air Emissions
- Type: N/A - Not Applicable
- Amount: N/A - Not Applicable

### Noise/Vibration
- Type: N/A - Not Applicable
- Amount: N/A - Not Applicable

### Sensitive Habitat
- Floodplain: N/A - Not Applicable
- Shoreline: N/A - Not Applicable

### Transportation
- Type: N/A - Not Applicable
ATTACH TO THIS APPLICATION THE FOLLOWING:

- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES.
- SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NAD 1927 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLL FREE (IN-STATE): (800) 478-6606 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

Authorized Signature

1/6/2021
Date

Keri Itle
Name

Environmental Specialist - Land Use
Title

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING $12,000
☐ DEVELOPMENT PERMIT $2,000, plus $500/well
✓ ADMINISTRATIVE APPROvals $1,500
☐ CONDITIONAL DEVELOPMENT PERMITS $3,000

AMOUNT PAID $1500.00

DECISION

☐ ADMINISTRATIVELY APPROVED
This is a minor alteration to a previously approved development permit for commercial recreation.

☐ REZONING APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan conditions, lease stipulations, and provisions of state and federal law and permits served thereunder.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory policies, represents the developer's best efforts to implement all relevant best efforts and minimization policies, and as long as conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter.)

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land that is listed as a conditional development for this zoning district or has been elevated by the NSB Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

NSB Land Management Administrator

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (P.O. Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect. NSMB §19.30.130.
Project Description
Drill Site L-4 Reinstatement Ice Pad
Prudhoe Bay Unit

Introduction
Hilcorp North Slope, LLC (Hilcorp) proposes to construct an ice pad adjacent to the Drill Site L-4 access road located within in the Prudhoe Bay Unit.

Purpose
This ice pad is being constructed to support the Drill Site L-4 Reinstatement project and will allow for through traffic on the roads while maintenance work is underway.

Scope of Proposed Activities

- Construct one (1) ice pad approximately 1900 feet in length by 20 feet in width adjacent to the existing roadway
- Use approximately 600,000 gallons of water from currently permitted sources
- Typical ice road building equipment will be used including a loader, dozer, water trucks, and dump trucks

Schedule
The ice road construction is expected to commence in January 2021.
This map is based on U.S.G.S quad Beechey Point (B-3) and on the Unit Operator's Facility Maps.

PROJECT LOCATION:
PRUDHOE BAY UNIT - DRILL SITE LISBURN 4
NAD83
LAT. = 70° 17' 26.650"
LONG. = -148° 12' 48.011"

ALASKA STATE PLANE ZONE 4, NAD83
X = 1,861,085.64 FEET
Y = 5,958,997.70 FEET

ADL028323 SEC. 24 T11N, R15E UMIAT M.

DATUM: MEAN SEA LEVEL

ADJACENT PROPERTY OWNER:
STATE OF ALASKA

HILCORP NORTH SLOPE, LLC
PRUDHOE BAY UNIT
DSL4 REINSTATEMENT
ICE PADS
VICINITY MAP

DATE: January 2021
SCALE: 1" = 1 Mile
FIGURE: 1
Proposed 1,900' x 20' Ice Road Location (0.87 Acres)
Approximate Tundra Impact 0.5 Acres
January 11, 2021

Arctic Slope Telephone Association Cooperative (ASTAC)
C/O Nathan Yaskell, Project Manager
4300 B Street, Suite 501
Anchorage, Alaska 99503
Email: Nathan@astac.net

RE: NSB 21-175, Administrative Approval, Placement Of Two Utility Poles, T23N, R18W, Section 33, Utqiagvik, Alaska, Suburban District.

Dear Mr. Yaskell:

We have reviewed your application dated January 8, 2021, in which you have requested authorization the installation of two utility poles located within Utqiagvik, Alaska, Suburban District.

Project Description

Introduction

ASTAC will construct an aerial crossing that will allow ASTAC to build a fiber optic line over the middle Salt Lagoon near/along the Cakeater Rd. in Barrow. The proposed route will follow existing utility poles from Cakeater rd. Once the route comes to the lagoon, two new poles will be set at locations adjacent to the existing power pole line crossing. The fiber optic cable will then transfer back to the existing utility poles on the east side of the lagoon.

Project Scope

- Auger/drill 10ft depth for each pole.

- Set poles at approximate locations identified in Figure 1 and 2. The overall distance between the two poles will have a maximum span of 435ft across the lagoon. Poles are to be set at a depth of 10ft leaving 40ft of reveals as referenced in figure 3.

- A 20ft horizontal separation from existing utility pole crossing will be maintained for the pole set location. This will provide adequate separation distance to ensure that the existing pole integrity is not compromised and will provide sufficient separation from the existing alignment. Fiber cable is to be installed along the existing alignment from Cakeater Rd., will transition to the two new poles and back to the existing alignment.

- One guy anchor is to be set at specified angles on each new pole.
Purpose

This project is needed for communication to the BARC building and NOAA.

This project is scheduled to commence January 12, 2021, with a completion date of April 30, 2021.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Village District.

We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

PROJECT SPECIFIC STIPULATIONS

1. Permittee shall get a Non-Objection letter from all land owners and provide a copy to the North Slope Borough Land Management Division.

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and grading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 I. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 I. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. ASTAC shall consult with ICAS Realty Director, at (907) 852-4227.
8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

- Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.
- A list of vehicles used for any off-road travel, which may have taken place.
- Statement of clean-up activities.
- Methods of disposal of garbage, and other camp debris.
- A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.
- Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangarkikt, Field Inspector at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.
- Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.

**GENERAL STIPULATIONS**

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental
Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan, as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Lang Management Division to become a part of this permit file. NSBMC 19.70.050(I)(1)(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellsars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, Rodney.ahtuangaruak@north-slope.org and/or herbert.ipalook@northslope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(l)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the Native Village of Barrow at (907) 852-4411 and Ukpeagvik Inupiat Corporation at (907) 852-4460, also the Savat Center (907) 852-0465 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Ralph Burke, Land Management Specialist at (907) 852-0320 ext. 5414 or by email at ralph.burke@north-slope.org

Sincerely,

Gordon R Brower,
Land Management Administrator
cc: NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Scott Danner, Public Works, NSB
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary.R.Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.Mccoy@usace.army.mil
Donna Wixon, USDI/BLM
Shelly Jones, BLM District Manager
Lloyd Paningona, Inupiat Community of the Arctic Slope
Flossie Mongoyak, Realty Director, Native Village of Barrow
Rex Rock Sr., President, Arctic Slope Regional Corporation
Delbert Rexford, President, Ukpeagvik Inupiat Corporation
Fannie Savlu, CAO/Mayor, City of Utqiagvik
Tommy Nageak, Cultural Resource Specialist, NSB
Darren W. Aiken, TLUI Technician, NSB
Herbert Ipaloak Jr., Rodney Ahtuanganuk Jr., Field Inspectors, Nuiqsut
Allyson Atos, Lead Field Inspector, Utqiagvik
Leroy Oenga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Files

NSB/GRB/nrk/lk-acting LMR Manager/rjb
# Land Management Regulations (LMR) Permit Application

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<th>Permit Type:</th>
<th>Administrative Approval</th>
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<th>Applicant:</th>
<th>Address: 4300 B Street, Suite 501</th>
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<tbody>
<tr>
<td>Arctic Slope Telephone Association Cooperative</td>
<td>Nathan Yassckel</td>
</tr>
<tr>
<td>Email: <a href="mailto:nathan@astac.net">nathan@astac.net</a></td>
<td>Phone: 907-564-2674</td>
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**Proposed Development:**

Set two poles on each side of the Middle Salt Lagoon crossing adjacent to existing utility poles.

**Purpose of Development:**

Set utility poles with guy anchors allowing fiber optic cable to cross the Middle Salt Lagoon along the utility pole line to the BARC and NOAA. Once the cable crosses the lagoon, it will join the existing pole line.

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<td>Airport or Helicopter Pad</td>
<td>Oil Transportation System</td>
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**Purpose of Development:**

Set utility poles with guy anchors allowing fiber optic cable to cross the Middle Salt Lagoon along the utility pole line to the BARC and NOAA. Once the cable crosses the lagoon, it will join the existing pole line.
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES
- SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NAD 1983 ALASKA ALBERS OR GEODETIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION: AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 857-8370 TOLL-FREE (IN-STATE): (800) 476-8866 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

[Signature]
Authorized Signature

Date: 12/28/2020

Nathan Yaskell
Name
Project Manager
Title

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING $12,000
☐ DEVELOPMENT PERMIT $2,000, plus $500/well
✓ ADMINISTRATIVE APPROVALS $1,500
☐ CONDITIONAL DEVELOPMENT PERMITS $3,000

AMOUNT PAID

DECISION

☐ ADMINISTRATIVELY APPROVED
This is a minor addition to a previously approved development permit for commercial recreation.

☐ REZONING APPROVED
The proposed development substantially complies with the Master Plan, and a use permit is issued, conditionally on compliance with all relevant Master Plan Conditions, lease stipulations, and provisions of the state and federal law and permit served documents.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory policies, represents the developer’s best efforts to implement all relevant best efforts and minimization policies, and as long as conditions set forth in the accompanying letter are completed with, will represent a net public benefit. (See accompanying letter)

☐ CONDITIONAL DEVELOPMENT PERMIT Approved
This is a use of land that is located in a conditional development for this zoning district or has been elevated by the NSB Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

[Signature]
NSB Land Management Administrator

Date: 12/21/21

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect. NSMB §19.30.130.
December 28, 2020

Mr. Gordon Brower  
Deputy Director, Land Management Regulations, Land Services and Community Planning Development  
North Slope Borough Planning Department  

RE: LMR Application for ASTAC utility pole lagoon crossing

Dear Mr. Brower,

ASTAC would like to construct an aerial crossing that will allow us to build a fiber optic line over the Middle Salt Lagoon near Cakeater Rd. in Barrow. The proposed route will follow existing utility poles from Cakeater Rd. Once the route comes to the lagoon, two new poles will be set at locations adjacent to the existing power pole line crossing. The fiber optic cable will then transfer back to the existing utility poles on the east side of the lagoon. This document outlines the project scope for your reference.

The following documentation is attached for an LMR administrative approval for the project:

- LMR application
- General vicinity map
- Specific location map
- Project scope and design documents (below)
- Copy of PO issued for payment

**Project Scope**

- Auger/drill 10 ft depth for each (2) pole
- Set poles at approximate locations identified in Figure 1 and Figure 2. The overall distance between the two poles will have a maximum span of 435ft across the lagoon. Poles are to be set to a depth of 10ft leaving 40ft of reveal as referenced in Figure 3.
- A 20ft horizontal separation from the existing utility pole crossing will be maintained for the pole set location. This will provide adequate separation distance to ensure that the existing poles integrity is not compromised and will provide sufficient separation from the existing alignment. Fiber cable is to be installed along the existing alignment from Cakeater Rd., will transition to the two new poles, and back to the existing alignment.
- One guy anchor is to be set at specified angles (Table 1) on each new pole. For details on plate anchor installation requirements, refer to Figure 4.

Sincerely,

Nathan Yaskell  
Project Manager  
Arctic Slope Telephone Association Cooperative  
907-564-2674  
nathan@astac.net
Figure 2: Alignment Plan

LEGEND

- NEW POLE GUMLNG ANCHOR
- EXISTING POLE
- NEW POLE

LAGOON

EXISTING DOUBLE POLE PRIMARY STRUCTURES

P1  P2  P3  P4  P5

N

0  120  240  360

1"=120'

1"=120'
Figure 3: Span Elevation

NOTES
(1) MINIMUM ESTIMATED CLEARANCE OVER WATER.
(2) MINIMUM ESTIMATED HEIGHT RELATIVE TO POLE SITE ELEVATION.
(3) POLE BURIAL IS CONSERVATIVE. A MINIMUM POLE BURIAL DEPTH OF 9 FEET IS RECOMMENDED.

LAGOON CROSSING SPAN ELEVATION
Figure 4: Plate Anchor Detail

NOTE: Designated maximum holding power rating assumes proper installation in class 5 soil.

<table>
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<th>8</th>
<th>10</th>
<th>12</th>
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<td>QTY</td>
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<td>z Anchor, plate type</td>
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ASSEMBLY NUMBERS
- NEW (OLD)
  - F3.6 (F1-1P)
  - F3.8 (F1-2P)
  - F3.10 (F1-3P)
  - F3.12 (F1-4P)

DESIGN PARAMETERS:
DESIGNATED MAXIMUM HOLDING POWER (lbs.)
- F3.6: 6,000
- F3.8: 8,000
- F3.10: 10,000
- F3.12: 12,000

PLATE TYPE ANCHORS
- APRIL 2005
  - F3.6, F3.8, F3.10, F3.12
  - RUS
### Table 1: Pole Alignment and Guying Table

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January 11, 2021

Eskimos Inc. (EI)
C/O Avaiyak Burnell, President/CEO
P.O. Box 536
Utqiagvik, Alaska 99723
Email: avburnell@asrc.com


Dear Ms. Burnell:

We have reviewed your application dated January 8, 2021, in which you have requested authorization to haul fuel from Utqiagvik to Atqasuk located within the Village & Conservation Districts.

EI is nearing the annual fuel haul to Atqasuk to resupply them with USLD heating fuel and gasoline. Olgoonik Oilfield Services is chosen to be the transportation for fuel to Atqasuk.

**Project Description**

- EI and the North Slope Borough (NSB) Fuel employees will jointly fill the steigers in Utqiagvik.
- OOS 5 Steiger tractors will be loaded with roughly 5,000 gallons of fuel each, if the trail is in good condition, if the trail is not ideal half loads of 2,500 gallons will be transported until the trail conditions are able to handle full loads.
- Will leave from Utqiagvik to Atqasuk on approximately February 1, 2021 overland on the approved NSB Planning Route.
- Estimated trip time is 12-16 hours depending on weather.
- Approximately 550,000 gallons of fuel will be hauled.
- Project historically takes 4-6 weeks.
- EI and NSB Fuel will have a crew in Atqasuk to assist Olgoonik with the offload of fuels.

**Location**

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Purpose of Project

To provide the village of Atqasuk with heating fuel, unleaded and USLD for power and heating.

This project is scheduled to commence upon approval of this permit with a completion date of April 15, 2021.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Village & Conservation Districts.

We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

**SPILL RESPONSE REQUIREMENTS**

1. Eskimos Inc. shall have an approved spill response and contingency plan. The approved Plan shall be attached to this file for reference. NSBMC 19.70.050 I (11)

**PROJET SPECIFIC STIPULATION**

1. Eskimos Inc. shall obtain letters of non-object from all land owners and provide a copy to the NSB Department of Planning and Community Services.

**TUNDRA STIPULATIONS**

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags. NSBMC 19.70.050 L. 2. and 3.
3. Movement of equipment through willow (Salix) stands shall be avoided where possible. NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility. NSBMC 19.70.050 I. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor’s initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 I. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. Eskimos Inc. shall consult with ICAS Realty Director at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6”) of snow cover and twelve inches (12”) of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations. NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams are to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas. NSBMC 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

- Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.

- A list of vehicles used for any off-road travel, which may have taken place.

- Statement of clean-up activities.

- Methods of disposal of garbage, and other camp debris.

- A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.
Any tundra damages that have occurred shall be reported to the Permitting Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspectors at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.

- Report any tundra damage within 24 hours and consult with NSB Permitting staff with any questionable activity unsure of.

**SPILL RESPONSE TACTICS**

1. Place drip pans under vehicles parked over 5 minutes.

2. Placement of adequate surface liners is required under all valves or connections to diesel fuel tanks.

3. Impermeable lining and diking is required for fuel storage facilities with a capacity greater than 660 gallons.

**Pink dye** is added to all diesel fuel prior to transporting to the field crews to aid in spill detection.
All spills will be reported and cleaned up by Eskimos Inc. (for the transport vehicles).

**GENERAL STIPULATIONS**

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(G) through (I)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allysonatos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, rodney.ahtuangaruak@north-slope.org and/or herbert.ipalook@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and
the village corporation of any village most affected by this permit. In this case contact the Native Village of Barrow at (907) 852-4411 and Ukpakvik Inupiat Corporation at (907) 852-4460, also the Savaat Center (907) 852-0465 the village of Atqasuk at (907) 633-6811 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Lilly Kilapsuk, Land Management Specialist at (907) 852-0320 ext. 5411 or by email at lilly.kilapsuk@north-slope.org.

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Della Segevan, Atqasuk Village Deputy Assistant, NSB
Christine Kagak, Wainwright Village Deputy Assistant, NSB
Jeanne Proulx, ADNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brashe, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USD/IF&W, Fairbanks
Jeanne Hanson, USD/NMFS, Anchorage
Josephina Delgado-Pikta, DCOM, Juneau
dec.water.oilandgas@alaska.gov
Reese Thierne, Industrial Facility Specialist, ADEC, reese.thierne@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary.R.Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.Mccoy@usace.army.mil
Donna Wixon, USD/BLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AkDNS/G, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
doe.permitting@alaska.gov
Margaret Abangasuk, President, Atqasuk Inupiat Corporation
Hugh Ptkotak Sr., President, Olgoonik Corporation
Doug Whiteman, Mayor, City of Atqasuk
Raymond Nasjokpuk, Mayor, City of Wainwright
Elizabeth Bordeaux, President, Native Village of Atqasuk
Howard Ptkotak, President, Wainwright Tribal Council
Tommy Nageak, Cultural Resource Specialist, NSB
Daren W. Aiken, TLU Technician, NSB
Herbert Ipakook Jr., Rodney Ahtuangarkuk Jr., Field Inspectors, Nuiqsut
Allyson Atos, Lead Field Inspector, Utqiagvik
Leroy Oenga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Land Management Regulations (LMR) Permit Application

Permit Number: 2-177
Applicant: Eskimos Inc.
Address: PO Box 536
Contact Person: Avaiyak Burnell
Email: avburnell@asrc.com
Location (TRS): T: See Att, R: See Att, Sec: See Att
Zoning District: Conversion / Village
Proposed Start Date: 1/5/2021
Proposed Development: Barrow to Atqasuk Fuel Haul
Purpose of Development: To provide the village of Atqasuk with heating fuel, unleaded and USLD for power and heating generation.

Fill/Dredge
Material ___________________________ Acres: ___________________________
Oil & Gas Wells
Number of New Surface Holes: ____________
Temp. Water Use
Sources: __________________________ Access: ___________________________
Purpose: __________________________ Maximum Amount: ___________________________
Off Road Travel
Period: 02/01/2021
Equipment: 5 Steigers
Fuel Storage
Type: __________________________ Handling: __________________________
Hazardous Material Storage
Type: __________________________ Amount: __________________________
Solid Waste
Treatment: __________________________
Mining
Habitat: __________________________
Air Emissions
Type: __________________________ Amount: __________________________
Noise/Vibrations
Type: __________________________ Amount: __________________________
Sensitive Habitat
Floodplain: __________________________ Shoreline: __________________________
Transportation
Type: 5 STEigers

Marine Tanker Facility
Seismic Work
Utility Development
Recreational Development
Causeway Construction
Offshore Drilling
Residential Development
CD-ROM Included
Airport or Helicopter Pad
Oil Transportation System
Snow Removal
Maps Included
ATTACH TO THIS APPLICATION THE FOLLOWING:

- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES
- SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NAD 1927 ALASKA ALBERS OR GEOREFERENCED.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, ak 99723
PHONE: (907) 852-0320 TOLL FREE (IN-STATE): (800) 476-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

Authorized Signature

Date

1/5/2021

Avaiyak Burnell
Name

President / CEO
Title

FEE PAID

☐ SPECIAL PLANNING COMMISSION MEETING $12,000

☐ DEVELOPMENT PERMIT $2,000, plus $500/well

☑ ADMINISTRATIVE APPROVALS $1,500

☐ CONDITIONAL DEVELOPMENT PERMITS $3,000

AMOUNT PAID

DECISION

☑ ADMINISTRATIVELY APPROVED
This is a minor alteration to a previously approved development permit for commercial recreation.

☐ REZONING APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan Conditions, lease stipulations, and provisions of the state and federal law and permit served thereunder.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory policies, represents the developer's best efforts to implement all relevant best efforts and minimization policies, and as long as conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter.)

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land that is listed as a conditional development for this zoning district or has been elevated by the NSB Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

NSB Land Management Administrator

Date

1/11/21

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect. NSMBC §19.30.130.
2021 Barrow to Atqasuk Fuel Haul Detail

Greetings,

Eskimos Inc. is nearing the annual fuel haul to Atqasuk to resupply them with USLD, heating fuel and gasoline. Olgoonik Oilfield Services is who we have chosen to be our transportation for fuel to Atqasuk.

Below is a description of the work that will be completed.

- EI and NSB Fuel employees will jointly fill the steiger's in Barrow
- OOS 5 steiger tractors will be loaded with roughly 5,000 gallons of fuel each, if the trail is in good condition, if the trail is not ideal half loads of 2,500 gallons will be transported until the trail conditions are able to handle full loads.
- Will leave from Barrow to Atqasuk on approximately February 1st, 2021 overland on the approved NSB Planning route.
- Estimated trip time is 12-16 hours depending on weather.
- Approximately 550,000 gallons of fuel will be hauled.
- Project historically takes 4-6 weeks.
- EI and NSB Fuel will have a crew in Atqasuk to assist Olgoonik with the offload of fuels.

If there are any questions please contact Avaiyak Burnell, Payuq Ahsogeak, or Glenn Edwards of Eskimos Inc.

-Avaiyak Burnell, President/CEO of Eskimos Inc. avburnell@asrc.com (907)852-3835
-Payuq Ahsogeak, Tank Farm Manager, Eskimos Inc. PAhsogeak@asrc.com (907)852-3835
-Glenn R. Edwards, Director of Barrow Ops. GEdwards@asrc.com (907)-852-9408

Regards,

Avaiyak Burnell
Eskimos Inc. President/CEO
avburnell@asrc.com
Location of Proposed Trail/Route

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NSB Proposed Winter Trails

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Proposed Barrow/Atqasuk/Umiak/Weinwright Snow Trails
Safe Travel Stake Route
Proposed 2P to Barrow Snow Trails
Barrow Prudhoe Sea Ice Road

NAD 1983 Alaska Albers
SCALE 1:250,000

Page 5
January 5, 2021

Eunice Brower, Owner
P.O. Box 89038
Nuiqsut, Alaska 99789
Email: kunnan.eunicemary@gmail.com

RE: NSB/NUI 21-052, Administrative Approval, Gravel Fill on Block 9, Lot 5, Nuiqsut Alaska, Village District.

Dear Ms. Brower:

We have reviewed your application dated January 5, 2021 in which you have requested authorization for placement of gravel fill on block 9 lot 5 within Nuiqsut, Alaska, Village District.

The proposed project will discharge 1,222 cubic yards of gravel into an 0.18 acre area (Dimension: 55 feet wide x 150 feet long x 4 feet high) of wetlands, in order to construct a garage and yard area.

The lot size is 100’ x 200’ and the fill area is 55’ x 150’ (0.18 acres).

This project is scheduled to commence upon approval of this permit with a completion date of January 5, 2022.

It is my determination that the above proposal is a Minor Alteration, as defined under NSBMC 19.20.020 and thus requires an administrative approval in the Village District.

We have no objections to the proposed activity and are recommending consistency with the North Slope Borough Municipal Code Title 19 and the NSB Comprehensive Plan by copy of this letter provided that you comply with the following conditions:

GRAVEL STIPULATIONS

1. The permittee shall maintain the work authorized herein in good condition and in accordance with approved plans and drawings. In the absence of these plans during this review, plans for improvement and/or additions of gravel shall be submitted under a separate permit and must also be approved by the Land Management Administrator.

2. The maximum fill shall not exceed 0.18-acre (i.e., total fill for gravel is not to expand over 7840.8 square feet). In recognition of advanced planning and public involvement in the North Slope Borough’s capital improvement program (civil works) approval process, similar projects for civil works proposals may exceed the square footage up to one acre (43,560 square feet) upon approval
from the Corps of Engineers or his designee and the North Slope Borough Land Management Administrator or his/her designated representative.

3. Access roads and driveways shall be constructed and maintained at a maximum bottom width of 48 feet and a maximum top width of 36 feet.

4. The maximum side slopes of all fills shall be 2:1 (horizontal:vertical)

5. To adequately protect the underlying permafrost from thermal degradation, a layer of fill material at least 4 feet thick, or a sufficient amount must be placed on the ground to maintain the integrity of the permafrost, if present. Signs of thermokarsting or standing water indicate non-compliance with this condition.

6. An adequate number of culverts shall be installed and maintained under fills authorized under this permit to avoid interruption of natural surface drainage. Excessive ponding of areas next to fills indicates non-compliance this condition.

7. There shall be no discharge of fill material for pad or road construction within 100 feet of the high tide line of any tidal water nor within 100 feet of the ordinary high water mark of any lake, stream, river, pond, slough, or other non-tidal water without the approval of the Land Management Administrator.

8. The lands and facilities subject to this permit must be maintained in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain approval from the Land Management Administrator or his/her designated representative, which may require restoration and or re-vegetation of the area.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, Rodney.ahtuangaruak@north-slope.org and/herbert.ipalook@north-
slopec.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer’s compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

If you should have any questions please contact Darylynn Aveoganna, Land Management Specialist at (907) 852-0320 ext. 5413 or by email at darylynn.aveoganna@north-slope.org

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc:  NSB Planning Commission
   Selene Tirre, Assessing Division, NSB
   Olivia Cabimboy, Nuiqsut Village Deputy Assistant, NSB
   Jeanne Proulx, AKNR, Fairbanks
   Lee McKinley, ADF&G JPO Liaison, Anchorage
   Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
   Jewel Bennett, Louise Smith, USDE/F&WS, Fairbanks
   Jeanne Hanson, USDINMFS, Anchorage
   Josephina Delgado-Plikat, DCOM, Juneau
dee.water.oilandgas@alaska.gov
   Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
   Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
   Mary R Romero, US Army COE, Mary.R.Romero@usace.army.mil
   Shane McCoy, US Army COE, Shane.Mccoy@usace.army.mil
   Donna Wixon, USD/BLM
   Shelly Jones, BLM District Manager
   Jeanne Frazier, AKNR/DO&G, Anchorage
   Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
   Dog.permittings@alaska.gov
   Mark Major, Kuukpik Corporation, majorinor@live.com
   Willow Hettick, Kuukpik Corporation, willow@kuukpik.com
Joseph Nukapigak, President, Kuukpik Village Corporation
Mamie Pardue Mayor, City of Nuiqsut
Raymond Ipalook, President, Native Village of Nuiqsut
Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspectors, Nuiqsut
Allyson Atoq, Lead Field Inspector, Ulqiagvik
Leroy Aiga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Files

NSB 21-052/GRB/mk/lk-acting LMR Manager/da
North Slope Borough
Department of Planning & Community Services
NUIQSUT VILLAGE PERMIT APPLICATION

Eunice Mary Brower

Applicant

89038 | Nuiqsut Alaska 99789

Mailing Address | City | State | Zip Code

Email Address: kunnan.eunicemary@gmail.com

(907)319-9313

Home No. | Work No. | Fax #

T.N.H.A. | P.O. Box 409 Utqiagvik, AK 99789 | (907)852-7150

Owner of Lot | Address | Phone No.

(If applicant is NOT the sole owner, the owners’ address must be provided to notify the owners’ of the applicant intent.)

SITE OF DEVELOPMENT

Village District: Nuiqsut townsite

Location: Lot: 5 Block: 9 BAN: USS: Vacant: Yes No

Dimensions: Lot Width: (ft) Depth: (ft) Lot Area: (sq. ft)

No. of Existing Structures | Use of Existing Structures

1

PROPOSED DEVELOPMENT

Gravel fill in high lighted area needed to add connex or shed when able to

Proposed Structure(s) Use (ie: single family dwelling, duplex, garage, etc.)

New Construction: Yes No

No. of Stories: Estimated Completion Date:

Overall Building Height:

Relocation: Yes No

Commercial Residential Utility locate; WATER, SEWER & GASLINE

If yes, current location of structure(s): Lot: Block: USS:

Please attach a site plan showing the following items to scale: (Contact the GIS Division for a plot plan (907) 852-0333)

- Lot Width, Depth, and Shape
- Existing Easements
- Existing Structures
- Existing And Proposed Parking
- Distance from Proposed Structure to Property Lines
- Distance Between Structures on Site
- Setbacks from Property Lines
- Shed/connexes that are used for subsistence equipment do not require permit

In the space provided below please provide a rough sketch of proposed work

I affirm that the above sketch and information is true to the best of my knowledge.

Applicant Signature: Mary Brown  Date: 09/22/2020

Chairperson, Planning Commission:  Date: 10/20

Land Management Administrator:  Date: 10/20

DEcision:

☑ Approved  ☐ Disapproved  ☐ Elevated

Reasons for Denial:
Eunice Mary Brower, the applicant proposes to discharge 1222 cubic yards of gravel into an 0.18 acre area (Dimensions: 55 feet wide x 150
6', in Ninilchik, Alaska.  4' x 4' feet high or wellheads, in order to construct a garage and yard area. The project area is located at 516 Yupikwik St., Block 9, Lot 5.
North Slope Borough
Planning and
Community Services
Department

Gordon R. Brower, Director

DRAFT DEVELOPMENT PERMIT - REQUEST FOR COMMENTS

COMMENTS DUE BY: JANUARY 3, 2021

This is a Draft Development Permit only for the purposes of review and gathering comments during the comment period prescribed by NSBMC Title 19. It contains conditions proposed for inclusion in a final permit, if a decision is made to issue a final permit. This draft permit should not be taken to mean that the proposed project is, or will, be approved. Only upon issuance of a final permit will the proposed project be approved to commence.

December 14, 2020

Jacobs/CH2M Hill for North Slope Borough CIPM
C/O Ian Van Blankenstein
949 E. 36th Ave., Ste. 500
Anchorage, Alaska 99508
Email: ian.vanblankenstein@jacobs.com


Dear Mr. Blankenstein:

We are in the process of reviewing your request to construct an addition to the existing WTP; then demolish the old washereria building and shop within Wainwright, Alaska, Village District.

Project Description

Jacobs/CH2m Hill has prepared a design for the North Slope Borough-CIPM to upgrade the existing Wainwright WTP. The purpose of this project is to replace aged and deteriorated infrastructure. The newest part of the plant (Area 3), which contains the water treatment processes, will be preserved and the oldest adjacent areas (Areas 1 and 2) will be demolished and replaced. The design work includes the following:

1. Demolish existing facility Areas 1 and 2 (see Figure 1 below)
2. New modular exterior emergency power standby generator

3. Design 4,670 square foot addition to remaining facility (Area 3, see below)

4. New addition to include:
   a. Garage/maintenance room
   b. Boiler room
   c. Break area
   d. Administrative offices
   e. Restroom, and shower room
   f. Storage
   g. New addition will be one story high bay construction
   h. Sprinkled
   i. New addition to have eave height to match existing Area 3 eave height.

The project is currently bidding and construction is to be completed by the end of 2021. The construction is sequenced to span two summer seasons with interior construction work being completed during the winter. The water treatment, pumping, and storage facilities will remain in operation throughout construction except for short interruptions for connections to new facilities.

**Purpose**

The purpose of this project is to a mechanical building and storage many years ago, has reached the end of its service life. A new WTP addition will include all the current functions from the old building.

This project is scheduled to commence on March 15, 2021 with a completion date of December 31, 2022.

We have preliminarily determined that your proposed development is consistent with Title 19 provided that you comply with the following conditions:

**GRAVEL STIPULATIONS**

1. The permittee shall maintain the work authorized herein in good condition and in accordance with approved plans and drawings. In the absence of these plans during this review, plans for improvement and/or additions of gravel shall be submitted under a separate permit and must also be approved by the Land Management Administrator.

2. The maximum dimensions for this project shall not exceed 0.15-acre (i.e., total fill for gravel is not to expand over 6,534 square feet). In recognition of advanced planning and public involvement in the North Slope Borough's capital improvement program (civil works) approval process, similar projects for civil works proposals may exceed the square footage up to one acre (43,560 square feet) upon approval from the Corps of Engineers or his designee.
and the North Slope Borough Land Management Administrator or his/her designated representative.

3. Access roads and driveways shall be constructed and maintained at a maximum bottom width of 48 feet and a maximum top width of 36 feet.

4. The maximum side slopes of all fills shall be 2:1 (horizontal:vertical)

5. To adequately protect the underlying permafrost from thermal degradation, a layer of fill material at least 4 feet thick, or a sufficient amount must be placed on the ground to maintain the integrity of the permafrost, if present. Signs of thermokarsting or standing water indicate non-compliance with this condition.

6. An adequate number of culverts shall be installed and maintained under fills authorized under this permit to avoid interruption of natural surface drainage. Excessive ponding of areas next to fills indicates non-compliance this condition.

7. There shall be no discharge of fill material for pad or road construction within 100 feet of the high tide line of any tidal water nor within 100 feet of the ordinary high water mark of any lake, stream, river, pond, slough, or other non-tidal water without the approval of the Land Management Administrator.

8. The lands and facilities subject to this permit must be maintained in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain approval from the Land Management Administrator or his/her designated representative, which may require restoration and or re-vegetation of the area.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(1)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed
and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBM 19.70.050(E) through (G).

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, and/or herbert.ipalook@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBM 19.50.030(I).

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBM 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Wainwright at (907) 763-2815 and Olgoonik Corporation at (907) 763-2613 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBM 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBM 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBM 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBM 19.30.100

Our review of your application dated December 9, 2020 is being conducted in accordance with NSBM, Title 19. The purpose of our review is to ensure that your project achieves the goals and objectives, and implements the policies, of the Borough Comprehensive Plan; to ensure that the future growth and development of the Borough is in accord with the values of its residents; to identify and secure, for present and future residents, the beneficial impacts of development; to identify and avoid, mitigate, or prohibit the negative impacts of development; and to ensure that future development is of the proper type, design and location, and is served by a proper range of public services and facilities.
You are encouraged to contact this office if you wish to discuss the applicability of the above conditions to this approval. By copy of this letter, we are soliciting comments from the below-listed individuals and their respective agencies regarding the adequacy of the above stipulations to meet the purpose of our review.

Comments on the adequacy of these stipulations should be sent to Daryllynn Aveoganna, Land Management Specialist at the address above or by email at: daryllynn.aveoganna@northslope.org or by telephone at (907) 852-0320 ext. 5418.

Sincerely,

[Signature]

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Raymond Nashookpuk, Wainwright Village Deputy Assistant, NSB
Scott Danner, Public Works, NSB
Jeanne Proulx, AkDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDI/F&WS, Fairbanks
Jeanne Hanson, USDI/NMFS, Anchorage
Josephina Delgado-Pilikat, DCOM, Juneau
dec.water.oilandgas@alaska.gov.
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.Mccoy@usace.army.mil
Donna Wixon, USDI/BLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AkDNR/DO&G, Anchorage
Katie Farley, State Pipeline Coordinators Office/ IPO, SOA
dog.permitting@alaska.gov
Hugh Patotak Sr., President, Olgoonik Corporation
Raymond Nashookpuk, Mayor, City of Wainwright
Howard Patotak, President, Wainwright Tribal Council
Herbert Ipalook Jr., Rodney Ahiuganauk Jr., Field Inspectors, Nuiqsut
Allyson Atos, Lead Field Inspector, Utqiagvik
Leroy Oenga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Raymond Aguvik Jr., Inupiat Community of the Arctic Slope Board Member, Wainwright
Amy Bodfish, Inupiat Community of the Arctic Slope Liaison, Wainwright
Files
Land Management Regulations (LMR) Permit Application

Permit Number: 21-145
Permit Type: Development
Date: 1/29/2020
State ID: AK7017767
Phone: 907-762-1500 ext. 1578
Project Name: Wainwright WTP 59-145
Field Name & Pad: Wainwright WTP SDC

Applicant: Jacobs/CH2M Hill for North Slope Borough CIPM
Address: 949 E. 36th Ave, Ste 500, Anchorage, AK 99508
Contact Person: Ian Van Blankenstein, PE, Jacobs
Email: ian.vanblankenstein@jacobs.com

Location (TRS): T: 15N  R: 32W  Sec: 34
Zoning District: Village of Wainwright, AK

Proposed Start Date: 3/15/2021
Completion Date: 12/31/2022
Proposed Development: Construct an addition to the existing WTP; then demolish the old washeteria building and shop.

Purpose of Development: The old washeteria, converted to a mechanical building and storage many years ago, has reached the end of its service life. A new WTP addition will include all the current functions from the old building.

☑ Fill/Dredge
Material: Stockpiled gravel over existing
Acres: 0.15

☐ Oil & Gas Wells
Number of New Surface Holes: 

☐ Temp. Water Use
Sources: 
Purpose: 
Access: 
Maximum Amount: 

☐ Off Road Travel
Period: 
Site Access: 

☐ Fuel Storage
Type: 
Handling: 
Amount: 

☐ Hazardous Material Storage
Type: 
Handling: 
Amount: 

☑ Solid Waste
Treatment: NSB to determine disposal requirements of demolished building material

☐ Mining
Habitat: 

☐ Air Emissions
Type: 
Amount: 

☐ Noise/Vibrations
Type: 
Amount: 

☐ Sensitive Habitat
Floodplain: 

☐ Transportation
Type: 

☐ Marine Tanker Facility
Seismic Work: 

☐ Utility Development
Recreational Development

☐ Causeway Construction
Offshore Drilling: 

☐ Residential Development
CD-ROM Included

☐ Airport or Helicopter Pad
Oil Transportation System: 

☐ Snow Removal
Maps Included
ATTACH TO THIS APPLICATION THE FOLLOWING:

- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES
- SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NAD 1983 ALASKA ALBERS OR GEOREFERENCED.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLL FREE (IN-STATE): (800) 476-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

Steven Decker
Authorized Signature

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING $12,000
☐ DEVELOPMENT PERMIT $2,000, plus $500/well
☐ ADMINISTRATIVE APPROVALS $1,500
☐ CONDITIONAL DEVELOPMENT PERMITS $3,000

AMOUNT PAID

Date
2/26/2020

Steven Decker
Name

☑ REZONING APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan Conditions, lease stipulations, and provisions of the state and federal law and permit servicer hereunder.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory policies, represents the developer’s best efforts to implement all relevant best efforts and minimization policies, and as long as conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter)

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land that is listed as a conditional development for this zoning district or has been elevated by the NSB Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

NSB Land Management Administrator

Date

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect. NSMBC §19.30.130.

North Slope Borough
Department of Planning and Community Services
Land Management Regulation Division

Land Management Regulations - General Application
October 2011
February 27, 2020

Gordon Brower
Director, Land Administrator
North Slope Borough
P.O. Box 69
Barrow, AK 99723

Subject: Land Management Regulations Permit Application on behalf of North Slope Borough-CIPM
Wainwright Water Treatment Plant (WTP) Upgrade within Village District

Dear Mr. Brower,

Jacobs/CH2M Hill has prepared a design for the North Slope Borough-CIPM to upgrade the existing Wainwright WTP. The purpose of this project is to replace aged and deteriorated infrastructure. The newest part of the plant (Area 3), which contains the water treatment processes, will be preserved and the oldest adjacent areas (Areas 1 and 2) will be demolished and replaced. The design work includes the following:

1. Demolish existing facility Areas 1 and 2 (see Figure 1 below)
2. New modular exterior emergency power standby generator
3. Design 4,670 square foot addition to remaining facility (Area 3, see below)
4. New addition to include:
   a. Garage/maintenance room
   b. Boiler room
   c. Break area
   d. Administrative offices
   e. Restroom, and shower room
   f. Storage
   g. New addition will be one story high bay construction
   h. Sprinkled
   i. New addition to have eave height to match existing Area 3 eave height.

The project is currently bidding and construction is to be completed by the end of 2021. The construction is sequenced to span two summer seasons with interior construction work being completed during the winter. The water treatment, pumping, and storage facilities will remain in operation throughout construction except for short interruptions for connections to new facilities.
To: All NSB Departments

From: Gordon R. Brower, Director of Planning and Community Services

Date: December 2, 2020

Subject: Delegation of Authority

I hereby delegate Mabel J. Kaleak as Acting Director of Planning and Community Services effective December 1, 2020 until further notice.

Please extend your cooperation to Mabel during this time.

Thank you,
DRAFT DEVELOPMENT PERMIT - REQUEST FOR COMMENTS

COMMENTS DUE BY JANUARY 11, 2021:

This is a Draft Development Permit only for the purposes of review and gathering comments during the comment period prescribed by NSBMC Title 19. It contains conditions proposed for inclusion in a final permit, if a decision is made to issue a final permit. This draft permit should not be taken to mean that the proposed project is, or will, be approved. Only upon issuance of a final permit will the proposed project be approved to commence.

December 22, 2020

ConocoPhillips Alaska, Inc. (CPAI)
C/O Jennifer Collins, Senior Environmental Coordinator
P.O. Box 100360
Anchorage, Alaska 99510-0360
Jennifer.collins@conocophillips.com


Dear Ms. Collins:

We are in the process of reviewing your request to conducting Geotechnical Survey Project located within the Alpine, CD-5 Units, Conservation & Resource Development Districts.

Project Description

CPAI will conduct a geotechnical survey within the ASRC Mine Site. The purpose of the geotechnical survey is to define and delineate subsurface gravel resources to support future engineering design and establish survey control for proposed infrastructure. The project area is located within the North Slope Borough (NSB) Resource Development District (RDD) and Conservation District. The surface land is privately owned.
SCOPE OF WORK

The scope of work includes advancing up to 25 primary boreholes and 25 secondary boreholes (e.g. step-outs) and/or a geophysical survey using ground penetrating radar to characterize subsurface soil and permafrost conditions at the ASRC Mine Site.

Boreholes

The boreholes will be installed to a depth of 70 feet at the ASRC Mine Site using a Geoprobe 7822 drill which is configured for arctic geotechnical drilling. The outside diameter of all boreholes will be 9-inches and no casings will be installed. The total surface area disturbed by advancing both the primary and secondary boreholes is 22 square feet (< 0.1 acres). The acreage to fill to wetlands will be 0.0056 acres (<0.1 acres). Up to 60 cubic feet (2.2- cubic yards) of excess cuttings per hole will be mounded over the finished borehole and allowed to settle back during subsequent seasons.

The project includes primary boreholes to determine the presence of granular material, followed by secondary target boreholes to infill data gaps. The primary target boreholes will be placed at a 500-foot to 1000-foot grid spacing with secondary target boreholes placed to infill at a 250-foot grid spacing for a total of 50 targets.

CPAI anticipates utilizing two drilling methods depending on subsurface conditions. The Hollow Stem Auger (HSA) method will be utilized at the majority of the boreholes and the Continuous Core Auger (CCA) method will be utilized at selected boreholes to infill between HSA locations. The soils will be sampled at 5-foot intervals with the HSA method and the CCA sampling system will provide a continuous sample column in 2.5-foot increments. Table 1 lists the proposed borehole data gathering and installation details. Each borehole will be sampled, field classified, and documented in a field log prepared by the field engineer or geologist.

The exact borehole target locations will be determined during project planning and refined in the field as data is collected and subsurface conditions are studied. Table 2 lists the tundra travel and soil boring locations by township, range, and section. All borehole locations will be contained within the project area defined in the attached map.

The soil cuttings produced during drilling will be collected in a tote mounted on a Rolligon and will be disposed of in accordance with CPAI’s Alaska Waste Disposal and Reuse Guide (Redbook).

MOBILIZATION AND ACCESS

CPAI will access the project area by utilizing existing gravel roads, ice roads (permitted separately) and winter tundra travel. Tundra travel routes will be refined in the field to avoid hazards such as steep terrain or environmentally sensitive areas, including willow habitat, areas with thin snow cover, and culturally sensitive sites.

EQUIPMENT AND MATERIALS

Equipment to be utilized includes approved tundra travel vehicles, Tuckers, Steigers, Hagglunds, Rolligans, snowmachines, an enclosed soil exploration drilling rig, mobile fuel tanks, generators, pick-up trucks, and other heavy equipment to transport equipment and material. The materials include frost-proof survey monuments and fill to support slurry method installation.
The drill equipment is portable and built on a flexible sled with a smooth plastic bottom that is towed behind a low ground pressure vehicle such as a Rolligon. The drill is contained within a mobile enclosure which includes an electric generator and support tools.

**FUEL STORAGE AND TRANSFER**

Fuel storage includes a double-walled, mobile 2,500-gallon capacity tank with secondary containment. The total estimated fuel use for this project is up to 25,000 gallons.

Fuel storage of more than 1,320 gallons requires that a Spill Prevention and Countermeasure Control (SPCC) plan be maintained at all project activity areas. CPAI holds an SPCC plan for fuel storage and handling facilities associated with the mobile fuel tank and fuel transfer equipment. All fuel storage and handling will follow CPAI operations and management procedures and federal, state, and local regulations. Any spills will be reported to the appropriate agencies within the required timeframe. Secondary containment will be provided during all fueling operations. (Please see attachments for maps and tables).

**Purpose**

The purpose of the geotechnical survey is to define and delineate subsurface gravel resources to support future engineering design and establish survey control for proposed infrastructure.

This project is scheduled to commence on February 15, 2021, with a completion date of August 31, 2021.

We have preliminarily determined that your proposed development is consistent with Title 19 provided that you comply with the following conditions:

**PROJECT SPECIFIC STIPULATIONS**

1. CPAI shall get a Non-Objection letter from all land owners and provide a copy to the North Slope Borough Land Management Division.

2. CPAI shall have two trained fuel handler on sight during all fueling operations.

**WILDLIFE STIPULATION**

The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Land Management Divisions before the start of any field activities.

**SPILL RESPONSE REQUIREMENTS**

1. CPAI shall have an approved spill response and contingency plan. The approved Plan shall be attached to this file for reference. NSBMC 19.70 .050 I (11)
SPILL RESPONSE TACTICS

1. Place drip pans under vehicles parked over 5 minutes.

2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks.

Pink dye is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by CPAI.

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O, NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 I. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor’s initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 I. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. CPAI shall consult with ICAS Realty Director, at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.
10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

   o Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.

   o A list of vehicles used for any off-road travel, which may have taken place.

   o Statement of clean-up activities.

   o Methods of disposal of garbage, and other camp debris.

   o A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.

   o Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr, Field Inspector at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.

   o Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Lang Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)
3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, and/or herbert.ipalook@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

Our review of your application dated December 21, 2020, is being conducted in accordance with NSBMC, Title 19. The purpose of our review is to ensure that your project achieves the goals and objectives, and implements the policies, of the Borough Comprehensive Plan; to ensure that the future growth and development of the Borough is in accord with the values of its residents; to identify and secure, for present and future residents, the beneficial impacts of development; to identify and avoid, mitigate, or prohibit the negative impacts of development; and to ensure that future development is of the proper type, design and location, and is served by a proper range of public services and facilities.

You are encouraged to contact this office if you wish to discuss the applicability of the above conditions to this approval. By copy of this letter, we are soliciting comments from the below-listed individuals and their respective agencies regarding the adequacy of the above stipulations to meet the purpose of our review.

Comments on the adequacy of these stipulations should be sent to Ralph Burke, Land Management Specialist at the address above or by email at: ralph.burke@north-slope.org or by telephone at (907) 852-0320 ext. 5414
Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Brian Person, NSB Wildlife (caribou/fox/geese/vegetation)
Robert Suydam, NSB Wildlife (Birds/Bowhead/Seal)
Selene Tirre, Assessing Division, NSB
Olivia Cabinboy, Nuiqsut Village Deputy Assistant, NSB
Jeanne Proulx, AkDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Braae, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDOI/FWS, Fairbanks
Jeanne Hanson, USD/NOF, Anchorage
Josephine Delgado-Pilik, DCOM, Juneau
dec.water.oilandgas@alaska.gov.
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.Mccoy@usace.army.mil
Donna Wixon, USDJ/BLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AkDNR/DOG, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
dog.permitting@alaska.gov
Rex Rock Sr., President, Arctic Slope Regional Corporation
Mark Major, Kuukpik Corporation, major@live.com
Willow Ietrick, Kuukpik Corporation, willow@kuukpik.com
Joseph Nakagigak, President, Kuukpik Village Corporation
Mamie Pardue Mayor, City of Nuiqsut
Raymond Ipalook, President, Native Village of Nuiqsut
Tommy Nageak, Cultural Resource Specialist, NSB
Darren W. Aiken, ULI Technician, NSB
Herbert Ipalook Jr., Rodney Ahtuanangaruak Jr., Field Inspectors, Nuiqsut
Allyson Atox, Lead Field Inspector, Utqiaġvik
Leroy Oenga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiaġvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CP/GIS, NSB
Files

N21-158/GRB/mk/lk Acting LMR Manager/rjb
<table>
<thead>
<tr>
<th>Permit Number</th>
<th>Permit Type</th>
<th>Development Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-158</td>
<td>Permit Type</td>
<td>12/21/2020</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Permit Date</th>
<th>Permit Date</th>
<th>Completion Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>12/21/2020</td>
<td>8/31/2021</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Contact Person</th>
<th>Project Name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jennifer Collins</td>
<td>Alpine Geotechnical Survey</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>Zoning District:</th>
</tr>
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<tbody>
<tr>
<td>T10N, RSE, Sections 11, 14, 23</td>
<td>Alpine, CD5 and Conservation District</td>
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</table>

<table>
<thead>
<tr>
<th>Proposed Start Date</th>
<th>Proposed Completion Date:</th>
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<tbody>
<tr>
<td>2/15/2021</td>
<td></td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Proposed Development:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ConocoPhillips Alaska, Inc. (CPAI) requests authorization to conduct a geotechnical survey within the ASRC Mine Site. See project description for further detail.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Purpose of Development:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The purpose of the geotechnical survey is to define and delineate subsurface gravel resources to support future engineering design and establish survey control for proposed infrastructure.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fill/Dredge</th>
<th>Material:</th>
<th>Excess drill cuttings and dry sand fill</th>
<th>Acres:</th>
<th>&lt;0.1</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Oil &amp; Gas Wells</th>
<th>Number of New Surface Holes:</th>
<th>N/A</th>
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<table>
<thead>
<tr>
<th>Temp. Water Use</th>
<th>Source:</th>
<th>N/A</th>
<th>Access:</th>
<th>N/A</th>
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<table>
<thead>
<tr>
<th>Off Road Travel</th>
<th>Period:</th>
<th>Winter Season</th>
<th>Equipment:</th>
<th>Approved tundra travel vehicles</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Site Access:</th>
<th>Access to the project area will by tundra travel.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Fuel Storage</th>
<th>Type:</th>
<th>Arctic Diesel</th>
<th>Amount:</th>
<th>Not to exceed 1000 bbl.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Handling:</th>
<th>Fuel storage will be handled in accordance with federal, state, and local regulations.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Hazardous Material Storage</th>
<th>Type:</th>
<th>N/A</th>
<th>Amount:</th>
<th>N/A</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Solid Waste</th>
<th>Treatment:</th>
<th>N/A</th>
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</table>

<table>
<thead>
<tr>
<th>Mining</th>
<th>Habitat:</th>
<th>N/A</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Air Emissions</th>
<th>Type:</th>
<th>Vehicles and equipment</th>
<th>Amount:</th>
<th>Minor</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Noise/Vibration</th>
<th>Type:</th>
<th>Vehicles and equipment</th>
<th>Amount:</th>
<th>Normal</th>
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<table>
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<tr>
<th>Sensitive Habitat</th>
<th>Floodplain:</th>
<th>N/A</th>
<th>Shoreline:</th>
<th>N/A</th>
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</table>

<table>
<thead>
<tr>
<th>Transportation</th>
<th>Type:</th>
<th>N/A</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Marine Tanker Facility</th>
<th>Seismic Work</th>
<th>Utility Development</th>
<th>Recreational Development</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Causeway Construction</th>
<th>Offshore Drilling</th>
<th>Residential Development</th>
<th>CD-ROM Included</th>
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</table>

<table>
<thead>
<tr>
<th>Temporary Airport</th>
<th>Oil Transport System</th>
<th>Snow Removal</th>
<th>Maps Included</th>
</tr>
</thead>
</table>
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES. THE PROJECTION SHOULD BE NAD 27 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED)

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLLFREE (IN STATE); (800) 478-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT

[Signature]
Authorized Signature
Jennifer Collins

Name

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING
☒ DEVELOPMENT PERMIT
☐ ADMINISTRATIVE APPROVALS
☐ CONDITIONAL DEVELOPMENT PERMITS AMOUNT PAID

$2,000
$2,000

Date
12/21/2020

Senior Environmental Coordinator
Title

Fee to be paid monthly by Electronic Funds Transfer.

DECISION
☐ ADMINISTRATIVELY APPROVED
  This is a minor amendment to a development permit or a use of land listed under administrative approvals for this zoning district.
☐ REZONING APPROVED
  This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan conditions, lease stipulations, and provision of state and federal law and permits served thereunder.
☐ DEVELOPMENT PERMIT APPROVED
  The proposed development meets all applicable mandatory Policies, represents the Developer’s best efforts to implement all relevant best efforts and minimization policies, and as long as any conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter).
☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
  This is a use of land this is listed as a conditional development for this zoning district or has been elevated by the Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
  (See accompanying letter)

Land Management Administrator

Date

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect.
NSMBC §19.30.130.
Alpine Geotechnical Survey
DOG - Colville River Unit
NSB – Alpine RDD, CD5 RDD and Conservation District
USACE NWP 6 and 18

Project Description

ConocoPhillips Alaska, Inc. (CPAI) requests authorization to conduct a geotechnical survey within the ASRC Mine Site. The purpose of the geotechnical survey is to define and delineate subsurface gravel resources to support future engineering design and establish survey control for proposed infrastructure. The project area is located within the North Slope Borough (NSB) Resource Development District (RDD) and Conservation District. The surface land is privately owned.

SCOPE OF WORK
The scope of work includes advancing up to 25 primary boreholes and 25 secondary boreholes (e.g. step-outs) and/or a geophysical survey using ground penetrating radar to characterize subsurface soil and permafrost conditions at the ASRC Mine Site.

Boreholes
The boreholes will be installed to a depth of 70 feet at the ASRC Mine Site using a Geoprobe 7822 drill which is configured for arctic geotechnical drilling. The outside diameter of all boreholes will be 9-inches and no casings will be installed. The total surface area disturbed by advancing both the primary and secondary boreholes is 22 square feet (< 0.1 acres). The acreage to fill to wetlands will be 0.0056 acres (<0.1 acres). Up to 60 cubic feet (2.2- cubic yards) of excess cuttings per hole will be mounded over the finished borehole and allowed to settle back during subsequent seasons.

The project includes primary boreholes to determine the presence of granular material, followed by secondary target boreholes to infill data gaps. The primary target boreholes will be placed at a 500-foot to 1000-foot grid spacing with secondary target boreholes placed to infill at a 250-foot grid spacing for a total of 50 targets.

CPAI anticipates utilizing two drilling methods depending on subsurface conditions. The Hollow Stem Auger (HSA) method will be utilized at the majority of the boreholes and the Continuous
Core Auger (CCA) method will be utilized at selected boreholes to infill between HSA locations. The soils will be sampled at 5-foot intervals with the HSA method and the CCA sampling system will provide a continuous sample column in 2.5-foot increments. Table 1 lists the proposed borehole data gathering and installation details. Each borehole will be sampled, field classified, and documented in a field log prepared by the field engineer or geologist.

<table>
<thead>
<tr>
<th>Location</th>
<th>Primary Borehole ID</th>
<th>Type</th>
<th>Drilling Methods</th>
<th>Depth (ft.)</th>
<th>Estimated Secondary Borehole (Shifts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASRC Mine Site</td>
<td>Prepacking ASRC Mine Site Access</td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>BH-01-BH-11</td>
<td>Exploration</td>
<td>HSA</td>
<td>70 each</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>BH-12-BH-25</td>
<td>Exploration</td>
<td>HSA/CCA</td>
<td>70 each</td>
<td>13</td>
<td></td>
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<tr>
<td>Totals</td>
<td>25</td>
<td></td>
<td>1,750</td>
<td>25</td>
<td></td>
</tr>
</tbody>
</table>

The exact borehole target locations will be determined during project planning and refined in the field as data is collected and subsurface conditions are studied. Table 2 lists the tundra travel and soil boring locations by township, range, and section. All borehole locations will be contained within the project area defined in the attached map.

<table>
<thead>
<tr>
<th>Project Component</th>
<th>Legal Description (T R S)</th>
<th>NSB Zoning District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geotechnical Survey Area</td>
<td>10N, 5E, Sections 11, 14, 23</td>
<td>Alpine, CD5 and Conservation</td>
</tr>
<tr>
<td>Tundra Travel</td>
<td>10N, 5E, Sections 11, 14</td>
<td>Alpine and CD5</td>
</tr>
</tbody>
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The drill equipment is portable and built on a flexible sled with a smooth plastic bottom that is towed behind a low ground pressure vehicle such as a Rolligon. The drill is contained within a mobile enclosure which includes an electric generator and support tools.

FUEL STORAGE AND TRANSFER
Fuel storage includes a double-walled, mobile 2,500-gallon capacity tank with secondary containment. The total estimated fuel use for this project is up to 25,000 gallons.

Fuel storage of more than 1,320 gallons requires that a Spill Prevention and Countermeasure Control (SPCC) plan be maintained at all project activity areas. CPAI holds an SPCC plan for fuel storage and handling facilities associated with the mobile fuel tank and fuel transfer equipment. All fuel storage and handling will follow CPAI operations and management procedures and federal, state, and local regulations. Any spills will be reported to the appropriate agencies within the required timeframe. Secondary containment will be provided during all fueling operations.

HISTORICAL SITES AND CULTURAL RESOURCE
The project area has been examined in part by many previous cultural resource efforts during survey for proposed exploration drilling and development projects. CPAI has reviewed the database of Alaska Heritage Resource Survey (AHRS), Native Allotments, and cabins used for subsistence purpose and there is one known Traditional Land Use Inventory (TLUI) located within 500 feet of the project area. CPAI will maintain a 500 feet buffer from TLUIHAR103. CPAI believes there would be no impact to cultural resources from this project. CPAI has applied for a Certified of TLUI Clearance.
PERMIT LIST AND AUTHORIZATIONS

Table 3: Permit List and Authorizations

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>PERMIT/APPROVALS</th>
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<tr>
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<td>FEDERAL PERMITS</td>
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<td>USACE</td>
<td>Nationwide Permits 6 and 18</td>
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<td>Section 106 Consultation of the National Historic Preservation Act</td>
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<td>USFWS</td>
<td>Letter of Authorizations (LOA)</td>
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<td>- New project specific incidental take of polar bears</td>
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<td>- Permit No. 18-INT-15 – Potential intentional take of polar bears. Expires 1/14/2021 (permit is in the process of being renewed)</td>
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<td>Section 7 Consultation of the Endangered Species</td>
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<td>STATE PERMITS</td>
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<td>ADNR</td>
<td>Unit Plan of Operations Amendment</td>
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<td>LOCAL PERMITS</td>
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<td>NSB</td>
<td>Development Permit</td>
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<tr>
<td>NSB TLUI</td>
<td>Traditional Land Use Inventory Clearance</td>
</tr>
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</table>

Project work is expected to begin February 15, 2021 and be completed by August 31, 2021 and will include inspections, reporting, seeding (if necessary) and clean-up activities. Project start and end dates will be revised as necessary based on winter tundra travel conditions. Ground disturbing activities and tundra travel will occur in the winter months. All activities will be conducted in accordance with federal, state and local regulations, permit stipulations and general concurrence stipulations as appropriate.
ASRC GEOTECHNICAL INVESTIGATION
PROPOSED BOREHOLE LOCATIONS

NOTE:
1. PROPOSED GEOTECHNICAL INVESTIGATION AREA IS APPROXIMATE.
2. LOCATION OF ASRC MINE SITE 2020 PIT IS APPROXIMATE.
3. BOREHOLE GRID SPACING IS EXPECTED TO VARY BETWEEN 250 FT AND 1000 FT, DEPENDING ON SURFACE AND SUBSURFACE CONDITIONS.
4. SEE SHEET 4 FOR A TYPICAL BOREHOLE SECTION.

REFERENCE: PQA-XXXX-XXXX
APPLICANT: CPAI
PROPOSED: ALPINE SURVEY MONUMENTS AND GEOTECH SURVEY
AT: ALASKA
SHEET 3 of 4 12/14/2020
EXISTING GROUND

EXCESS CUTTINGS MOUNDED AT BORING 15" DIAMETER, 7.5" MAX HEIGHT

DRILL HOLE, BACKFILLED WITH CUTTINGS

DRILLED DEPTH MATURES, UP TO 70 FT

NOTE:
HOLE WIDTH EXAGGERATED FOR CLARITY.

TYPICAL BOREHOLE SECTION

REFERENCE: POA-XXXX-XXXX
APPLICANT: CPAI
PROPOSED: ALPINE SURVEY MONUMENTS AND GEOTECH SURVEY
AT: ALASKA
SHEET 4 of 4 12/14/2020
DRAFT DEVELOPMENT PERMIT - REQUEST FOR COMMENTS

COMMENTS DUE BY: JANUARY 17, 2021

This is a Draft Development Permit only for the purposes of review and gathering comments during the comment period prescribed by NSBMC Title 19. It contains conditions proposed for inclusion in a final permit, if a decision is made to issue a final permit. This draft permit should not be taken to mean that the proposed project is, or will, be approved. Only upon issuance of a final permit will the proposed project be approved to commence.

December 28, 2020

ConocoPhillips Alaska, Inc. (CPAI)
C/O Jennifer Collins, Senior Environmental Coordinator
P.O. Box 100360
Anchorage, Alaska 99510-0360
Email: Jennifer.Collins@ConocoPhillips.com


Dear Ms. Collins:

We are in the process of reviewing your request to construct a 1.7-mile long ice road to access Lookout 1 Well located within the Alpine Satellite Resource Development & Conservation Districts.

Project Description

CPAI will construct a 1.7-mile ice road to access Lookout 1 well. Pullout areas or wide sections of the ice road will be constructed at certain locations depending on construction technique, field conditions and safety conditions. The ice road will be refined in the field to avoid hazards such
as steep terrain or environmentally sensitive areas, including willow habitat, areas with thin snow cover, and culturally sensitive sites.

The ice road will be constructed and maintained using water and ice chips from permitted sources. The ice road will not require prepacking activities.

CPAI has reviewed the database of Traditional Land Use Inventory (TLUI), Alaska Heritage Resource Survey (AHRS), Native Allotments, and cabins used for subsistence purposes and there are no sites within 500 feet of the proposed ice road. CPAI believes there would be no impact to cultural resources from this project. This area was examined in 2012 as part of the 2012-2013 Cassin Exploration Program (Reanier 2012) and a TLUI Clearance was previously obtained for the ice road under NSB TLUI 12-012 however the proposed ice road has changed slightly therefore CPAI is applying for a new TLUI Clearance approval.

Ice road construction is scheduled to begin on January 15, 2021 or when conditions are suitable. The project will end by September 15, 2021, or when stick picking and agency inspections have been completed.

All activities will be conducted in accordance with federal, state, and local regulations, permit stipulations and general concurrence stipulations as appropriate. See attached project description and figures for additional details.

Purpose

The ice road will be used to access the Lookout 1 well. Minor site-specific variations will occur due to filed conditions.

This project is scheduled to commence upon approval of final permit with a completion date of September 15, 2021.

We have preliminarily determined that your proposed development is consistent with Title 19 provided that you comply with the following conditions:

PROJECT SPECIFIC STIPULATIONS

1. CPAI shall get a Non-Objection letter from all land owners and provide a copy to the North Slope Borough Land Management Division.

2. CPAI shall have two trained fuel handler on site during all fueling operations.

WILDLIFE STIPULATION

The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize
human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Land Management Division before the start of any field activities.

**SPILL RESPONSE TACTICS**

1. Place drip pans under vehicles parked over 5 minutes.

2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks.

3. Impermeable lining and diking is required for fuel storage facilities with a capacity greater than 660 gallons.

*Pink dye* is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by CPAI.

**ICE ROADS AND PADS STIPULATIONS**

1. Water may be extracted only from sources approved by the Alaska Department of Natural Resources.

2. Onshore ice roads/pads construction is not to commence until frost has penetrated the ground to a depth of one-foot. The ice road/pad is to be maintained at a minimum thickness of six (6) inches. NSBMC 19.50.030(J); NSBMC 19.60.040(O).

3. Spills of fuels, hydrocarbons, or chemicals on ice roads/pads shall be cleaned up thoroughly prior to break-up to prevent damage to the underlying tundra when the ice road/pad melts. NSBMC 19.50.030(J); NSBMC 19.60.040(O).

4. In the event that an alternate ice road route is required, all surface vehicles are to confine travel as much as possible to only those areas and times of year with sufficient (6 inches) snow cover in order to protect the underlying tundra. NSBMC 19.60.040(O).

**TUNDRA STIPULATIONS**

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially
free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 I. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 I. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. CPAI shall consult with ICAS Realty Director at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.
11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

- Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.
- A list of vehicles used for any off-road travel, which may have taken place.
- Statement of clean-up activities.
- Methods of disposal of garbage, and other camp debris.
- A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.
- Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr, Field Inspector at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.
- Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Lang Management Division to become a part of this permit file. NSBMC 19.70.050(1)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be
discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, Rodney.ahtuangaranuk@north-slope.org and/or herbert.ipalook@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

Our review of your application dated December 28, 2020, is being conducted in accordance with NSBMC, Title 19. The purpose of our review is to ensure that your project achieves the goals and objectives, and implements the policies, of the Borough Comprehensive Plan; to ensure that the future growth and development of the Borough is in accord with the values of its residents; to identify and secure, for present and future residents, the beneficial impacts of development; to identify and avoid, mitigate, or prohibit the negative impacts of development; and to ensure that future development is of the proper type, design and location, and is served by a proper range of public services and facilities.
You are encouraged to contact this office if you wish to discuss the applicability of the above conditions to this approval. By copy of this letter, we are soliciting comments from the below-listed individuals and their respective agencies regarding the adequacy of the above stipulations to meet the purpose of our review.

Comments on the adequacy of these stipulations should be sent to Lilly Kilapsuk, Land Management Specialist at the address above or by email at: lilly.kilapsuk@north-slope.org or by telephone at (907) 852-0320 ext. 5411.

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: 
NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Olivia Cabinboy, Nuqiat Village Deputy Assistant, NSB
Jeanne Proulx, AKNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/DIVision of Habitat, Fairbanks
Josephine Delgado-Pliktak, DCOM, Juneau
dec.wator.oilandgas@alaska.gov
Rexx Thieme, Industrial Facility Specialist, ADEC, rexx.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.winn@usace.army.mil
Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.McCoy@usace.army.mil
Donna Wixon, USD/BLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AKNR/DO&G, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
dep.permittings@alaska.gov
Mark Major, Kuukpik Corporation, majorinoo@live.com
Willow Hetrick, Kuukpik Corporation, willow2@kuukpik.com
Joseph Nukapigak, President, Kuukpik Village Corporation
Marnie Pardue Mayor, City of Nuqiat
Raymond Ipalook, President, Native Village of Nuqiat
Tommy Naglak, Cultural Resource Specialist, NSB
Darren W. Aiken, TLIU Technician, NSB
Herbert Ipalook Jr., Rodney Ahtuangaruk Jr., Field Inspectors, Nuqiat
Allyson Atos, Lead Field Inspector, Utqiagvik
Leroy Oega Jr. Ralph Kalesk Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB

N21-168/GRB/mk/lk-acting LMR Manager/lk
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<th>Permit Number</th>
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</table>

| Applicant: | ConocoPhillips Alaska, Inc |
| Address:   | P.O. Box 100360 |
|           | Anchorage, AK 99510-0360 |

| Contact Person: | Jennifer Collins |
| Location (TRS): | T11N, R2E, Section 36 |
|                | T11N, R3E, Section 31 |
| Zoning District: | Alpine Satellite RDD, Conservation District |

| Proposed Start Date: | January 15, 2021 |
| Completion Date:     | September 15, 2021 |

| Proposed Development: | ConocoPhillips Alaska, Inc. (CPAI) requests authorization to construct a 1.7-mile ice road to access Lookout 1 well. |
| Purpose of Development: | The ice road will be used to access Lookout 1 well. Minor site-specific variations will occur due to field conditions. |

<table>
<thead>
<tr>
<th>Activity Type</th>
<th>Material</th>
<th>Acres</th>
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<th>Access</th>
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<th>Maximum Amount</th>
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<td>Water trucks, graders, etc.</td>
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<td>Recreational Development</td>
<td>CD-ROM Included</td>
<td>Maps Included</td>
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</table>
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES. THE PROJECTION SHOULD BE NAD 27 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED)

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLLFREE (IN STATE): (800) 478-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT

Authorized Signature
Jennifer Collins
Name
FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING
☒ DEVELOPMENT PERMIT
☐ ADMINISTRATIVE APPROVALS
☐ CONDITIONAL DEVELOPMENT PERMITS
AMOUNT PAID:
$2,000
Date
12/21/2020
Senior Environmental Coordinator
Title
Fee to be paid monthly by Electronic Funds Transfer.

DECISION
☐ ADMINISTRATIVELY APPROVED
☐ This is a minor amendment to a development permit or is a use of land listed under administrative approvals for this zoning district.
☐ REZONING APPROVED
☐ This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan conditions, lease stipulations, and provision of state and federal law and permits served thereunder.
☐ DEVELOPMENT PERMIT APPROVED
☐ The proposed development meets all applicable mandatory Policies, represents the Developer's best efforts to implement all relevant best efforts and minimization policies, and as long as any conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter).
☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
☐ This is a use of land this is listed as a conditional development for this zoning district or has been elevated by the Land Management Administrator to the Planning Commission.
☐ PERMIT DENIED
(See accompanying letter)

Land Management Administrator
Date

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect.

NSMBC §19.30.130.
Lookout 1 Ice Road
Greater Mooses Tooth Unit
NSB – Conservation and Alpine Satellite

Project Description

ConocoPhillips Alaska, Inc. (CPAI) requests authorization to construct a 1.7-mile ice road to access Lookout 1 well. Pullout areas or wide sections of the ice road will be constructed at certain locations depending on construction technique, field conditions, and safety conditions. The ice road will be refined in the field to avoid hazards such as steep terrain or environmentally sensitive areas, including willow habitat, areas with thin snow cover, and culturally sensitive sites. Minor site-specific variations will occur due to field conditions.

The table below lists the location of the proposed ice road:

<table>
<thead>
<tr>
<th>Ice Road</th>
<th>Length (miles)</th>
<th>Legal Description (T, R, S)</th>
<th>Zoning District</th>
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<tbody>
<tr>
<td>Lookout 1</td>
<td>1.7</td>
<td>11N, 2E, Section 36 11N, 3E, Section 31</td>
<td>Conservation Alpine Satellite</td>
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</table>

The ice road will be constructed and maintained using water and ice chips from permitted sources. The ice road will not require prepacking activities.

CPAI has reviewed the database of Traditional Land Use Inventory (TLUI), Alaska Heritage Resource Survey (AHRS), Native Allotments, and cabins used for subsistence purposes and there are no sites within 500 feet of the proposed ice road. CPAI believes there would be no impact to cultural resources from this project. This area was examined in 2012 as part of the 2012-2013 Cassin Exploration Program (Reanier 2012) and a TLUI Clearance was previously obtained for the ice road under NSB TLUI 12-012 however the proposed ice road has changed slightly therefore CPAI is applying for a new TLUI Clearance approval.

Ice road construction will begin on January 15, 2021 or when conditions are suitable. The project will end by September 15, 2021 or when stick picking and agency inspections have been completed.

All activities will be conducted in accordance with federal, state and local regulations, permit stipulations and general concurrence stipulations as appropriate. See the attached maps for additional details.
DRAFT DEVELOPMENT PERMIT - REQUEST FOR COMMENTS

COMMENTS DUE BY JANUARY 27, 2021:

This is a Draft Development Permit only for the purposes of review and gathering comments during the comment period prescribed by NSBMC Title 19. It contains conditions proposed for inclusion in a final permit, if a decision is made to issue a final permit. This draft permit should not be taken to mean that the proposed project is, or will, be approved. Only upon issuance of a final permit will the proposed project be approved to commence.

January 7, 2021

UMIAQ Environmental, UMI
C/O Emily McDonald, Environmental Specialist
6700 Arctic Spur Road
Anchorage, Alaska 99518
Email: Emily.mcdonald@uices.com & frieda.nageak@north-slope.org


Dear Ms. McDonald:

We are in the process of reviewing your request on behalf of the NSB CIPM for the multi residential water and sewer service connections located within Anaktuvuk Pass, Alaska, Village District.

Introduction

UMIAQ Environmental, LLC (UMIAQ Environmental), on behalf of the North Slope Borough’s Capital Improvement Program Management (NSB CIPM), submits this Village District permit application for installation of new water and sewer service to 10 existing residential buildings in Anaktuvuk Pass, including the senior center. The project is located in section 17, township 15S, range 2E, Umiat meridian.
Project Description

This project will install new water and sewer service barrels at 10 existing residential locations, including the senior center (see Figures 2-11). Many of these addresses were included in the Anaktuvuk Pass Comprehensive Plan 2016 – 2036 as proposed water and sewer service connections. One goal of the Comprehensive Plan is to support the development and maintenance of essential public facilities, by providing water and sewer connections to homes that have not yet been connected. Below are the street addresses, lot and block numbers, and associated survey or plat of each proposed connection:

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Installation will consist of trenching and excavation in a utility easement, placing a new service barrel, water, and sewer lines at each address, and backfilling the trench. Backfill material will be a mixture of excavated material and gravels as needed to achieve thermal protection of the utility.

Purpose

The purpose of this project is to connect 9 residential homes and the Senior Center for water and sewer services.

This project is scheduled to commence on March 1, 2021, with a completion date of November 1, 2021.

We have preliminarily determined that your proposed development is consistent with Title 19 provided that you comply with the following conditions:

Project Advisory Village

1. Permittee shall maintain all setback requirements of this lot which include, side and rear setbacks of ten feet, and five feet in front, additional five feet on a corner lot extending twenty-five feet from the apex of the corner. Permittee shall gain the approval of the Land Management Administrator if the setbacks of this property are compromised and that may require additional standards for compliance.

2. Structures, building materials, or other items shall not be placed on, or stored on the adjacent road right-of-way. This condition does not include operable motor vehicles.
3. To adequately protect the underlying permafrost from thermal degradation, structures shall be placed on pilings and/or a layer of fill material. The fill material shall be placed in a layer at least four feet thick, or a sufficient amount must be placed on the ground to protect the integrity of the permafrost, with maximum side slopes of 2:1.

4. This permit does not relieve the applicant from seeking approval for fill/piling placement through the U.S Army Corps of Engineers, under their regulatory authority for information regarding the Army Corps of Engineers gravel fill/piling, please contact Mary Romero at mary.r.romero@usace.army.mil or by phone at: (907) 753-2773.

5. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. This permit is non-transferable.

6. Permittee is responsible to ensure that proposed plan does not intrude into any gas, electric or other easements. For information concerning gas, electrical and for BUS easements contact Brett Goodwin at (907) 852-0831.

GENERAL STIPULATIONS

1. All structures shall be placed a minimum of ten-feet (10’) away from electrical power lines and conductors AS 18.60.670.

2. Permittee shall post and maintain a building number on the structure in a location visible from the street. The numbers shall be a minimum of six inches in height. To obtain the house address contact the NSB/Assessor’s Office at Building 1250A or call (907)852-0355.

3. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Permitting and Zoning Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

6. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100
Our review of your application dated January 4, 2021, is being conducted in accordance with NSBMC, Title 19. The purpose of our review is to ensure that your project achieves the goals and objectives, and implements the policies, of the Borough Comprehensive Plan; to ensure that the future growth and development of the Borough is in accord with the values of its residents; to identify and secure, for present and future residents, the beneficial impacts of development; to identify and avoid, mitigate, or prohibit the negative impacts of development; and to ensure that future development is of the proper type, design and location, and is served by a proper range of public services and facilities.

You are encouraged to contact this office if you wish to discuss the applicability of the above conditions to this approval. By copy of this letter, we are soliciting comments from the below-listed individuals and their respective agencies regarding the adequacy of the above stipulations to meet the purpose of our review.

Comments on the adequacy of these stipulations should be sent to Ralph Burke, Land Management Specialist at the address above or by email at: ralph.burke@north-slope.org or by telephone at (907) 852-0320 ext. 5414

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
    Selene Turr, Assessing Division, NSB
    Della Tagarok, Anaktuvuk Pass Village Deputy Assistant, NSB
    Della Shuglik, Atgusvik Village Deputy Assistant, NSB
    Scott Danner, Public Works, NSB
    Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
    Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
    Shane McCoy, US Army COE, Shanne.McCoy@usace.army.mil
    Donna Wixon, USD/BLM
    Shelly Jones, BLM District Manager
    Justus Mekiana Jr., Mayor, City of Anaktuvuk Pass
    Herbert Ipalook Jr., Rodney Ahtuangaranak Jr., Field Inspectors, Nuiqsut
    Allyson Atos, Lead Field Inspector, Utqiagvik
    Leroy Oenga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
    Wayne Cary, Assistant Attorney, NSB
    Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
    Karlene Ticket, Inupiat Community of the Arctic Slope Village Liaison, Anaktuvuk Pass
    Files

NSB/AKP21-171/GRB/mk/lk Acting LMR Manager/rjb
Form 700 – Village District Residential Permit Application

Villages of Point Hope, Point Lay, Wainwright, Atqasuk, Nuiqsut, Anaktuvuk Pass, and Kaktovik

This application is required for permit applications in all North Slope Borough (NSB) Villages, except Barrow. In Barrow, please use the Form 800 Barrow Residential Permit Application. For non-residential Village applications, use Form 750.

If you need any assistance filling out this application, please contact the NSB Department of Planning and Community Services at 907-852-0320. NSB permitting staff will assist you through the permit application process.

PART 1 – APPLICANT & OWNER INFORMATION

☐ New Permit No. ☐ Amendment to NSB Permit No. ☐ Existing NSB Permit No.

Application Date: 12/7/2020 Proposed Start Date: 3/1/2021 Completion Date: 11/1/2021 Date Received at NSB: __________

Applicant Name: UMI AQ Environmental on behalf of the North Slope Borough CIPM

Applicant Address: 6700 Arctic Spur Road
Anchorage, AK 99518

Phone: (907) 677-8288
Call: (907) 952-7807
Email: Emily.McDonald@UICCS.com

Property Ownership (Check all that apply)

☑ Applicant is property owner. ☐ Property has multiple owners. Owner listed above is not the sole owner. (Attach NSB Form 1300 Property or Land Owner Consent to the application).

☐ Property is owned by one person. ☐ Applicant is completing application form on behalf of Property Owner(s). (Attach NSB Form 1400 Letter of Authorization for Agent to the application.)

☐ Property is privately owned/unrestricted. ☐ Applicant is a renter or contractor and has permission from Property Owner(s). (Attach NSB Form 1300 Property or Land Owner Consent to the application.)

☐ Property is a restricted Native Townsite. ☐ Applicant is executor of the estate. (Attach the court document showing your executor status to the application.)

PART 2 – PROPERTY INFORMATION (Lot Location, Dimensions, and Information on Existing Structures)

Street Address/GPS Location: Multiple street addresses, please see attached sheet

Village: Anaktuvuk Pass

Lot: _______ Block: _______ Survey or Plat No: _______ Is the property vacant? ☐ Yes ☑ No

Lot Width: _______ Lot Depth: _______ Lot Area (ft²): _______

Number of Existing Buildings or Structures (e.g., homes, garages, buildings): ______ Describe type and use in box below.

This project will install new water and sewer service to 10 existing residential structures, including the senior center.
**Existing Easements:**  Is there an easement on the property?  
- [ ] Yes (describe in box below)  
- [ ] No  
- [ ] Don't know

Are there any existing structures located in easement?  
- [ ] Yes (describe in box below)  
- [x] No  
- [ ] Don't know

Are there any existing structures located on/over the property line?  
- [ ] Yes (describe in box below)  
- [x] No  
- [ ] Don't know

New water and sewer service barrels will be installed in utility easements.

**Is the property connected to utilities (e.g., gas, electric, water, sewer)?**  
- [ ] Yes (describe in box below)  
- [x] No  
- [ ] Don't know

This project will install a new service barrel to 10 residential buildings, from the existing water and sewer main.

**Is there adequate drainage for the property?**  
- [x] Yes  
- [ ] No  
- [ ] Don’t know

**Is there adequate off-street parking space?**  
- [x] Yes  
- [ ] No  
- [ ] Don’t know

**Is there clear access for fire/emergency/police vehicles?**  
- [x] Yes  
- [ ] No  
- [ ] Don’t know

---

**PART 3 - DESCRIPTION OF PROPOSED DEVELOPMENTS & USES**

Types of Activities (check each box that applies; more than one may be checked):

- [ ] Construct Single Residential Dwelling  
- [ ] Construct Duplex (Two Units)  
- [ ] Construct Multi-Unit Dwelling  
- [ ] Relocate Existing Building or Structure  
- [ ] Relocate Utilities  
- [ ] Construct Garage  
- [ ] Construct Storage Structures  
- [ ] Construct Addition to Building  
- [ ] Divide Home/Add New Dwelling Unit  
- [ ] Gravel Fill, Construct Driveway or Parking Area  
- [x] Other Land Excavation Activities

- [ ] Other: Excavate and backfill for installation of water and sewer service connection

If constructing building/structure: Square Footage: _______ Height: _______ Number stories: _______

If relocating building/structure, indicate current location: __________________________

**Project Description** (Describe the scope and purpose of the project in the box below)

Please see the attached project description.

[ ] Check this box if additional description/information attached to application.
Please provide a hand-drawn sketch of your proposed site plan to the best of your ability below. If you have hired a land surveyor, contractor, or engineer and they have prepared a drawing for you, please attach that drawing to the application.

Please see the attached Figures 1 - 11.

PART 4 - REQUIRED ATTACHMENTS TO THE APPLICATION FORM (as appropriate for your application)

1. **Site Plan:** A rough site plan sketch (hand-drawn) to the best of your knowledge (in the box above) is sufficient for most applications. Please see the instructions for an example of how to draw a site plan sketch. NSB staff will work with you to confirm the site plan information. NSB may require an as-built survey (a survey prepared by a licensed land surveyor) if the applicant is unable to determine the distances and locations of structures from the hand-drawn sketch and information located on file at the NSB office. It will be very helpful for you to include as much information as possible in your sketch including the following information (where known): (a) lot width, depth, and shape; (b) existing easements and utilities; (c) locations and dimensions of existing and proposed buildings and structures (or proposed additions); (d) existing and proposed parking; (e) distances from each existing and proposed structure to the property line and to other structures on the property; (f) setbacks from property lines, and (g) the locations of sheds and connexes that are used for subsistence equipment.

2. **Construction Plan:** A rough construction plan sketch (hand-drawn) to the best of your knowledge is sufficient for most applications. Please attach it to your application and refer to the instructions for an example. Please show the following information on your sketch: (a) the dimensions of each floor/level, and (b) dimensions of the side, front and back views of any new building/structure or addition to an existing building/structure. If you have a construction plan drawn to scale this is preferred and can be attached to the application.

3. **Proof of Ownership:** Evidence of property ownership (e.g., copy of deed, title, tax bill or other legal document) that indicates all property owners. Please call the NSB Tax Assessing Department at 907-852-0355 to obtain a printout of your Tax ID Parcel No. for property ownership evidence if needed.

4. **Placement of Gravel in Wetland:** If you will be placing gravel in a wetland on your property, you must also request approval to conduct work under the Army Corps of Engineers, Residential, Non-Commercial, Community Construction General Permit. Please contact NSB for assistance.

5. **Authorizations:** A Form 1300 Property/Land Owner Consent Form must be attached if you are not the sole owner of this property. A Form 1400 Authorization for Agents must be attached if the person submitting the application is not the same as the property owner, along with any required state, federal, tribal, or city permits.

6. **Fees:** A check made payable to the North Slope Borough for the application fee.
Mail Application To:

NORTH SLOPE BOROUGH, DEPARTMENT OF PLANNING AND COMMUNITY SERVICES, LAND MANAGEMENT ADMINISTRATOR
PO BOX 69, BARROW, ALASKA 99723
PHONE: (907) 852-0320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE, ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMANENT NSB RECORDS FOR THIS PROJECT. I HEREBY AGREE TO DEFEND, INDEMNIFY AND HOLD THE NORTH SLOPE BOROUGH HARMLESS FROM ANY AND ALL CLAIMS, DAMAGES, SUITS, LOSSES, LIABILITIES AND EXPENSES RELATED TO THE INJURY TO OR DEATH OF PERSONS AND DAMAGE TO OR LOSS OF PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE ENTRY ON AND USE OF PROPERTY WITHIN THE NORTH SLOPE BOROUGH BOUNDARIES BY ME, THE COMPANY I REPRESENT, AND ANY AND ALL OF MY CONTRACTORS, SUBCONTRACTORS AND THEIR EMPLOYEES INVOLVED.

Emily McDonald  12/7/2020
Authorized Signature  Date

Emily McDonald  Environmental Specialist
Name  Title

FEE PAID  □ Minor Alterations, Placement of Fill, Single Family Dwelling  $10
□ Duplex, Relocation of Buildings, Other Residential Uses  $20

Total Amount Paid  □ Fee Waiver Requested

DECISION BY NSB LAND MANAGEMENT ADMINISTRATOR

□ ADMINISTRATIVELY APPROVED
The application meets all applicable policies required by Title 19 for administrative permits in the Village District.

□ REFERRAL TO PLANNING COMMISSION
The application requires a conditional development or use permit for the Village District or has been elevated by the Land Management Administrator to the Planning Commission (see accompanying letter).

□ PERMIT DENIED
The proposal cannot be approved in its current form (see accompanying letter).

NSB Land Management Administrator  Date

If you, including the developer wish to appeal this decision you must submit written notice to the secretary of the appropriate Commission (P.O. Box 69, Barrow, Alaska, 99723) and the developer within 30 days of the receipt of this decision, stating the reasons you believe the decision is incorrect. NSBMC § 19.30.130.

DECISION BY NSB PLANNING COMMISSION

□ APPROVED  □ PARTIALLY APPROVED
□ MODIFICATION APPROVED  □ DENIED

Planning Commission Chairman  Date

If you wish to appeal a Planning Commission decision to the Assembly, it may be made in the same manner as set forth above for appeals to the Commission. See NSBMC §19.30.140. The Assembly's decision is the Borough's final decision and may be appealed to the Superior Court in accordance with Alaska law and NSBMC §2.28.260.
December 7, 2020

Mr. Gordon Brower
Director, Department of Planning & Community Services
North Slope Borough
P.O. Box 69
Utqiagvik, AK 99723

Re: Anaktuvuk Pass Village District Permit Application
Residential Water and Sewer Service Connections

Dear Mr. Brower:

UMIAQ Environmental, LLC (UMIAQ Environmental), on behalf of the North Slope Borough’s Capital Improvement Program Management (NSB CIPM), submits this Village District permit application for installation of new water and sewer service to 10 existing residential buildings in Anaktuvuk Pass, including the senior center. The project is located in section 17, township 15S, range 2E, Umiat meridian (see Figure 1).

Project Scope
This project will install new water and sewer service barrels at 10 existing residential locations, including the senior center (see Figures 2-11). Many of these addresses were included in the Anaktuvuk Pass Comprehensive Plan 2016 – 2036 as proposed water and sewer service connections. One goal of the Comprehensive Plan is to support the development and maintenance of essential public facilities, by providing water and sewer connections to homes that have not yet been connected. Below are the street addresses, lot and block numbers, and associated survey or plat of each proposed connection:

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Installation will consist of trenching and excavation in a utility easement, placing a new service barrel, water, and sewer lines at each address, and backfilling the trench. Backfill material will be a mixture of excavated material and gravels as needed to achieve thermal protection of the utility. Authorization to excavate and fill wetlands has been requested from the U.S. Army Corps of Engineers, in accordance with the Clean Water Act. A copy of the authorization will be made available to the NSB Department of Planning and Community Services upon receipt.

Schedule
Construction is scheduled to occur in summer 2021.

This project is a NSB CIPM project and a fee waiver is respectfully requested. Attached please find the Form 700 - Anaktuvuk Pass Village District permit application, Form 1200 - fee waiver request, and project figures. Thank you.

Sincerely,

Emily McDonald
Environmental Specialist II

Attachments: Form 700, Form 1200, Figures 1-11

cc: Frieda Nageak, NSB CIPM
    Travis Holmes, UMIAQ Design
SITE MAP
APPLICANT/AGENT:
NORTH SLOPE BOROUGH

AGENT:
UMIAQ ENVIRONMENTAL, LLC
6700 ARCTIC SPUR ROAD
ANCHORAGE, ALASKA 99516

DATE: 11/20/2020

NORTH SLOPE BOROUGH
ANAKTUVUK PASS
WATER & SEWER CONNECTIONS

PLOT 80-17
B.R.D

LOT 12
LOT 5
LOT 11
LOT 13

AREA = 793.6 SQ. FT.
VOLUME = 176.4 CU. YD.

LEGEND
PROPERTY LINE
ROAD SHOULDER
ROAD TOE
WATER/SEWER MAIN
NEW WATER/SEWER SERVICE
NEW SERVICE BARREL
DISTURBED TUNDRA

PURPOSE:
ANAKTUVUK PASS
WATER & SEWER CONNECTIONS
USAGE PERMIT

ADJACENT PROPERTY OWNERS:
DRAFT DEVELOPMENT PERMIT - REQUEST FOR COMMENTS

COMMENTS DUE BY: JANUARY 28, 2021

This is a Draft Development Permit only for the purposes of review and gathering comments during the comment period prescribed by NSBMC Title 19. It contains conditions proposed for inclusion in a final permit, if a decision is made to issue a final permit. This draft permit should not be taken to mean that the proposed project is, or will, be approved. Only upon issuance of a final permit will the proposed project be approved to commence.

January 8, 2021

Kaktovik Inupiat Corporation (KIC)
C/O Matthew Rexford, President
P.O. Box 73
Kaktovik, Alaska 99747
Email: matthew.rexford@gmail.com

RE: NSB 21-173, Draft Development Permit, Marsh Creek 3D, Various Townships, Ranges and Sections, Umiat Meridian, Conservation District.

Dear Mr. Rexford:

We are in the process of reviewing your request to conduct a seismic survey within the Coastal Plain (1002 Area) of the Alaska National Wildlife Refuge (ANWR) during the winter season of 2020/2021 located within the Conservation District.

Introduction

KIC intends to conduct operations through a third-party acquisition company during open tundra travel winter season within this boundary. The estimated start date of December 2020 is to conduct the forward-looking infrared (FLIR) aerial surveys for maternal dens in December, followed by a second FLIR survey in January, followed by ice checking as soon as tundra conditions allow
(typically late December/early January) and continuing with acquisition until the close of tundra or the sea ice deteriorates. Land ownership within this boundary area is the Alaska Native Corporation (ANC) surface land owned by KIC, ANC subsurface land owned by Arctic Slope Regional Corporation (ASRC), and federal lands owned by the Department of the Interior (DOI).

Scope

KIC will acquire seismic data from within ANWR with the opening of the 1002 Area for oil exploration. KIC would like to be the entity that initiates the exploration phase of the 1002 Area as this area represents the interests of the people of the local communities. Operational activities that will be conducted as part of the 3D seismic survey within the program area includes an operator that will support one crew for one winter season to complete the acquisition. The planned operations will cover the winter season of 2020/2021, beginning with the FLIR survey for dens in early December 2020, a second survey in January 2021; mobilization approximately December 31, 2020 or tundra opening; and ending on approximately May 31, 2021 or tundra closure. Additionally, during the summer months of 2021, the operator will return to conduct cleanup activities and a thorough inspection of the area after all snow is gone, typically in the July to early-August 2021 timeframe. This phase of the project will require one helicopter for approximately 15 days, including possible weather days. The area of the cleanup will be determined by the completed program area during the winter season. The survey permit area encompasses approximately 847.8 square miles. The project area will include parts, or all the following townships:

All of the Townships

U006N035E  U006N036E  U006N037E  U007N035E
U007N036E  U007N037E  U008N033E  U008N034E
U008N035E  U008N036E

Part of the Townships

U005N034E  U005N035E  U005N036E  U005N037E
U005N038E  U006N034E  U006N038E  U007N031E
U007N032E  U007N033E  U007N034E  U007N038E
U008N031E  U008N032E  U008N037E  U008N038E
U009N032E  U009N033E  U009N034E  U009N035E
U009N036E

The program areas are defined by the enclosed boundary map in Appendix A.

Environmental Management

KIC and its operator are dedicated to minimizing the effect of operations on the environment. We are unified in a commitment to environmental excellence and continuous improvement. We will constantly assess our impact on the environment and will apply what past projects have learned over the past several years.
KIC and its operator will manage our equipment and follow procedures to minimize environmental impact caused by seismic operations. KIC’s operator, SAExploration has vast experience across the North Slope and has successfully implemented many environmental improvements, of which a few are listed below:

- Reduced the number of equipment on the tundra through new technology, thereby reducing the total environmental impact of the crew.
- Minimized the compaction of the tundra and risk of damage through the use of articulating, rubber tracked, low ground pressure vehicles.
- Reduced vehicle size.
- Modified seismic equipment to minimize the risk of hydrocarbon spills to the tundra:
  - Containment systems
  - High resolution rear mounted vehicle monitoring cameras, aids in spill detection.
  - Daily and weekly maintenance of equipment.
  - Daily equipment inspections.
  - Hourly equipment walk-abouts.
  - The use of biodegradable, environmentally sensitive products is number one priority when operating in delicate regions such as the NPRA and ANWR. This includes lubricants, hydraulic fluids, greases and glycol that have readily biodegradable based oils that are virtually non-toxic, still delivering maximum protection to our equipment aiding in preventing breakdowns.

Cultural Interface

KIC will coordinate its seismic activities with the local communities and villages to mitigate and to prevent potential conflicts when operating in close proximity of subsistence users. Prior to the commencement of the 2020-2021 winter season, KIC and its operator will hold a meeting with the village of Kaktovik to discuss the planned activities. These discussions will include text and visual documentation of the crew’s activities, as well as the project boundaries. It is anticipated that as a result of these meetings, various protocols and procedures can be developed and implemented which will allow both subsistence and exploration activities to co-exist with respect to this project. Any subsistence hunting and fishing that will be in the area of operations can be documented at this time with the help of community members. All meetings will be documented and kept on file as a resource during and after activities. We are dedicated to enhance, sustain and develop locally based economic and employment opportunities primarily for the community of Kaktovik and other North Slope businesses and residents as needed.

Oversight Community Liaison

KIC will require a community liaison for subsistence and the native community of Kaktovik will be developed to address subsistence issues and will report back to the communities near the project area and the agencies overseeing the project. This community liaison will be the local point of contact and have the responsibility for the following:

- Meet with the Kaktovik Community prior to the season start to discuss the concerns.
Document past subsistence activities in the area.
- Conduct scouting with the operator and a local subsistence representative from the community.
- Help to identify local subsistence observers to be employed to work on the seismic crew.
- Address any key issues with communities.

"An issue is a significant opportunity, problem, factor or trend or a challenge to our mission, direction, way of doing business, or culture".

KIC's Operator's Hiring Processes

- The operator is required by KIC to attract and hire locally to employ the best in the industry to operate the crew.
- A comprehensive pre-employment screening is required for new hires.
- Prospective employees are administered a drug and alcohol screening test.
- Prospective employees must complete a Physical Exam and Functional Capacity Exam.
- Prospective employees will be required to complete an eight-hour Health, Safety and Environmental orientation and task specific training as well as a competency assessment while on the crew.

The Operator's Training Processes will:

- Ensure the operations are managed by highly qualified arctic-experienced personnel.
- Provide unique employment opportunities for its employees.
- Holds an HSE Seminar for the full crew prior to project start.
- Provide comprehensive online training and testing.
- Hold daily orientation and safety briefings (for each shift) accounting for: hazards which could be encountered, other conflicting operations, daily conditions, and review of the day before and the day ahead.
- Tailgate meetings are held to review procedures in areas of known hazard or where operational requirements have changed from those expected.
- New hire and refresher training for employees, including:
  - Remote medicine training
  - Arctic survival training
  - First aid/CPR
  - Hazard recognition, rating and mitigation seminars
  - NSTC refreshers
  - Hazwoper training
  - Hazcom awareness training
  - Behavior based safety awareness training
  - Wildlife interaction training
  - Permit stipulation review
Mobilization and Access

KIC’s operator will have equipment staged at existing facilities in Deadhorse. Camp and equipment will be transported via a preferred access route from Deadhorse to Kaktovik (red line in Appendix C) or along a secondary sea ice route (green line in Appendix C). The secondary selection of the sea ice route is dependent upon the thickness of the sea ice. The crew will mobilize to the program area. Mobilization will begin on or around December 31, but after the December FLIR, at which time KIC estimates there will be sufficient snow cover for mobilization and all permits for tundra travel from the State of Alaska have been received.

All mobile equipment will have a navigation system installed for logistics and hazard identification. All transit outside of the 1002 Area will be covered under the existing 2016-2021 Beaufort Sea Incidental Take Regulations (ITRs). The length of each trail is 219.6 km (136.5 mi) for the tundra access route (red line) and 106.8 km (66.4 mi) for the sea ice access route (green line). Using a 100-m (328-ft) buffer on each side, the area of the tundra access route is 43.9 km² (17.0 mi²) and 21.4 km² (8.2 mi²) for the sea ice route as shown on the map in Appendix C.

Tracked and wheeled tundra vehicles along with the camp will be used to transport the sled camp along the tundra. The camp will remain close to the survey activities and will move every five to seven days, depending on the survey progress and snow cover. When the survey is completed, the camp and equipment will travel along the tundra or sea ice to back to Deadhorse or to a Kaktovik pad location for a summer barge de-mob. Snow-packed trails will be made throughout the Program Area, these trails will be used to reduce environmental impact and crew travel /re-supply. The location of these trails will depend on snow coverage and terrain conditions. The Operator will attempt to coordinate with companies to use any existing or planned trails.

KIC’s Contractors Operational Program

Survey and Ice check

Advanced crews will perform a survey for hazards, including ice integrity of rivers, lakes, and sea ice. One of the highest risk potentials for arctic operations is properly verifying the integrity of the ice. This will be done by “ice checking units” consisting of a Tucker vehicle capable of supporting 24-hour operations, manned by two personnel. Snow machines may also be used for survey and ice check operations. The survey units will be equipped with ground penetrating radar systems (GPR), which are extremely accurate on freshwater. In addition, each ice check unit is equipped with battery-operated ice auger which is used to verify the calibration of the GPR, measure ice depths on sea ice, or verify if depths where the GPR units cannot reach. Freeboard testing (ice stabilization) is also conducted when working on floating ice to ensure the ice has the strength to safely hold the equipment. Tucker vehicles that are conducting the advance ice check operations will also have a handheld or vehicle-mounted FLIR device to scan at tributary crossings for potential dens in defined polar bear denning habitat. Preliminary trails or snail trails will be established for every foot that the vibrators must travel on the sea ice, lakes or rivers, which will minimize the potential for breaking through the ice. Surveyors will also map each hazard that is discovered and placed into our navigation system that allows each vehicle to display the Program Area, hazards, and avoidance areas.
Snow surveys will be conducted to substantiate depths and will be recorded for equipment movement efforts. Thermistors will be deployed in the fall in representative locations near Kaktovik to gauge soil temperature and snow depth to comply with ROP 11. If snow or ice conditions are not adequate, they will continue scouting an area for suitable snow cover. Areas not to be passable by the camp or vehicles will be lathed off for avoidance. Snow survey crews will move out ahead of the main crew by approximately 7-20 days, accessing the Program Area. The crew includes camp trailers, fuelers, Steigers, Tuckers, and support trailers and consists of three to four crews of two personnel per crew. These crews work independently of each other to check ice conditions, identify and mark hazards, and scout safe routes for seismic operations. Depending on the number of locations needed to be verified, crews can complete and travel up to 10 miles per day per day. At the end of each day, crews return to camp. Once operations are too far from camp, the camp is moved to stay close to operations. When the main camp arrives with the recording crew, the advance camp will merge with main camp.

Willow Protocol

KIC requires the operator to operate in a manner that all its operations or activities do not damage or affect the social, cultural or community in the areas where we work. If it is determined that willows are in the area, from aerial or satellite imagery, then the crews on the ground will find access in and around dense willow areas or steep slopes using snow machines, on foot or with tucker vehicles. The operator has developed a willow protocol approved by the agencies that ensures willow areas are mapped and defined by size and avoided where possible. It is the responsibility of the survey manager to ensure that willow areas are recorded on the hazard maps and appropriate markings are in place. During the ground truthing of willows, Subsistence Representatives will be responsible for assisting in identifying sensitive willow areas and defining size. Survey will mark trials to be followed by the crews if it is determined that the area is accessible. A copy of the willow protocol is attached for reference in Appendix C.

Recording Operations

The method of acquisition is Source Driven Shooting (SDS) combined with a Compressive Sensing design. Seismic operations will be conducted utilizing rubber tracked/buggy vibrators and wireless, autonomous recording channels (nodes). These nodes will be laid out on foot by crews traveling in rubber tracked approved vehicles. Vibrators will typically operate within a distinct area proximal to each other. Vibrator source points will be located along source lines. Geophone receiver lines will run perpendicular to source lines, and both source and receiver lines are spaced approximately 1320 and 660 feet apart respectively. Geophones will be located along receiver lines every 220 feet. Up to 5 receiver lines could be placed on the ground at one time. Wireless nodes and geophones will be laid out by crews on foot and through the use of rubber tracked tundra travel approved vehicles. Each station will be placed individually and will be surveyed by GPS upon deployment. Upon retrieval, all GPS data is then entered into a database.

Using the SDS methodology, multiple vibrators can collect data at the same time. This methodology means that only a single vibrator is required to travel down any source line, thereby reducing risk compaction or damage to the tundra. Source lines will be located 1320 feet apart but the source locations on the line will be every 27.5 feet. The AHV IV Vibrators will only operate
on snow covered tundra or grounded sea ice. The Lighter Univibes are utilized to further reduce potential disturbance in narrow riverbeds and on ungrounded lakes, reducing the risk from working in areas that do not have grounded landfast ice, and reduce noise levels. Recording Operations continue for 24 hours per workday and are based on two 12-hour shifts. Communications with the crews while out in the field will be via VHF radio systems and wireless data transfer radios.

Camp Facilities

Each camp can accommodate up to 180 persons. Equipment included at camp stations will include long haul fuel tractors, remote fuelers, water maker, incinerator, resupply and survival sleigh, tractors, loaders and tuckers. Sanitary conditions in the kitchen and dinner and washrooms will be maintained in full compliance with governmental regulations. Gray water will be filtered to meet the discharge requirements of the Alaska Department of Environmental Conservation (ADEC) Alaska Pollutant Discharge Elimination System (APDES) permit prior to discharge; a current APDES discharge permit is in place for this purpose.

The camp may stay at current location up to seven days. Typically, the camp will move 1-2 miles every 5-7 days, which could be 4-6 camp moves per month. Moves are determined by the efficiency of the crew or the conditions of the tundra. Camp locations are pre-scouted by the sub rep and project manager prior to occupying an area. The camp will generally remain in the center of the spread moving as the spread moves. A maximum footprint for a large camp is approximately 300 ft. x 400 ft.

Mobilization of equipment and vehicles will occur coming off of a pad in Deadhorse and travel along our mobilization route as described in Appendix C. A pre-determined route will be used to move equipment to the project location. Camp travels in a single file configuration pulled by a rubber tracked Steiger or CAT. Each string of camp has five trailers and typically camp consist of eight strings but can consist up to 10 strings. Camp trails during project will be scouted out in advance by project manager or survey personnel to avoid hazards and to measure and ascertain proper snow depth.

The HSE advisor and the local hire subsistence representative will revisit every camp site, after camp has moved on, to review the area and sign-off that no damage occurred.

Water Withdrawal

Potable water will be produced at camp with a skid-mounted snow-melter. Water is produced by melting snow or if it is a low snow year this can be supplemented by withdrawing water from lakes, it is then processed through our ADEC approved water system. The operator will identify lakes and will be permitted if used. If lakes are used, the operator has fish and game approved water withdrawal pumps that will be utilized during this process. If there is not an adequate source of snow, water may need to be transported to each camp from an approved source, either in Kaktovik or Deadhorse.
Temporary Snow Airstrips

The project will need airstrips to transport crews on crew change days. Having temporary airstrips will save several hours of tundra travel. The operator will create a flat area on predetermined grounded, frozen lakes, or tundra to serve as landing strip to receive the aircraft for crew changes. When creating a landing strip on the tundra, there will be no tundra disturbance or impact as in compliance with ROP 11 (b)(c), but an effort will be made to find a level area and then groomed to help the aviation operator have a safe landing on level ground with skis.

An advance scouting trip will be identifying grounded lakes and or tundra locations that can be used for this purpose. The landing strip will only be on areas that have adequate space for safely landing aircraft. On lakes, a rubber tracked Steiger with a blade will clear the snow down to ice approximately 75-100 feet wide and 2300 to 3500 feet long for the aircraft to land. Black bags filled with snow will be placed along the side of the berm to delineate the edge of landing strip along with lighting.

After crew has mobilized and initial scouting has been done lakes which may support this operation will be documented for possible airstrip locations. The GPS location of the landing strip will be documented.

The strips will be used for landing and will not be maintained unless the same location is needed again. After use of the strip is no longer necessary, the crews will inspect the location and record that area that was used by GPS location to be included in the final reporting. An example of airstrip is listed in Appendix E.

River Crossings

There may be areas where floating ice is encountered that may not safely support the weight of some equipment. In these cases, the Operator will permit this activity with the State of Alaska Department of Fish and Game (ADF&G) to apply water to increase the thickness of the ice to establish temporary river crossings. There also may be areas on rivers, streams, and lakes that need to be protected with snow for traversing from tundra to ice for crossing. As identified in Section 10, KIC has committed to several mitigation measures specifically for drainages through reduction of the number of source lines crossing major drainages by using a slope analysis tool. The slopes along these lines can be measured during the preplanning and advance crew phases of the operations. Equipment will only cross these areas at the lowest possible relief points, as vibrators are not able to shake on slopes greater than 10°. KIC is requiring its Operator to place a 25-m (82.5-ft) buffer on each side of slopes greater than 10°. For areas that are defined denning critical habitat (16□□slope and height of 1.6 m [5.2 ft.]), a 100 m (328 ft.) buffer will be used. The area will be mapped using digital elevation modeling (DEM) data for slopes. Ramp areas or transits across these areas will be cleared by the advance ice check crews with handheld or truck-mounted FLIR prior to movement. An example of pre mapping slope >10□□can be seen below (Figure 1) as well as a previous survey post-plot diagram (Figure 2) demonstrating this best practice.

The Operator will make snow ramps in these areas and establish that the ice is grounded or the ice is of sufficient ice depth to cross. This will eliminate any impact to river banks and/or tundra. Scouting by the Operator will determine locations of river crossings based on the best available
information from advanced scouting, environmental and terrain conditions, local knowledge, surveys, and operational safety.

Fuel Supply and Storage

Long haul sleigh tanks will be used for fueling. All fuel will be ultra-low sulfur for vehicles and equipment. Fuel will be delivered using over land Rolligon or rubber tracked carriers. In the event the supply is disrupted by weather or other unforeseen events fuel may have to be delivered by aircraft, the operator will use temporary airstrips for these occasions. An advance scouting trip will assist in identifying existing airstrips if any that can be used for this purpose. Off-loading fuel from aircraft will be done in accordance with operators fueling procedure. Fueling storages and fueling activity will be located at least 100 feet from any water body. All equipment fuel locations will be tracked and recorded. The fueling procedures include spill management practices such as drip plan placement under any vehicle parked and placement of vinyl liners with foam dikes under all valves or connections to diesel fuel tanks. All fuel tanks are double-wall tank construction. Fuel dye is added to all fuel as part of spill detection.

All spills, no matter what the size are tracked and cleaned up by operator and used for spill prevention operations. The operator also holds a Spill Prevention Countermeasure Control (SPCC) plan for our fueling and fuel storage operations associated with seismic operations. This SPCC plan is site specific and will be amended for each new project. All reportable spills will be communicated through the proper agencies and reporting requirements.

Waste Management

Food waste generated by the field operations will be stored in vehicles until the end of the shift. The garbage will then be consolidated at camp in wildlife resistance containers for further disposal. All food waste generated in camp will also be collected and stored in the same consolidation area. A skid-mounted incinerator will be used for daily garbage waste. This equipment falls within the regulatory requirements of 40 CFR 60. This cyclonator will use on an average 1 to 2 gallons of fuel per hour while in use. The use of electricity is for the motor to the unit that maintains the air to fuel mixture. The operator will collect data to provide the required records on a calendar basis of description and weight of camp wastes burned.

Any wastes generated by seismic operations will be properly stored and disposed of in accordance with applicable permit stipulations and operator controls. Food waste is continually incinerated to avoid attracting wildlife. Gray water generated from the mobile camp will be discharged according general permit AKG332000 and 18 AAC 83.210 and NPDES discharge limits. Toilets are “PACTO” type to eliminate “black water”. Ash from the incinerator will be back-hauled to the North Slope Borough disposal facility in Deadhorse. The sleigh camp will move approximately every two to five days depending on weather conditions. An inspection by the HSE Advisor will be done after camp has left to ensure that the area is clean of all debris.

Wildlife
Wildlife that may be in the area during the winter season are owls, ravens, arctic fox, wolverine, musk ox, and, possibly, over-wintering caribou, ringed seals, and polar bears. Grizzly bears also inhabit the general area in the project but are likely to be inactive during the winter season. Polar bears may be seen along the coastal areas and out on the sea ice. Although encounters with polar bears or grizzly bears are unlikely, the operator and its contractors will exercise caution during the project. Should a grizzly bear or polar bear be encountered, KIC requires the operator follow the procedures as outlined in our comprehensive Wildlife Interaction Plan that is approved by the Alaska Department of Fish and Game (ADF&G) and United States Fish and Wildlife Service (USFWS). Food and food waste will be kept inside vehicles while out in field. All polar bear sightings will be reported to the USFWS as per the authorization from USFWS. Any type of bear dens suspected or confirmed will be reported to the USFWS or ADF&G agency personnel.

KIC through its contractors and operator will work with agencies to avoid and minimize interactions with wildlife; this includes abiding by relevant regulations and obtaining required authorizations. Our Wildlife Interaction Plan is listed in Appendix F.

Historic and Cultural Resources

KIC has commissioned a Cultural Resources Study to identify the historic and cultural resources in the program area. The Cultural Resources Study will inform KIC’s operator’s activities. Cultural resources known and new that fall within the mapped area will have avoidance buffers placed around them. Any known existing studies will be reviewed. The operator will not be accessing any native allotments without permission of the owners. A licensed archaeologist will work with the NSB, State of Alaska and the Refuge manager to review existing records. The studies will include the use of the Alaska Heritage Resource Survey (AHRS) database, maintained by the Alaska Department of Natural Resources (ADNR) and the Traditional Land Use Inventory (TLUI) database, maintained by the NSB.

Previously recorded and any new AHRS sites will not be affected by any of the proposed seismic activities. All areas will have 500-foot buffers placed around them as a non-activity zone. These buffers will be placed in our navigation system and placed on maps to ensure no vehicles enter avoidance areas.

Summer Cleanup Activities

After all snow is gone, in the late-July to early-August 2021 timeframe, a single helicopter will be contracted to perform flyovers of the Program Area looking for any debris that may have been left behind in July or August. The cleanup crew will also land inspect all camp locations and any area that had an unplanned release or tundra disturbances. Source and receiver lines will be travelled and inspected. The aircraft will land and pick up any seen debris during the flight travels on the program area. Typically, each day of flyover inspections, there may be roughly 100 miles of flight time and approximately 30-40 landings. This phase of the project will require one helicopter for approximately 15 days, including possible weather days. The area of
the cleanup will be determined by the completed portion from that winters acquisition and will not go beyond the Program Area.

Appendix B: Operator’s Equipment List Per Crew

<table>
<thead>
<tr>
<th>Number</th>
<th>Equipment Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>AHV-4 vibe trucks</td>
<td>Tracked Vibrator</td>
</tr>
<tr>
<td>9</td>
<td>Case or Steiger tractor</td>
<td>Fuel, camp and ramp support</td>
</tr>
<tr>
<td>2</td>
<td>Dozer / loader</td>
<td>Camp support</td>
</tr>
<tr>
<td>8</td>
<td>Fuel tanks</td>
<td>Tracked and ski tanks</td>
</tr>
<tr>
<td>3</td>
<td>GPS base</td>
<td>Survey station support</td>
</tr>
<tr>
<td>10</td>
<td>Support tracked trailers</td>
<td>Support to camp</td>
</tr>
<tr>
<td>8</td>
<td>Taco trailers</td>
<td>Ski trailers to haul recording equipment</td>
</tr>
<tr>
<td>10</td>
<td>Tucker</td>
<td>Node Tuckers</td>
</tr>
<tr>
<td>5</td>
<td>Tucker</td>
<td>Ice Cat</td>
</tr>
<tr>
<td>4</td>
<td>Tucker</td>
<td>Support tuckers</td>
</tr>
<tr>
<td>1</td>
<td>Tucker</td>
<td>Client Tucker</td>
</tr>
<tr>
<td>3</td>
<td>Tucker</td>
<td>Personal Carrier</td>
</tr>
<tr>
<td>2</td>
<td>Piston Bully</td>
<td>Groomer</td>
</tr>
<tr>
<td>1</td>
<td>Skid Steer</td>
<td>Camp support vehicle for lifting</td>
</tr>
<tr>
<td>4</td>
<td>Snow Machine</td>
<td>Support around willows</td>
</tr>
<tr>
<td>2</td>
<td>Univibe</td>
<td>Vibrator for water bodies</td>
</tr>
<tr>
<td>30000</td>
<td>Nodes</td>
<td>Recording equipment (nodal receivers)</td>
</tr>
<tr>
<td>50</td>
<td>Camp trailers</td>
<td>160-180 man camp trailers</td>
</tr>
</tbody>
</table>

See attached project description and figures for additional details.

Purpose

The purpose of this project is to acquire seismic data in order to further oil and gas development.

This project is scheduled to commence upon approval of final permit with a completion date of May 22, 2021.

We have preliminarily determined that your proposed development is consistent with Title 19 provided that you comply with the following conditions:
PROJECT SPECIFIC STIPULATIONS

1. KIC shall get a Non-Objection letter from all land owners and provide a copy to the North Slope Borough Land Management Division.

2. KIC shall have two trained fuel handlers on site during all refueling operations.

3. This permit is valid only for the seismic activities; the temporary airstrips must be permitted separately.

WILDLIFE STIPULATION

The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Land Management Division before the start of any field activities.

SPILL RESPONSE TACTICS

1. Place drip pans under vehicles parked over 5 minutes.

2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks.

3. Impermeable lining and diking is required for fuel storage facilities with a capacity greater than 660 gallons.

Pink dye is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by KIC.

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever
occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall bebackhauled to an authorized solid waste disposal facility NSBMC 19.70.050 L. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 L. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. KIC shall consult with ICAS Realty Director, at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.
12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

- Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.

- A list of vehicles used for any off-road travel, which may have taken place.

- Statement of clean-up activities.

- Methods of disposal of garbage, and other camp debris.

- A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.

- Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr, Field Inspector at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.

- Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)
3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.aios@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, rodney.ahtuanguvak@north-slope.org and/or herbert.ipalook@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(f)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Kaktovik at (907) 640-6313 and Kaktovik Inupiat Corporation at (907) 640-6120 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

Our review of your application dated January 5, 2020, is being conducted in accordance with NSBMC, Title 19. The purpose of our review is to ensure that your project achieves the goals and objectives, and implements the policies, of the Borough Comprehensive Plan; to ensure that the future growth and development of the Borough is in accord with the values of its residents; to identify and secure, for present and future residents, the beneficial impacts of development; to identify and avoid, mitigate, or prohibit the negative impacts of development; and to ensure that future development is of the proper type, design and location, and is served by a proper range of public services and facilities.

You are encouraged to contact this office if you wish to discuss the applicability of the above conditions to this approval. By copy of this letter, we are soliciting comments from the below-
listed individuals and their respective agencies regarding the adequacy of the above stipulations to meet the purpose of our review.

Comments on the adequacy of these stipulations should be sent to Lilly Kilapsuk, Land Management Specialist at the address above or by email at: lilly.kilapsuk@north-slope.org or by telephone at (907) 852-0320 ext. 5411.

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Nora Jane Burns, Marianne Rexford, Kaktovik Village Deputy Assistant, NSB
Jeanne Proulx, AKNPL, Fairbanks
Lee McKenney, ADF&G JFO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDA/F&WS, Fairbanks
Jeanne Hanson, USDINMFS, Anchorage
Josephina Delgado-Pilkat, DCOM, Juneau
dcc.wur@ilandpass@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Wynn, US Army COE, ryan.h.wynn@usace.army.mil
Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.McCoy@usace.army.mil
Donna Wixon, USDIBLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AKNRR/DO&G, Anchorage
Katie Parley, State Pipeline Coordinators Office/ JPO, SOA
Matthew Rexford, President, Kaktovik Inupiat Corporation
Nora Jane Burns, Mayor, City of Kaktovik
Edward Rexford Sr., President, Native Village of Kaktovik
Tommy Nagayak, Cultural Resource Specialist, NSB
Darren W. Aiken, TLUI Technician, NSB
Herbert Ipaluk Jr., Rodney Ahiqarakaq Jr., Field Inspectors, Nuiqsut
Allyson Atos, Lead Field Inspector, Utqiagvik
Leroy Oenga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Files

N21-173/GRB/mk/acting LMR Manager/lk
Land Management Regulations (LMR) Permit Application

Permit Number: 21-178

Applicant: Kaktovik Ibuplat Corporation
Address: PO Box 73, Kaktovik, AK 99747
Contact Person: Matthew Rexford
Email: matthew.rexford@gmail.com
Location (TRS): T: _____ R: _____ Sec: See letter
Zoning District: Conservation District

Proposed Start Date: 1/20/2021
Proposed Development: Seismic Exploration
Purpose of Development: To acquire seismic data in order to further oil and gas development

- Fill/Dredge
- Oil & Gas Wells
- Temp. Water Use
- Off Road Travel
- Fuel Storage
- Hazardous Material Storage
- Solid Waste
- Mining
- Air Emissions
- Noise/Vibrations
- Sensitive Habitat
- Transportation
- Marine Tanker Facility
- Causeway Construction
- Airport or Helicopter Pad

Material: N/A
Number of New Surface Holes: N/A
Sources: N/A
Purpose: N/A
Period: Tundra Travel Season
Site Access: Tundra travel and ice roads
Type: Dye/diesel/temporary
Handling: Transported via road system and transferred to remote fueler trailers
Amount: 30,000.00 gallons

- Treatment: N/A
- Habitat: N/A
- Vehicles and generators
- Floodplain: N/A
- Shoreline: N/A

- Seismic Work
- Utility Development
- Recreational Development
- Offshore Drilling
- Residential Development
- CD-ROM Included
- Oil Transportation System
- Snow Removal
- Maps Included

Permit Type: Developmental
Date: 12/28/2021
State ID: 907-640-1517
Phone: N/A
Project Name: Marsh Creek 3D
Field Name & Pad: Kaktovik
Completion Date: 5/22/2021
ATTACH TO THIS APPLICATION THE FOLLOWING:

- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES
- SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NAD 1983 ALASKA ALBERS OR GEOREFERENCED.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPLICABLE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0329 TOLL FREE (IN-STATE): (800) 476-6666 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

Authorized Signature: ____________________________ Date: ____________
Matthew Rexford
Name: ____________________________ Title: ____________________________

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING $12,000
☐ DEVELOPMENT PERMIT $2,000, plus $500/well
☐ ADMINISTRATIVE APPROVALS $1,500
☐ CONDITIONAL DEVELOPMENT PERMITS $3,000
AMOUNT PAID: ____________

DECISION

☐ ADMINISTRATIVELY APPROVED
This is a minor deviation to a previously approved development permit for commercial recreation.

☐ REZONING APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan Conditions, lease stipulations, and provisions of the state and federal law and permit issued thereunder.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory policies, and the developer’s best efforts to implement all relevant best efforts and minimization policies, and as long as conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter.)

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land that is listed as a conditional development for this zoning district or has been elevated by the NSB Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

NSB Land Management Administrator: ____________________________ Date: ____________

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect. NSMBC §19.30.130.
Marsh Creek East Program

PLAN OF OPERATIONS
WINTER SEISMIC SURVEY

Submitted by:
Kaktovik Inupiat Corporation (KIC)

Marsh Creek East Plan of Operations
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Marsh Creek Plan of Operations

Winter Plan of Operations 2020-2021 Project Description

1.0 Introduction

Kaktovik Inupiat Corporation (KIC), is pleased to submit the plan of operations for the Marsh Creek East Program. KIC is requesting permits to conduct a seismic survey within the Coastal Plain (1002 Area) of the Arctic National Wildlife Refuge (ANWR) during the winter season of 2020-2021. KIC intends to conduct operations through a third-party acquisition company during open tundra travel winter season within this boundary. The estimated start date of December 2020 is to conduct the forward-looking infrared (FLIR) aerial surveys for maternal dens in December, followed by a second FLIR survey in January, followed by ice checking as soon as tundra conditions allow (typically late December/early January) and continuing with acquisition until the close of tundra or the sea ice deteriorates. Land ownership within this boundary area is the Alaska Native Corporation (ANC) surface land owned by KIC, ANC subsurface land owned by Arctic Slope Regional Corporation (ASRC), and federal lands owned by the Department of Interior (DOI).

2.0 Scope

KIC is proposing to acquire seismic data from within ANWR with the opening of the 1002 Area for oil exploration. KIC would like to be the entity that initiates the exploration phase of the 1002 Area as this area represents the interests of the people of the local communities. Operational activities that will be conducted as part of the 3D seismic survey within the program area includes an operator that will support one crew for one winter season to complete the acquisition. The planned operations will cover the winter season of 2020-2021, beginning with the FLIR survey for dens in early December 2020, a second survey in January 2021; mobilization approximately December 31, 2020 or tundra opening; and ending on approximately May 31, 2021 or tundra closure. Additionally, during the summer months of 2021, the operator will return to conduct cleanup activities and a thorough inspection of the area after all snow is gone, typically in the July to early-August 2021 timeframe. This phase of the project will require one helicopter for approximately 15 days, including possible weather days. The area of the cleanup will be determined by the completed program area during the winter season.

3.0 Location
The survey permit area encompasses approximately 847.8 sq. miles. The project area will include parts, or all the following townships:

**All of**
U006N035E, U006N036E, U006N037E, U007N035E, U007N036E, U007N037E, U008N033E, U008N034E, U008N035E, U008N036E

**Part of**
U005N034E, U005N035E, U005N036E, U005N037E, U005N038E, U006N034E, U006N038E, U007N031E, U007N032E, U007N033E, U007N034E, U007N038E, U008N031E, U008N032E, U008N037E, U008N038E, U009N032E, U009N033E, U009N034E, U009N035E, U009N036E

The program areas are defined by the enclosed boundary map in Appendix A.

### 4.0 Environmental Management

KIC and its operator are dedicated to minimizing the effect of operations on the environment. We are unified in a commitment to environmental excellence and continuous improvement. We will constantly assess our impact on the environment and will apply what past projects have learned over the past several years.

KIC and its operator will manage our equipment and follow procedures to minimize environmental impact caused by seismic operations. KIC’s operator, SAExploration has vast experience across the North Slope and has successfully implemented many environmental improvements, of which a few are listed below:

- Reduced the number of equipment on the tundra through new technology, thereby reducing the total environmental impact of the crew.
- Minimized the compaction of the tundra and risk of damage through the use of articulating, rubber tracked, low ground pressure vehicles.
- Reduced vehicle size.
- Modified seismic equipment to minimize the risk of hydrocarbon spills to the tundra:
  - Containments systems
  - High resolution rear mounted vehicle monitoring cameras, aids in spill detection.
  - Daily and weekly maintenance of equipment.
  - Daily equipment inspections.
  - Hourly equipment walk-arounds.
  - The use of biodegradable, environmentally sensitive products is number one priority when operating in delicate regions such as the NPRA and ANWR. This includes lubricants, hydraulic fluids, greases and glycol that have readily biodegradable based oils that are virtually non-toxic, still
delivering maximum protection to our equipment aiding in preventing breakdowns.

5.0 Cultural Interface

KIC will coordinate its seismic activities with the local communities and villages to mitigate and to prevent potential conflicts when operating in close proximity of subsistence users. Prior to the commencement of the 2020-2021 winter season, KIC and its operator will hold a meeting with the village of Kaktovik to discuss the planned activities. These discussions will include text and visual documentation of the crew’s activities, as well as the project boundaries. It is anticipated that as a result of these meetings, various protocols and procedures can be developed and implemented which will allow both subsistence and exploration activities to co-exist with respect to this project. Any subsistence hunting and fishing that will be in the area of operations can be documented at this time with the help of community members. All meetings will be documented and kept on file as a resource during and after activities. We are dedicated to enhance, sustain and develop locally based economic and employment opportunities primarily for the community of Kaktovik and other North Slope businesses and residents as needed.

6.0 Oversight Community Liaison

KIC will require a community liaison for subsistence and the native community of Kaktovik will be developed to address subsistence issues and will report back to the communities near the project area and the agencies overseeing the project. This community liaison will be the local point of contact and have the responsibility for the following:

- Meet with the Kaktovik Community prior to the season start to discuss the concerns.
- Document past subsistence activities in the area.
- Conduct scouting with the operator and a local subsistence representative from the community.
- Help to identify local subsistence observers to be employed to work on the seismic crew
- Address any key issues with communities.
  - "An issue is a significant opportunity, problem, factor or trend or a challenge to our mission, direction, way of doing business, or culture".

7.0 KIC’s Operator’s Hiring Processes

- The operator is required by KIC to attract and hire locally to employ the best in the industry to operate the crew.
- A comprehensive pre-employment screening is required for new hires.
- Prospective employees are administered a drug and alcohol screening test.
- Prospective employees must complete a Physical exam and Functional Capacity Exam.
- Prospective employees will be required to complete an eight-hour Health, Safety and Environmental orientation and task specific training as well as a competency assessment while on the crew.

The Operator’s Training Processes will:

- Ensure the operations are managed by highly qualified arctic-experienced personnel.
- Provide unique employment opportunities for its employees.
- Holds an HSE Seminar for the full crew prior to project start.
- Provide comprehensive online training and testing.
- Hold daily orientation and safety briefings (for each shift) accounting for: hazards which could be encountered, other conflicting operations, daily conditions, and review of the day before and the day ahead.
- Tailgate meetings are held to review procedures in areas of known hazard or where operational requirements have changed from those expected.
- New hire and refresher training for employees, including:
  - Remote medicine training
  - Arctic survival training
  - first aid/CPR
  - Hazard recognition, rating and mitigation seminars
  - NSTC refreshers
  - Hazwoper training
  - Hazcom awareness training
  - Behavior based safety awareness training
  - Wildlife interaction training
  - Permit stipulation reviews

8.0 Marsh Creek East Permit Requirements

Provided below is a list of permits, approvals, authorizations and supporting documents required for the operations described in this Plan. Land ownership within this boundary area is the Alaska Native Corporation (ANC) surface land owned by KIC, ANC subsurface land owned by Arctic Slope Regional Corporation (ASRC), federal lands owned by the Department of Interior (DOI), and private holdings all within the NSB.
<table>
<thead>
<tr>
<th>Agency</th>
<th>Authorization</th>
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<tr>
<td>Federal Government</td>
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<tr>
<td>Bureau of Land Management (BLM)</td>
<td>Geophysical Exploration Permit / ESA consultation</td>
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<td>Incidental Harassment Authorization (IHA), Polar Bear Marine Mammal Protection Act consultation</td>
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<td>National Marine Fisheries Service (NMFS)</td>
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<tr>
<td>Planning Department</td>
<td>Land Management Development Permit for seismic: Landing Strips: Mobilization Route</td>
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<tr>
<td>IHLIC Department</td>
<td>Form 600</td>
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<td>TLUI Department</td>
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<td>State of Alaska</td>
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<tr>
<td>Alaska Department of Natural Resources,</td>
<td>Letter of Concurrence</td>
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<tr>
<td>State Historic Preservation Office</td>
<td></td>
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<tr>
<td>Department of Natural Resources,</td>
<td>Temporary Water Use Permit (if necessary)</td>
</tr>
<tr>
<td>Division of Mining Land and Water</td>
<td>Tundra Travel Permit</td>
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<tr>
<td>Alaska Department of Environmental</td>
<td>Kitchen</td>
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<td>Conservation</td>
<td>Potable Water Permits</td>
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<td>Discharge Permits</td>
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<td>State of Alaska Fish and Game</td>
<td>Fish Habitat Permit, Stream and River Crossing and Water Withdrawal Permit (if necessary)</td>
</tr>
<tr>
<td>Other Approvals</td>
<td></td>
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<tr>
<td>Native Allotments</td>
<td>&quot;No go buffers&quot; placed around lands.</td>
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9.0 Mobilization and Access

KIC's operator will have equipment staged at existing facilities in Deadhorse. Camp and equipment will be transported via a preferred access route from Deadhorse to Kaktovik (red line in Appendix C) or along an secondary sea ice route (green line in Appendix C). The secondary selection of the sea ice route is dependent upon the thickness of the sea ice. The crew will mobilize to the program area. Mobilization will begin on or around December 31, but after the December FLIR, at which time KIC estimates there will be sufficient snow cover for mobilization and all permits for tundra travel from the State of

Marsh Creek East Plan of Operations
Alaska have been received. All mobile equipment will have a navigation system installed for logistics and hazard identification. All transit outside of the 1002 Area will be covered under the existing 2016-2021 Beaufort Sea Incidental Take Regulations (ITRs). The length of each trail is 219.6 km (136.5 mi) for the tundra access route (red line) and 106.8 km (66.4 mi) for the sea ice access route (green line). Using a 100-m (328-ft) buffer on each side, the area of the tundra access route is 43.9 km² (17.0 mi²) and 21.4 km² (8.2 mi²) for the sea ice route as shown on the map in Appendix C.

Tracked and wheeled tundra vehicles along with the camp will be used to transport the sled camp along the tundra. The camp will remain close to the survey activities and will move every five to seven days, depending on the survey progress and snow cover. When the survey is completed, the camp and equipment will travel along the tundra or sea ice to back to Deadhorse or to a Kaktovik pad location for a summer barge de-mob. Snow-packed trails will be made throughout the Program Area, these trails will be used to reduce environmental impact and crew travel /re-supply. The location of these trails will depend on snow coverage and terrain conditions. The Operator will attempt to coordinate with companies to use any existing or planned trails.

10.0 KIC’s Contractors Operational Program

10.1 Survey and Ice check

Advanced crews will perform a survey for hazards, including ice integrity of rivers, lakes, and sea ice. One of the highest risk potentials for arctic operations is properly verifying the integrity of the ice. This will be done by "ice checking units" consisting of a Tucker vehicle capable of supporting 24-hour operations, manned by two personnel. Snow machines may also be used for survey and ice check operations. The survey units will be equipped with ground penetrating radar systems (GPR), which are extremely accurate on freshwater. In addition, each ice check unit is equipped with battery-operated ice auger which is used to verify the calibration of the GPR, measure ice depths on sea ice, or verify if depths where the GPR units cannot reach. Freeboard testing (ice stabilization) is also conducted when working on floating ice to ensure the ice has the strength to safely hold the equipment. Tucker vehicles that are conducting the advance ice check operations will also have a handheld or vehicle-mounted FLIR device to scan at tributary crossings for potential dens in defined polar bear denning habitat. Preliminary trails or snail trails will be established for every foot that the vibrators must travel on the sea ice, lakes or rivers, which will minimize the potential for breaking through the ice. Surveyors will also map each hazard that is discovered and placed into our navigation system that allows each vehicle to display the Program Area, hazards, and avoidance areas.

Snow surveys will be conducted to substantiate depths and will be recorded for equipment movement efforts. Thermistors will be deployed in the fall in representative locations near Kaktovik to gauge soil temperature and snow depth to comply with ROP 11. If snow or ice conditions are not adequate, they will continue scouting an area for
suitable snow cover. Areas not to be passable by the camp or vehicles will be lathered off for avoidance.
Snow survey crews will move out ahead of the main crew by approximately 7-20 days, accessing the Program Area. The crew includes camp trailers, fuelers, Steigers, Tuckers, and support trailers and consists of three to four crews of two personnel per crew. These crews work independently of each other to check ice conditions, identify and mark hazards, and scout safe routes for seismic operations. Depending on the number of locations needed to be verified, crews can complete and travel up to 10 miles per day per day. At the end of each day, crews return to camp. Once operations are too far from camp, the camp is moved to stay close to operations. When the main camp arrives with the recording crew, the advance camp will merge with main camp.

10.2 Willow Protocol

KIC requires the operator to operate in a manner that all its operations or activities do not damage or affect the social, cultural or community in the areas where we work. If it is determined that willows are in the area, from aerial or satellite imagery, then the crews on the ground will find access in and around dense willow areas or steep slopes using snowmachines, on foot or with tucker vehicles. The operator has developed a willow protocol approved by the agencies that ensures willow areas are mapped and defined by size and avoided where possible. It is the responsibility of the survey manager to ensure that willow areas are recorded on the hazard maps and appropriate markings are in place. During the ground truthing of willows, Subsistence Representatives will be responsible for assisting in identifying sensitive willow areas and defining size. Survey will mark trials to be follow by the crews if it is determined that the area is accessible. A copy of the willow protocol is attached for reference in Appendix C.

10.3 Recording Operations

The method of acquisition is Source Driven Shooting (SDS), combined with a Compressive Sensing design. Seismic operations will be conducted utilizing rubber tracked/buggy vibrators and wireless, autonomous recording channels (nodes). These nodes will be laid out on foot by crews traveling in rubber tracked approved vehicles. Vibrators will typically operate within a distinct area proximal to each other. Vibration source points will be located along source lines. Geophone receiver lines will run perpendicular to source lines, and both source and receiver lines are spaced approximately 1320 and 660 feet apart respectively. Geophones will be located along receiver lines every 220 feet. Up to 5 receiver lines could be placed on the ground at one time. Wireless nodes and geophones will be laid out by crews on foot and through the use of rubber tracked tundra travel approved vehicles. Each station will be placed individually and will be surveyed by GPS upon deployment. Upon retrieval, all GPS data is then entered into a database.

Using the SDS methodology, multiple vibrators can collect data at the same time. This
methodology means that only a single vibrator is required to travel down any source line, thereby reducing risk compaction or damage to the tundra. Source lines will be located 1320 feet apart but the source locations on the line will be every 27.5 feet. The AHV IV Vibrators will only operate on snow covered tundra or grounded sea ice. The lighter Univibes are utilized to further reduce potential disturbance in narrow riverbeds and on ungrounded lakes, reducing the risk from working in areas that do not have grounded landfast ice, and reduce noise levels. Recording Operations continue for 24 hours per workday and are based on two 12-hour shifts. Communications with the crews while out in the field will be via VHF radio systems and wireless data transfer radios.

10.4 Camp Facilities

Each camp can accommodate up to 180 persons. Equipment included at camp stations will include long haul fuel tractors, remote fuelers, water maker, incinerator, resupply and survival sleigh, tractors, loaders and tuckers. Sanitary conditions in the kitchen and diner and washrooms will be maintained in full compliance with governmental regulations. Gray water will be filtered to meet the discharge requirements of the Alaska Department of Environmental Conservation (ADEC) Alaska Pollutant Discharge Elimination System (APDES) permit prior to discharge; a current APDES discharge permit is in place for this purpose.

The camp may stay at current location up to seven days. Typically, the camp will move 1-2 miles every 5-7 days, which could be 4-6 camp moves per month. Moves are determined by the efficiency of the crew or the conditions of the tundra. Camp locations are prescouted by the sub rep and project manager prior to occupying an area. The camp will generally remain in the center of the spread moving as the spread moves. A maximum footprint for a large camp is approximately 300 ft x 400 feet.

Mobilization of equipment and vehicles will occur coming off of a pad in Deadhorse and travel along our mobilization route as described in Appendix C. A pre-determined route will be used to move equipment to the project location. Camp travels in a single file configuration pulled by a rubber tracked Steiger or CAT. Each string of camp has five trailers and typically camp consist of eight strings but can consist up to 10 strings. Camp trails during project will be scouted out in advance by project manager or survey personnel to avoid hazards and to measure and ascertain proper snow depth.

The HSE advisor and the local hire subsistence representative will revisit every camp site, after camp has moved on, to review the area and sign-off that no damage occurred.

Marsh Creek East Plan of Operations
10.5 Water Withdrawal

Potable water will be produced at camp with a skid-mounted snow-melter. Water is produced by melting snow or if it is a low snow year this can be supplemented by withdrawing water from lakes, it is then processed through our ADEC approved water system. The operator will identify lakes and will be permitted if used. If lakes are used, the operator has fish and game approved water withdrawal pumps that will be utilized during this process. If there is not an adequate source of snow, water may need to be transported to each camp from an approved source, either in Kaktovik or Deadhorse.

10.6 Temporary Snow Airstrips

The project will need airstrips to transport crews on crew change days. Having temporary airstrips will save several hours of tundra travel. The operator will create a flat area on predetermined grounded, frozen lakes, or tundra to serve as landing strip to receive the aircraft for crew changes. When creating a landing strip on the tundra, there will be no tundra disturbance or impact as in compliance with ROP 11 (b)(c), but an effort will be made to find a level area and then groomed to help the aviation operator have a safe landing on level ground with skis.
An advance scouting trip will be identifying grounded lakes and or tundra locations that can be used for this purpose. The landing strip will only be on areas that have adequate space for safely landing aircraft. On lakes, a rubber tracked Steiger with a blade will clear the snow down to ice approximately 75-100 feet wide and 2300 to 3500 feet long for the aircraft to land. Black bags filled with snow will be placed along the side of the berm to delineate the edge of landing strip along with lighting.

After crew has mobilized and initial scouting has been done lakes which may support this operation will be documented for possible airstrip locations. The GPS location of the landing strip will be documented.

The strips will be used for landing and will not be maintained unless the same location is needed again. After use of the strip is no longer necessary, the crews will inspect the location and record that area that was used by GPS location to be included in the final reporting. An example of airstrip is listed in Appendix E.

10.7 River Crossings

There may be areas where floating ice is encountered that may not safely support the weight of some equipment. In these cases, the Operator will permit this activity with the State of Alaska Department of Fish and Game (ADF&G) to apply water to increase the thickness of the ice to establish temporary river crossings. There also may be areas on rivers, streams, and lakes that need to be protected with snow for traversing from tundra
to ice for crossing. As identified in Section 10, KIC has committed to several mitigation measures specifically for drainages through reduction of the number of source lines crossing major drainages by using a slope analysis tool. The slopes along these lines can be measured during the preplanning and advance crew phases of the operations. Equipment will only cross these areas at the lowest possible relief points, as vibrators are not able to shake on slopes greater than 10°. KIC is requiring its Operator to place a 25-m (82.5-ft) buffer on each side of slopes greater than 10°. For areas that are defined denning critical habitat (16° slope and height of 1.6 m [5.2 ft]), a 100 m (328 ft) buffer will be used. The area will be mapped using digital elevation modeling (DEM) data for slopes. Ramp areas or transits across these areas will be cleared by the advance ice check crews with handheld or truck-mounted FLIR prior to movement. An example of pre mapping slope >10° can be seen below (Figure 1) as well as a previous survey post-plot diagram (Figure 2) demonstrating this best practice.

The Operator will make snow ramps in these areas and establish that the ice is grounded or the ice is of sufficient ice depth to cross. This will eliminate any impact to river banks and/or tundra. Scouting by the Operator will determine locations of river crossings based on the best available information from advanced scouting, environmental and terrain conditions, local knowledge, surveys, and operational safety.

Figure 1. Example of Pre-Mapping of Survey Area.
Figure 2. Actual Positions from 2020 Acquisition
10.8 Fuel Supply and Storage

Long haul sleigh tanks will be used for fueling. All fuel will be ultra-low sulfur for vehicles and equipment. Fuel will be delivered using over land Rolligon or rubber tracked carriers. In the event the supply is disrupted by weather or other unforeseen events fuel may have to be delivered by aircraft, the operator will use temporary airstrips for these occasions. An advance scouting trip will assist in identifying existing airstrips if any that can be used for this purpose. Off-loading fuel from aircraft will be done in accordance with operators fueling procedure. Fueling storages and fueling activity will be located at least 100 feet from any water body. All equipment fuel locations will be tracked and recorded. The fueling procedures include spill management practices such as drip plan placement under any vehicle parked and placement of vinyl liners with foam dikes under all valves or connections to diesel fuel tanks. All fuel tanks are double-wall tank construction. Fuel dye is added to all fuel as part of spill detection.

All spills, no matter what the size are tracked and cleaned up by operator and used for spill prevention operations. The operator also holds a Spill Prevention Countermeasure Control (SPCC) plan for our fueling and fuel storage operations associated with seismic operations. This SPCC plan is site specific and will be amended for each new project. All reportable spills will be communicated through the proper agencies and reporting requirements.

10.9 Waste Management

Food waste generated by the field operations will be stored in vehicles until the end of the shift. The garbage will then be consolidated at camp in wildlife resistance containers for further disposal. All food waste generated in camp will also be collected and stored in the same consolidation area. A skid-mounted incinerator will be used for daily garbage waste. This equipment falls within the regulatory requirements of 40 CFR 60. This cyclotron will use on an average 1 to 2 gallons of fuel per hour while in use. The use of electricity is for the motor to the unit that maintains the air to fuel mixture. The operator will collect data to provide the required records on a calendar basis of description and weight of camp wastes burned.

Any wastes generated by seismic operations will be properly stored and disposed of in accordance with applicable permit stipulations and operator controls. Food waste is continually incinerated to avoid attracting wildlife. Gray water generated from the mobile camp will be discharged according general permit AKG332000 and 18 AAC 83.210 and NPDES discharge limits. Toilets are “PACTO” type to eliminate “black water”. Ash from the incinerator will be back-hauled to the North Slope Borough disposal facility in Deadhorse. The sleigh camp will move approximately every two to five days depending on weather conditions. An inspection by the HSE Advisor will be done after camp has left to ensure that the area is clean of all debris.
Appendix A: Project Area Maps

Project Area

Legend
- Marsh Creek East 3D Program Area
- Slope >18 deg. 100 m Buffer
- Terrestrial Route
- Sea Ice Route
- ANWR Boundary
- KIC Lands
Project Area with Land Status
## Appendix B: Operator's Equipment List Per Crew

<table>
<thead>
<tr>
<th>Number</th>
<th>Equipment Type</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>12</td>
<td>AHV-4 vibe trucks</td>
<td>Tracked Vibrator</td>
</tr>
<tr>
<td>9</td>
<td>Case or Steiger tractor</td>
<td>Fuel, camp and ramp support</td>
</tr>
<tr>
<td>2</td>
<td>Dozer / loader</td>
<td>Camp support</td>
</tr>
<tr>
<td>8</td>
<td>Fuel tanks</td>
<td>Tracked and ski tanks</td>
</tr>
<tr>
<td>3</td>
<td>GPS base</td>
<td>Survey station support</td>
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<tr>
<td>10</td>
<td>Support tracked trailers</td>
<td>Support to camp</td>
</tr>
<tr>
<td>8</td>
<td>Taco trailers</td>
<td>Ski trailers to haul recording equipment</td>
</tr>
<tr>
<td>10</td>
<td>Tucker</td>
<td>Node Tuckers</td>
</tr>
<tr>
<td>5</td>
<td>Tucker</td>
<td>Ice Cat</td>
</tr>
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<td>4</td>
<td>Tucker</td>
<td>Support tuckers</td>
</tr>
<tr>
<td>1</td>
<td>Tucker</td>
<td>Client Tucker</td>
</tr>
<tr>
<td>3</td>
<td>Tucker</td>
<td>Personal Carrier</td>
</tr>
<tr>
<td>2</td>
<td>Piston Bully</td>
<td>Groomer</td>
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<tr>
<td>1</td>
<td>Skid Steer</td>
<td>Camp support vehicle for lifting</td>
</tr>
<tr>
<td>4</td>
<td>Snow Machine</td>
<td>Support around willows</td>
</tr>
<tr>
<td>2</td>
<td>Univibe</td>
<td>Vibrator for water bodies</td>
</tr>
<tr>
<td>30000</td>
<td>Nodes</td>
<td>Recording equipment (nodal receivers)</td>
</tr>
<tr>
<td>50</td>
<td>Camp trailers</td>
<td>160-180 man camp trailers</td>
</tr>
</tbody>
</table>
Appendix C: Example of Mobilization Route
Appendix D: Operator's Equipment Pictures

NODES
Cable-Free/Radio-Free Autonomous Data Recording
Seismic Recorder (GSX)

Tucker
Approximately 90,000 pounds with Tracks, 60,000 with tires
AHV4 Commander Vibrator (Source Equipment)

UNIVibe
Vibe rectangular baseplate
Appendix E: Example of Temporary Airstrip

Legend
- Orange Edge Light
- Green/Red Threshold Lights
- Black Garbage Bag
- GPS Point

RUNWAY DIRECTION WILL BE SET UP NCTO SW.
11.0 Wildlife

Wildlife that may be in the area during the winter season are owls, ravens, arctic fox, wolverine, musk ox, and, possibly, over-wintering caribou, ringed seals, and polar bears. Grizzly bears also inhabit the general area in the project but are likely to be inactive during the winter season. Polar bears may be seen along the coastal areas and out on the sea ice. Although encounters with polar bears or grizzly bears are unlikely, the operator and its contractors will exercise caution during the project. Should a grizzly bear or polar bear be encountered, KIC requires the operator follow the procedures as outlined in our comprehensive Wildlife Interaction Plan that is approved by the Alaska Department of Fish and Game (ADF&G) and United States Fish and Wildlife Service (USFWS). Food and food waste will be kept inside vehicles while out in field. All polar bear sightings will be reported to the USFWS as per the authorization from USFWS. Any type of bear dens suspected or confirmed will be reported to the USFWS or ADF&G agency personnel.

KIC through its contractors and operator will work with agencies to avoid and minimize interactions with wildlife; this includes abiding by relevant regulations and obtaining required authorizations. Our Wildlife Interaction Plan is listed in Appendix F.

12.0 Historic and Cultural Resources

KIC has commissioned a Cultural Resources Study to identify the historic and cultural resources in the program area. The Cultural Resources Study will inform KIC’s operator’s activities. Cultural resources known and new that fall within the mapped area will have avoidance buffers placed around them. Any known existing studies will be reviewed. The operator will not be accessing any native allotments without permission of the owners. A licensed archeologist will work with the NSB, State of Alaska and the Refuge manager to review existing records. The studies will include the use of the Alaska Heritage Resource Survey (AHRS) database, maintained by the Alaska Department of Natural Resources (ADNR) and the Traditional Land Use Inventory (TLUI) database, maintained by the NSB.

Previously recorded and any new AHRS sites will not be affected by any of the proposed seismic activities. All areas will have 500-foot buffers placed around them as a non-activity zone. These buffers will be placed in our navigation system and placed on maps to ensure no vehicles enter avoidance areas.

13.0 Summer Cleanup Activities

After all snow is gone, in the late-July to early-August 2021 timeframe, a single helicopter will be contracted to perform flyovers of the Program Area looking for any debris that may have been left behind in July or August. The cleanup crew will also land inspect all camp locations and any area that had an unplanned release or tundra

Marsh Creek East Plan of Operations
disturbances. Source and receiver lines will be travelled and inspected. The aircraft will land and pick up any seen debris during the flight travels on the program area. Typically, each day of flyover inspections, there may be roughly 100 miles of flight time and approximately 30-40 landings. This phase of the project will require one helicopter for approximately 15 days, including possible weather days. The area of the cleanup will be determined by the completed portion from that winters acquisition and will not go beyond the Program Area.

14.0 Communication & Supervision

The following personnel can be contacted for information during the permitting survey program are:

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Email</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matthew Rexford</td>
<td>KIC, President</td>
<td><a href="mailto:Matthew.Rexford@gmail.com">Matthew.Rexford@gmail.com</a></td>
<td>907-640-0082</td>
</tr>
<tr>
<td>Teresa Imm</td>
<td>KIC Representative</td>
<td><a href="mailto:Teresa-imm@outlook.com">Teresa-imm@outlook.com</a></td>
<td>907-519-5057</td>
</tr>
</tbody>
</table>
15.0 Appendices

Appendix A - Project Area Maps
Appendix B - Equipment List
Appendix C - Example Map of Mobilization Route
Appendix D - Equipment Pictures
Appendix E - Example of Temporary Airstrip
Appendix F - Wild Life Interaction Plan
Appendix G - Willow Protocol
Appendix H - Equipment Weights
DRAFT DEVELOPMENT PERMIT - REQUEST FOR COMMENTS

COMMENTS DUE BY JANUARY 17, 2021:

This is a Draft Development Permit only for the purposes of review and gathering comments during the comment period prescribed by NSBMC Title 19. It contains conditions proposed for inclusion in a final permit, if a decision is made to issue a final permit. This draft permit should not be taken to mean that the proposed project is, or will be approved. Only upon issuance of a final permit will the proposed project be approved to commence.

December 28, 2020

ConocoPhillips Alaska, Inc. (CPAI)
C/O Jennifer Collins, Senior Environmental Coordinator
P. O. Box 100360
Anchorage, Alaska 99510-0360
Jennifer.Collins@conocophillips.com


Dear Ms. Collins:

We are in the process of reviewing your request to P&A Lookout Well #1 located within the Conservation District.

Project Description

CPAI will plug and abandon the existing Lookout 1 well and construct a temporary 5.7-acre ice pad (500-ft by 500-ft) located within the North Slope Borough Conservation District in the National Petroleum Reserve – Alaska (NPR-A). The surface land is privately owned. Minor site-specific variations will likely occur due to field conditions.

CPAI has reviewed the database of Traditional Land Use Inventory (TLUI), Alaska Heritage Resource Survey (AHRS), Native Allotments, and cabins used for subsistence purposes and there are no sites within 500 feet of the proposed ice pad. CPAI believes there would be no impact to cultural resources.
from this project. This area was examined in 2012 as part of the 2012-2013 Cassin Exploration Program (Reanier 2012) and a TLUI Clearance was previously obtained for the ice pad under NSB TLUI 12-012 however the proposed ice road has changed slightly therefore CPAI is applying for a new TLUI Clearance approval.

Ice pad construction is scheduled to begin on January 15, 2021 or when conditions are suitable. The project will end by September 15, 2021 or when stick picking and agency inspections have been completed.

All activities will be conducted in accordance with federal, state and local regulations, permit stipulations and general concurrence stipulations as appropriate. See the attached maps for additional details.

Purpose

The purpose of this project is to PSA Lookout Well #1.

This project is scheduled to commence on upon approval of the final permit with a completion date of September 15, 2021.

We have preliminarily determined that your proposed development is consistent with Title 19 provided that you comply with the following conditions:

PROJECT SPECIFIC STIPULATIONS

1. CPAI shall get a Non-Objection letter from all land owners and provide a copy to the North Slope Borough Land Management Division.

2. CPAI shall have two trained fuel handler on site during all fueling operations.

WILDLIFE STIPULATION

The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Land Management Divisions before the start of any field activities.

SPILL RESPONSE TACTICS

1. Place drip pans under vehicles parked over 5 minutes.

2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks.

3. Impermeable lining and diking is required for fuel storage facilities with a capacity greater than 660 gallons.
Pink dye is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by CPAI.

ICE ROADS AND PADS STIPULATIONS

1. Water may be extracted only from sources approved by the Alaska Department of Natural Resources.

2. Onshore ice roads/pads construction is not to commence until frost has penetrated the ground to a depth of one-foot. The ice road/pad is to be maintained at a minimum thickness of six (6) inches. NSBMC 19.50.030(J); NSBMC 19.60.040(O).

3. Spills of fuels, hydrocarbons, or chemicals on ice roads/ pads shall be cleaned up thoroughly prior to break-up to prevent damage to the underlying tundra when the ice road/pad melts. NSBMC 19.50.030) (J); NSBMC 19.60.040(O).

4. In the event that an alternate ice road route is required, all surface vehicles are to confine travel as much as possible to only those areas and times of year with sufficient (6 inches) snow cover in order to protect the underlying tundra. NSBMC 19.60.040(O).

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 I. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 I. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. CPAI shall consult with ICAS Realty Director, at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.
9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBM C 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBM C 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBM C 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

   o Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.
   
   o A list of vehicles used for any off-road travel, which may have taken place.
   
   o Statement of clean-up activities.
   
   o Methods of disposal of garbage, and other camp debris.
   
   o A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.
   
   o Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuananguak Jr., Field Inspector at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.
   
   o Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBM C Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy
of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, Rodney.ahtuangaruak@north-slope.org and/or herbert.ipalook@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer’s compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

Our review of your application dated December 23, 2020, is being conducted in accordance with NSBMC, Title 19. The purpose of our review is to ensure that your project achieves the goals and objectives, and implements the policies, of the Borough Comprehensive Plan; to ensure that the future growth and development of the Borough is in accord with the values of its residents; to identify and secure, for present and future residents, the beneficial impacts of development; to identify and avoid, mitigate, or prohibit the negative impacts of development; and to ensure that future development is of the proper type, design and location, and is served by a proper range of public services and facilities.

You are encouraged to contact this office if you wish to discuss the applicability of the above conditions to this approval. By copy of this letter, we are soliciting comments from the below-listed individuals and their respective agencies regarding the adequacy of the above stipulations to meet the purpose of our review.
Comments on the adequacy of these stipulations should be sent to Ralph Burke, Land Management Specialist at the address above or by email at ralph.burke@north-slope.org or by telephone at (907) 852-0320 ext. 5414

Sincerely,

[Signature]

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
    Salene Turre, Assessing Division, NSB
    Olivia Cabinboy, Nuiqsut Village Deputy Assistant, NSB
    Jeanne Proulx, AlDNR, Fairbanks
    Lee McKinley, ADF&G IPO Liaison, Anchorage
    Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
    Jewel Bennett, Louise Smith, USDI/FWS, Fairbanks
    Jeanne Hanson, USDI/NMFS, Anchorage
    Josephine Delgado-Pilikat, DCOM, Juneau
    dev.water.ofialanduse@alaska.gov

Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.McCoy@usace.army.mil
Donna Wixon, USDI/BLM
Shelly Jones, BLM District Manager
Jeannie Frazier, AKDNR/DG&G, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA

Dbp.permittings@alaska.gov

Mark Major, Kuskokwim Corporation, majorinoz@live.com
Willow Hetrick, Kuskokwim Corporation, willow@kuskokwim.com
Joseph Nukapigak, President, Kuskokwim Village Corporation
Marnie Pardue Mayor, City of Nuiqsut
Raymond Ipalook, President, Native Village of Nuiqsut
Tommy Nageak, Cultural Resource Specialist, NSB
Darren W. Aiken, TLUI Technician, NSB
Herbert Ipalook Jr., Rodney Ahtuangarkak Jr., Field Inspectors, Nuiqsut
Allyson Atoor, Lead Field Inspector, Utqiagvik
Leroy Otng Jr. Ralph Kalsak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB

Files

N21-166/GRB/mlr Acting LMR Manager/tjb
Lookout 1 P&A Well
Greater Mooses Tooth Unit
NSB – Conservation

Project Description

ConocoPhillips Alaska, Inc. (CPAI) requests authorization to plug and abandon the existing Lookout 1 well and construct a temporary 5.7-acre ice pad (500-ft by 500-ft) located within the North Slope Borough Conservation District in the National Petroleum Reserve – Alaska (NPR-A). The surface land is privately owned. Minor site-specific variations will likely occur due to field conditions.

The table below lists the location of the proposed ice pad:

<table>
<thead>
<tr>
<th>Ice Pad</th>
<th>Size (acres)</th>
<th>Legal Description (T, R, S)</th>
<th>Zoning District</th>
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</thead>
<tbody>
<tr>
<td>Lookout 1</td>
<td>5.7</td>
<td>11N, 2E, Section 35, 36</td>
<td>Conservation</td>
</tr>
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</table>

The ice pad will be constructed and maintained using water and ice chips from permitted sources.

CPAI has reviewed the database of Traditional Land Use Inventory (TLUI), Alaska Heritage Resource Survey (AHRS), Native Allotments, and cabins used for subsistence purposes and there are no sites within 500 feet of the proposed ice pad. CPAI believes there would be no impact to cultural resources from this project. This area was examined in 2012 as part of the 2012-2013 Cassin Exploration Program (Reanier 2012) and a TLUI Clearance was previously obtained for the ice pad under NSB TLUI 12-012 however the proposed ice road has changed slightly therefore CPAI is applying for a new TLUI Clearance approval.

Ice pad construction will begin on January 15, 2021 or when conditions are suitable. The project will end by September 15, 2021 or when stick picking and agency inspections have been completed.

All activities will be conducted in accordance with federal, state and local regulations, permit stipulations and general concurrence stipulations as appropriate. See the attached maps for additional details.
# Land Management Regulations Permit Application

**Permit Number**: 21-166  
**Applicant**: ConocoPhillips Alaska, Inc  
**Address**: P.O. Box 100360  
**Anchorage, AK 99510-0360**  
**Phone**: (907) 265-6509  
**Contact Person**: Jennifer Collins  
**Location (TRS)**: T11N, R2E, Section 35, 36  
**Zoning District**: Conservation District  
**Date**: 12/22/2020  

**Development Permit**  
**Permit Type**: Development Permit  
**Completion Date**: September 15, 2021  
**Proposed Start Date**: January 15, 2021

**Proposed Development**: ConocoPhillips Alaska, Inc. (CPA!) requests authorization to plug and abandon the existing Lookout 1 well and construct a temporary 5.7-acre ice pad (500-ft by 500-ft) located in the NPR-A.

**Purpose of Development**: To plug and abandon the existing Lookout 1 well. Minor site-specific variations will occur due to field conditions.

**Fill/Dredge**:  
- **Material**: N/A  
- **Acres**: N/A

**Oil & Gas Wells**:  
- **Number of New Surface Holes**: N/A

**Temp. Water Use**:  
- **Source**: Permitted Sources  
- **Access**: Existing Infrastructure, Alpine Resupply Road and Access Ice Road  
- **Purpose**: Ice Pad Construction  
- **Maximum Amount**: N/A

**Off Road Travel**:  
- **Period**: N/A  
- **Equipment**: N/A

**Fuel Storage**:  
- **Type**: Arctic Diesel  
- **Amount**: Not to exceed 500 bbl.  
- **Handling**: Fuel storage will be handled in accordance with federal, state, and local regulations.

**Hazardous Material Storage**:  
- **Type**: N/A  
- **Amount**: N/A

**Solid Waste**:  
- **Treatment**: N/A

**Mining**:  
- **Habitat**: N/A

**Air Emissions**:  
- **Type**: Vehicles and equipment  
- **Amount**: Minor

**Noise/Vibration**:  
- **Type**: Vehicles and equipment  
- **Amount**: Normal

**Sensitive Habitat**:  
- **Floodplain**: N/A  
- **Shoreline**: N/A

**Transportation**:  
- **Type**: N/A

**Marine Tanker Facility**:  
- **Seismic Work**: ☐  
- **Utility Development**: ☐  
- **Recreational Development**: ☐

**Causeway Construction**:  
- **Offshore Drilling**: ☐  
- **Residential Development**: ☐  
- **CD-ROM Included**: ☐

**Temporary Airport**:  
- **Oil Transport System**: ☐  
- **Snow Removal**: ☐  
- **Maps Included**: ☑
ATTACH TO THIS APPLICATION THE FOLLOWING:

- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES. THE PROJECTION SHOULD BE NAD 27 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED)

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLL FREE (IN STATE): (800) 478-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT

Authorized Signature
Jennifer Collins

Name

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING
☐ DEVELOPMENT PERMIT
☐ ADMINISTRATIVE APPROVALS
☐ CONDITIONAL DEVELOPMENT PERMITS
AMOUNT PAID: $2,000 Fee to be paid monthly by Electronic Funds Transfer.

Date
12/22/2020

Senior Environmental Coordinator
Title

DECISION
☐ ADMINISTRATIVELY APPROVED
This is a minor amendment to a development permit or is a use of land listed under administrative approvals for this zoning district.

☐ REZONING APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan conditions, lease stipulations, and provision of state and federal law and permits served thereunder.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory Policies, represents the Developer’s best efforts to implement all relevant best efforts and minimization policies, and as long as any conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter).

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land this is listed as a conditional development for this zoning district or has been elevated by the Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

Land Management Administrator

Date

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect.

NSMBC §19.30.130.
DRAFT DEVELOPMENT PERMIT - REQUEST FOR COMMENTS

COMMENTS DUE BY JANUARY 31, 2021:

This is a Draft Development Permit only for the purposes of review and gathering comments during the comment period prescribed by NSBMC Title 19. It contains conditions proposed for inclusion in a final permit, if a decision is made to issue a final permit. This draft permit should not be taken to mean that the proposed project is, or will, be approved. Only upon issuance of a final permit will the proposed project be approved to commence.

January 11, 2021

Olgoonik Construction Services (OCS)
C/O James Nunley, Senior Project Manager
3201 C Street, Suite 700
Anchorage, Alaska 99503
Email: jnunley@olgoonik.com

RE: NSB 21-176, Draft Development Permit, Temporary Airstrip, T11N, R1E, Section 15, Conservation District.

Dear Mr. Nunley:

We are in the process of reviewing your request for a temporary airstrip located within the Conservation District.

Project Description

Introduction

OCS will plug and abandon two legacy wells in 2021: one near Fish Creek and one at Inigok. OCS will construct a temporary snow airstrip near Fish Creek only as there is an airstrip already constructed at Inigok during the winter season of 2021. The project will need a temporary airstrip to access to the program area for crew and supply transport. The airstrip will be used during open tundra travel winter season with an estimated start date of February 10th, 2021; starting with ice checking and the recording crew following thereafter.
Operations

The project utilizes aircraft and requires airstrips to transport crews and/or supplies on crew change days. Temporary airstrips will save several hours of tundra travel. OCS will create a flat area on predetermined ground, frozen lakes, or tundra to serve as a landing strip to receive the aircraft for crew changes. Aircraft will travel from Deadhorse to meet crews at airstrip locations. All mobile equipment will have a navigation system installed for logistics and hazard identification. Tracked and wheeled tundra vehicles will transport the sleigh camp across the tundra to the program area.

Scouting efforts will aid in identifying grounded lakes and or tundra locations suitable for this purpose. After the crew has mobilized and initial scouting has been done, lakes which may support this operation will be documented for airstrip actual locations. The GPS location of the landing strip will be recorded on daily reports.

The landing strip will only be on areas that have adequate space for safely landing aircraft. A rubber tracked Steiger will groom the snow in an area approximately 75 feet wide and up to 3500 feet long. Temporary lighting or dark markers will be used to delineate the edge of the landing strip. These landing strips will not be maintained unless the same location is needed again. After use of the strip is no longer necessary, the crews will inspect the location and record the area with a GPS location to be included in the final reporting. An example of an airstrip is listed in Figure 2.

Purpose

The purpose of this project is needed to support the P&A Project.

This project is scheduled to commence upon approval of the final permit with a completion date of August 31, 2021.

We have preliminarily determined that your proposed development is consistent with Title 19 provided that you comply with the following conditions:

PROJECT ADVISORY

This permit is valid only for the temporary airstrip; all other activities must be permitted separately.

PROJECT SPECIFIC STIPULATIONS

1. OCS shall get a Non-Objection letter from all land owners and provide a copy to the North Slope Borough Land Management Division.

2. OCS shall have two trained fuel handler on site during all fueling operations.

SPILL RESPONSE TACTICS

1. Place drip pans under vehicles parked over 5 minutes.

2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks.

Pink dye is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by OCS.
HELCOPTER STIPULATIONS/FIXED WING

1. OCS shall avoid impacting subsistence activities by communicating with the village of Nuiqsut by setting up a communications link. NSBMC 19.70.050 (L), NSBMC 19.70.050 (J) 3.

2. Helicopter/Fixed Wing use in support of P&A activities shall maintain an altitude of 1500 feet over concentrations of 25 or more caribou, and with hunter in the area of pursuit of subsistence animals. NSBMC 19.70.050 (L) 4, NSBMC 19.70.050 (J) 3.

3. To minimize impacts to subsistence activities, a Helicopter/Fixed Wing route shall be established from routine site locations, OCS shall not deviate from that prescribed route, unless avoidance of large concentration of animals is occurring, or for human safety. NSBMC 19.70.050 (L) 4, NSBMC 19.70.050 (J) 3.

4. Airports and helicopter pads are required to be sited, designed, constructed and operated in a manner that minimized their impact upon wildlife. 2.4.6 (d).

5. Vehicles, vessels, and aircraft that are likely to cause significant disturbance must avoid areas where species that are sensitive to noise or movement are concentrated at times when such species are concentrated. Concentrations may be seasonal or year-round and may be due to behavior (e.g., flocks or herds) or limited habitat (e.g., polar bear denning, seal haulouts). Horizontal and vertical buffers will be required where appropriate. Concern for human safety will be given special consideration when applying this policy. 2.4.4(a)

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 I. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 I. 11.
7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. OCS shall consult with ICAS Realty Director, at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

- Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.

- A list of vehicles used for any off-road travel, which may have taken place.

- Statement of clean-up activities.

- Methods of disposal of garbage, and other camp debris.

- A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.

- Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspector at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.

- Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.

**GENERAL STIPULATIONS**

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16
regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Lang Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, rodney.ahtuanganak@north-slope.org and/or herbert.ipalook@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

Our review of your application dated January 8, 2021, is being conducted in accordance with NSBMC, Title 19. The purpose of our review is to ensure that your project achieves the goals and objectives, and implements the policies, of the Borough Comprehensive Plan; to ensure that the future growth and development of the Borough is in accord with the values of its residents; to identify and secure, for present and future residents, the beneficial impacts of development; to identify and avoid, mitigate, or prohibit the negative impacts of development; and to ensure that future development is of the proper type, design and location, and is served by a proper range of public services and facilities.
You are encouraged to contact this office if you wish to discuss the applicability of the above conditions to this approval. By copy of this letter, we are soliciting comments from the below-listed individuals and their respective agencies regarding the adequacy of the above stipulations to meet the purpose of our review.

Comments on the adequacy of these stipulations should be sent to Ralph Burke, Land Management Specialist at the address above or by email at: ralph.burke@north-slope.org or by telephone at (907) 852-0320 ext. 5414

Sincerely,

[Signature]

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
    Brian Person, NSB Wildlife (caribou/fox/geese/vegetation)
    Robert Suydam, NSB Wildlife (Birds/Bowhead/Beaglaya)
    Selene Tulle, Assessing Division, NSB
    Olivia Cabinboy, Nuiqsut Village Deputy Assistant, NSB
    Jeanne Proulx, AKDNF, Fairbanks
    Lee McKinley, ADF&G IPO Liaison, Anchorage
    Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
    Jewel Bennett, Louise Smith, USDlF&WS, Fairbanks
    Jeanne Hanson, USDI/NMFS, Anchorage
    Josephina Delgado-Pilkat, DCOM, Juneau
    dca.water.oilandgas@alesaka.gov
    Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
    Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
    Mary R. Romero, US Army COE, Mary R. Romero@usace.army.mil
    Shane McCoy, US Army COE, Shane.McCoy@usace.army.mil
    Donna Wixon, USDI/BLM
    Shelly Jones, BLM District Manager
    Jeanne Frazier, AKDNF/DO&G, Anchorage
    Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
    Dept.permittins@alaska.gov
    Mark Major, Kuukpak Corporation, majorine@live.com
    Willow Hetrick, Kuukpak Corporation, willow@kuukpak.com
    Joseph Nukapigak, President, Kuukpak Village Corporation
    Mamie Parduau Mayor, City of Nuiqsut
    Raymond ipalook, President, Native Village of Nuiqsut
    Tommy Nageak, Cultural Resource Specialist, NSB
    Darren W. Aiken, TLUI Technician, NSB
    Herbert Ipalook Jr., Rodney Ahtuangarak Jr., Field Inspectors, Nuiqsut
    Allyson Als, Lead Field Inspector, Utqiagvik
    Leroy Oenga Jr. Ralph Kaleb Sr., Field Inspectors, Utqiagvik
    Wayne Cary, Assistant Attorney, NSB
    Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB

N21-176/GRB/nuk/lk Acting LMR Manager/rjb
# Land Management Regulations (LMR) Permit Application

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<td>Phone:</td>
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<td>Project Name:</td>
<td>Fish Creek Legacy Wells</td>
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<td>Field Name &amp; Pad:</td>
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<td>Location (TRS):</td>
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<td>Completion Date:</td>
<td>8/31/2021</td>
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<td>Proposed Development:</td>
<td>BLM NPR-A Legacy Well Remediation Temporary Airstrip Construction</td>
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<td>Purpose of Development:</td>
<td>Create temporary airstrips to support transportation of NPR-A Legacy Well equipment, supplies and crew rotations in support of and to reduce tundra impacts and travel times to the program area.</td>
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<th>Seismic Work</th>
<th>Utility Development</th>
<th>Recreational Development</th>
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<tr>
<td>Offshore Drilling</td>
<td>Residential Development</td>
<td>CD-ROM Included</td>
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<td>Oil Transportation System</td>
<td>Snow Removal</td>
<td>Maps Included</td>
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North Slope Borough
Department of Planning and Community Services
Land Management Regulations Division

Page 1 of 2
Land Management Regulations - General Application
October 2011
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES
- SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NAD 1983 ALASKA ALBERS OR GEODETIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, ak 99723
PHONE: (907) 852-0330 TOLL FREE (IN-STATE): (800) 476-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

James O. Nunley
Authorized Signature

Date: 1/7/2021

James O. Nunley
Senior Project Manager

Name

Title

FEE PAID

☐ SPECIAL PLANNING COMMISSION MEETING $12,000

☒ DEVELOPMENT PERMIT $2,000, plus $500/well

☐ ADMINISTRATIVE APPROVALS $1,500

☐ CONDITIONAL DEVELOPMENT PERMITS $3,000

AMOUNT PAID

$2,000

DECISION

☐ ADMINISTRATIVELY APPROVED
   This is a minor alteration to a previously approved development permit for commercial recreation.

☐ REZONING APPROVED
   This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan Conditions, lease stipulations, and provisions of the state and federal law and permit served thereon.

☐ DEVELOPMENT PERMIT APPROVED
   The proposed development meets all applicable mandatory policies, represents the developer's best effort to implement all relevant best efforts and minimization policies, and as long as conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter.)

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
   This is a use of land that is listed as a conditional development for this zoning district or has been elevated by the NSB Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
   (See accompanying letter)

NSB Land Management Administrator

Date

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect. NSMBC §19.30.130.
Temporary Airstrip Description

AIRSTRIP LOCATION IN SUPPORT OF WINTER LEGACY WELL PLUG &
ABANDONMENT PROGRAM

DESCRIPTION

1.0 Introduction
Olgoonik Construction Services (OCS) is planning to plug and abandon two legacy wells in 2021: one near Fish Creek and one at Inigok. OCS is requesting a permit to construct a temporary one snow airstrip within near Fish Creek only as there is an airstrip already constructed at Inigok during the winter season of 2021. The project will need a temporary airstrip to access to the program area for crew and supply transport. The airstrip will be used during open tundra travel winter season with an estimated start date of February 10th, 202; starting with ice checking and the recording crew following thereafter.

2.0 Location
The approximate location is shown in the map below. Land ownership within these areas is on Bureau of Land Management (BLM), within the North Slope Borough (NSB). MTRS data are shown below. The airstrip will be in one of these sections depending on conditions: U011N001E15 (shown in Figure 1). The exact location will be in the close out report.

3.0 Operations
The project utilizes aircraft and requires airstrips to transport crews and/or supplies on crew change days. Temporary airstrips will save several hours of tundra travel. OCS will create a flat area on predetermined ground, frozen lakes, or tundra to serve as a landing strip to receive the aircraft for crew changes. Aircraft will travel from Deadhorse to meet crews at airstrip locations. All mobile equipment will have a navigation system installed for logistics and hazard identification. Tracked and wheeled tundra vehicles will transport the sleigh camp across the tundra to the program area.

Scouting efforts will aid in identifying grounded lakes and or tundra locations suitable for this purpose. After the crew has mobilized and initial scouting has been done, lakes which may support this operation will be documented for airstrip actual locations. The GPS location of the landing strip will be recorded on daily reports.

4.0 Communication & Supervision
The following personnel at OCS can be contacted for information:

Operations Supervisors    James Nunley    907-232-9952
The landing strip will only be on areas that have adequate space for safely landing aircraft. A rubber tracked Steiger will groom the snow in an area approximately 75 feet wide and up to 3500 feet long. Temporary lighting or dark markers will be used to delineate the edge of the landing strip. These landing strips will not be maintained unless the same location is needed again. After use of the strip is no longer necessary, the crews will inspect the location and record the area with a GPS location to be included in the final reporting. An example of an airstrip is listed in Figure 2.
January 7, 2021

Emerald House LLC
C/O Erik Opstad, Vice President
P.O. Box 112212
Anchorage, Alaska 99511-2212
Email: erik.opstad@gmail.com

RE: NSB 21-143, Development Permit, Peregrine Exploration Program, Various Townships, Ranges, Sections, Conservation District.

Dear Mr. Opstad:

We have completed our review of your request to construct a 76 mile snow road south from the NSB CWAT within the Conservation District.

Project Description

1. Introduction and Project Overview

Emerald plans on drilling two oil and gas exploration wells on the North Slope of Alaska. The proposed wells will be drilled from ice pads within the Peregrine Lease Block in the National Petroleum in Alaska (NPR-A) during winter 2020/2021 (Figures 1 and 2 in Attachment 1). Access will be by the NSB CWAT and then by the Peregrine Snow Road which will pioneer south from the NSB CWAT within the NPR-A (Figures 2 to 4). The NSB CWAT will be a shared snow road operated by others on which Emerald will travel as a contracting party. Emerald will help in the construction and maintenance of this shared snow road.

 Emerald’s planned winter operations include constructing/maintaining an ice staging pad (“PEP 2P Staging Pad”) at the start of the NSB CWAT, constructing/maintaining another 76 miles of the Peregrine Snow Road, constructing/maintaining the Merlin-1 and Harrier-1 ice drilling pads, plus drilling and test the Merlin-1 and Harrier-1 exploration wells. Access will also be by aircraft as well.

All facilities and snow roads will be temporary, and will be designed and constructed to meet Federal, State and NSB regulatory requirements, industry standards and arctic oil field best practices. Additionally, the NSB Oil and Gas Technical Report (NSB 2014) was consulted along with the NSB Comprehensive Plan from 2019 to 2030 (adopted March 2019).
2. **Peregrine Snow Road Location and Layout**

The Peregrine Snow Road alignment is shown in Figures 2 and 4 in attachments 1. Location by Umiat Meridian, Townships, Ranges and Sections (Umiat MTRS) for the Peregrine Snow Road area listed below, along with GPS Coordinates (WGS84) for start and end, and for the Merlin-1 and Harrier 1 Drill Pads.

<table>
<thead>
<tr>
<th>Township</th>
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<td>2, 11, 10, 15, 22, 21, 28, 33</td>
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</tbody>
</table>

**Water and Wastewater**

Fresh water and Ice chips. Emerald will withdraw water and trim ice chips for the Peregrine Snow Road from five lakes along the alignment. Volumes, locations and access are listed below and shown in Figures 3 & 4.

Water use will total up to 30 million gallons as follows:

- About 20 million gallons for snow road armoring and 5 million gallons for ice pads (fresh water and ice chips combined).
- Another 4 million gallons for drilling.
- Up to another 1 million gallons for hydraulic stimulations/fracturing and testing.

Snow cover will be removed from grounded portions of the lakes that are less than 4 feet to help provide access for water withdrawal. Water pumped from these lakes will be hauled in skid-mounted trailer tankers by Steigers, Pisten Bullys and by Volvo A45 Water Buffaloes during construction.

Light plants will be built-in 110% containment will be placed within additional secondary containment areas (SCAs), spotted next to pump houses & road intersections and refueled daily following Emerald fuel transfer procedures. Sign will be place at lake access points to identify each permitted lake that is being actively used. Rolling stock equipment will not be refueled on frozen lake surfaces.

Water withdrawal from fish-bearing water bodies also will be authorized under Fish Habitat Permits from the Alaska Department of Fish and Game (ADF&G). Emerald is assuming all lakes are resistant fish bearing; therefore, all water intake hoses in all lakes will have ADF&G approved screens at the intake points to prevent fish entrapment.
Fluids Management, Storage and Spill Response

During fuel transfer operations, tundra underlying the Peregrine Snow Road will be protected from leaks or drips by using drip pans or other surface liners designed to catch and hold fluids under the equipment. Two spill technicians & fuel contractors (trained and certified oil handlers), operating under the Emerald Fluid Transfer Procedures, will attend all bulk fluid transfer operations. Spill of hydrocarbons, or chemicals on snow roads also will be cleaned up immediately to prevent damage to the underlying tundra when the ice pad or roads melt.

Emerald’s existing, Alaska Department of Environmental Conservation (ADEC) reviewed spill plan: ADEC 20-CP-5256, covers spill response equipment to be staged along the snow road alignment; the Plan includes immediate response actions for a spreader tank leak, reporting requirements, communications trees, receiving environments, spill cleanup mobilization response times, well control information and spill prevention guidance.

Additionally, the contractors providing fueling services will have updated and current Spill Prevention Control and Countermeasure (SPCC) Plans specific to the operations on-site. Contractor crews will be trained in the appropriate response & prevention guidance.

Snow Road Construction

Emerald will build the 76-mile Peregrine Snow Road within NPR-A (Figures 3 to 4) to accommodate drill rig and rig camp moves. Emerald also will build ice pads along the alignment large enough to safely carry out drilling support operations.

The Peregrine Snow Road will be constructed and maintained using the generally accepted practices for the North Slope, subject to BLM tundra opening criteria as outlined in NPR-A IAP/FEIS. The snow road will generally be 25-35 feet wide and compacted with a minimum 6 inches thick snow, depending on drilling rig and vehicle requirements. Rig mats or other similar items will be used on or in the construction of snow roads at selected locations as necessitated by field conditions encountered during construction or during equipment movement. The rig mats will be removed prior to the end of the operating season. Additionally, ice bridges or ramps crossing streams will be required with ice chip aggregate and water coming from surrounding lakes.

Peregrine Snow Road River & Lake Crossings

Descriptions of stream and river crossings along Peregrine Snow Road are summarized in below and shown in Figures 3 and 4.

The snow road route will cross lakes, rivers and stream on grounded ice whenever feasible. Ice thickness at all crossings will be confirmed by hand drilling during route pioneering. There may be areas, however, on rivers, streams and lakes that may need to be protected with snow when traversing from tundra to ice. Emerald will first construct snow or ice ramps in these areas and then confirm the ice is thick enough to cross. This will eliminate impacts to riverbanks, Lake Shoreline and or tundra. Finally, Emerald could run into tundra where wind has blown off most snow cover. Emerald will remove snow covering from surrounding grounded lakes in areas less than 4 feet deep and, pushing ahead, build up at least 6 inches of compacted snow. By avoiding snow cover compaction or removal from fish bearing lakes at depths greater than 4 feet, Emerald can help maintain natural hydrologic regimes in soils surrounding lakes and also help maintain habitat.
**Heavy Equipment**

The number and types of vehicles and equipment used in an “snow/ice road kit” for construction and maintenance of ice pads and snow roads are listed below. Heavy equipment used during operations will first consist of Pisten Bully and Steiger tractor/trailer units hauling the modular drill rig, camps, tubulars, food supplies and other operational tangibles. Eventually, as the snow road is “armored” with water to increase load support, the tundra tractor/trailer units will be replaced by conventional tractor/trailer units.

**Subsistence Plan**

The proposed operations are within Nuiqsut Subsistence Use Area. Emerald understands subsistence is a way of life for Nuiqsut residents and it is important to protect subsistence resources, uses and access. Emerald also understands that due to the high costs of goods, fuel and transportation, subsistence harvests reduce food costs and, more important, provides cultural identity and spirit. Emerald has completed consultation and a review of recent subsistence field surveys and inventories of prehistoric, historic, and archaeological sites.

**PURPOSE & SCOPE**

The goal of Emerald is to provide measures to mitigate subsistence impacts and to ensure Project security and safety procedures do not unduly restrict or reduce access to wildlife by subsistence hunters during operations. This will be achieved by implementing the following.

**Rehabilitation Plan**

The snow road also will be “tight bladed” by grader to remove dark-colored drips missed by the ACS spill technician and the snow spoils will be thawed with resulting oily water disposed of at a permitted disposal facility.

Emerald also will inspect the Peregrine Snow Road for trash and debris and slot all ice bridges and snow ramps crossing rivers to facilitate water flow during spring break up. Emerald will then construct snow berms across the entrance to Peregrine Road to bar further use after closure. Trash and debris collected will be transported for disposal at NSB SA-10. Emerald will then conduct an inspection and “stick picking” operation via helicopter in summer 2021 to ensure that NSB and State cleanup requirements have been met.

Overall, this approach will result in no long-term disturbances to the tundra, as activities will be conducted only on the ice pads, select lakes and the Peregrine Snow Road.

Nonetheless, impacts to vegetation and habitat will occur. Therefore, Emerald will inspect the Project area following snowmelt in 2021 during stick picking to confirm that tundra damage did not occur. If tundra damage is discovered, Emerald will consult with the State and the NSB to determine the appropriate methods for restoration and incorporate them into a Tundra Damage Rehabilitation/Remediation Plan.

The Plan will address the area, type, and extent of damage and will be developed in accordance with the Alaska Coastal Revegetation & Erosion Control Guide (developed by the ADNR Plant Materials Center), the Streambank Revegetation and Protection Guide (developed by the Alaska Department of Fish and
Game), and other relevant guidance documents. NSB and State personnel will be invited to verify that rehabilitation operations are complete and that any issues identified are addressed.

Fish & Wildlife

Wildlife avoidance & interaction plans have been prepared and are under review by the ADF&G and USFWS. These plans are adopted by reference and will be covered extensively in the site orientation training for all project personnel.

Pads constructed of ice will only be used in winter months during the open winter tundra travel season. Emerald identified willow habitats and then moved the ice pad to avoid them. Emerald also focused on avoiding areas (especially south-southwest facing stream embankments, pingos and drained lakes) that appeared to be prime bear den habitat, keeping in mind required buffer zones.

Wildlife that can also be in the area during the winter season is owls, ravens, arctic fox, wolverine, musk ox, and possibly over-wintering caribou. Grizzly bears are known to inhabit the general area of where the project will occur but are likely to be inactive during winter season. Polar bear range and habitat is not within this program and probably will not be encountered. Emerald and its contractor will exercise caution during the project. Should a grizzly bear or polar bear be encountered, Emerald will follow the procedures as outlined in the Bear Avoidance Interaction Plan. Any sightings will be reported immediately to the Company Man and Emerald’s Lead Field Environmental Coordinator to warn personnel of the bear. Agency reporting would follow within 24 hours as indicated below. Reporting contacts are listed in all plans.

In summary, all Emerald activities will be conducted to minimize impacts. This includes mitigation measures outlined in the ADL lease stipulations and adherence to State and NSB Land Management regulations and permit requirements.

Training Program

All operations. The Emerald training program has been designed to inform everyone assigned to the Project of the environmental, social, and cultural concerns that relate to the job functions. Training components include a review of permit stipulations and requirements, cultural awareness, spill prevention and reporting, wildlife interaction, site specific safety, waste management practices, etc.

All personnel will participate in a specific training program module for bear safety and a briefing of the Bear Avoidance, Interaction and Mitigation Plan. In addition, Emerald employees and contractors are required to complete an 8 hour training program provided by the North Slope Training Cooperative (NSTC). The North Slope Field Environmental Handbook, Alaska Safety Handbook and a North Slope Visitor’s Guide are used for training. The latest versions of these handbooks are adopted by reference, and copies will be readily available to personnel in the field. The training program includes classes on the Alaska Safety Handbook, personal protective equipment, camp and safety orientation, hazard communication, HAZWOPER Level I, and Environmental Awareness.

Interacting with Local Communities and Community Groups

Emerald will continue its partnership with local contractors and business through competitive bid contracting opportunities. This includes contracting to provide the drill rig and drilling services, camp and catering services, fuel supply and transport services, mobilization & demobilization services, and providing contracted Subsistence Representatives.
Subsistence trails also are an integral part travel within the NSB. Travel to and from communities for subsistence harvests are normally by snow machine. This means people using the subsistence trails will be crossing the snow road during subsistence harvest hunting and trapping. The snow road and subsistence trail interaction will be marked with road signs and delineators.

**Purpose**

The purpose of this project is to support access (mob/demob) in support of Merlin 1 & Harrier 1 drilling and testing operations by Emerald. Exploration wells, drill ice pads and staging pad are permitted separately.

This project is scheduled to commence upon approval of the final permit with a completion date of April 27, 2021.

We have determined that your proposed activity is consistent with Title 19 provided that you comply with the following conditions:

**PROJECT SPECIFIC STIPULATIONS**

1. This permit is only valid for the Snow Road. All other projects must be permitted separately.

**ICE ROADS AND PADS STIPULATIONS**

1. Water may be extracted only from sources approved by the Alaska Department of Natural Resources.

2. Onshore ice road construction is not to commence until frost has penetrated the ground to a depth of one-foot. The ice road is to be maintained at a minimum thickness of six (6) inches. NSBMC 19.50.030(J); NSBMC 19.60.040(O).

3. Spills of fuels, hydrocarbons, or chemicals on ice pads shall be cleaned up thoroughly prior to break-up to prevent damage to the underlying tundra when the ice pad melts. NSBMC 19.50.030) (J); NSBMC 19.60.040)(O).

4. In the event that an alternate ice road route is required, all surface vehicles are to confine travel as much as possible to only those areas and times of year with sufficient (6 inches) snow cover in order to protect the underlying tundra. NSBMC 19.60.040)(O).

**SPILL RESPONSE TACTICS**

1. Place drip pans under vehicles parked over 5 minutes.

2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks.

3. Impermeable lining and diking is required for fuel storage facilities with a capacity greater than 660 gallons.

**Pink dye** is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by Emerald.
WILDLIFE STIPULATION

The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Planning and Community Services Department before the start of any field activities.

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 L. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 L. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. Emerald shall consult with ICAS Realty Director, at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North
Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

   o Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.
   
   o A list of vehicles used for any off-road travel, which may have taken place.
   
   o Statement of clean-up activities.
   
   o Methods of disposal of garbage, and other camp debris.
   
   o A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.
   
   o Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr. Field Inspectors at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0440.
   
   o Report any tundra damage within 24 hours and consult with NSB Land Management staff with any questionable activity unsure of.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plant as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Lang Management Division to become a part of this permit file. NSBMC 19.70.050(1)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope
Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, Rodney.ahtuangaruak@north-slope.org and/or herbert.ipalook@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

Our review was conducted in accordance with NSBMC, Title 19. The purpose of our review is to ensure that your project achieves the goals and objectives, and implements the policies, of the Borough Comprehensive Plan; to ensure that the future growth and development of the Borough is in accord with the values of its residents; to identify and secure, for present and future residents, and beneficial impacts of developments; to identify and avoid, mitigate, or prohibit the negative impacts of development; and to ensure that future development is of the proper type, design and location, and is served by a proper range of public services and facilities.

If your proposal is changed from what is represented in your application December 3, 2020, you must contact this office prior to the change being implemented in order to determine whether the enclosed authorization requires an amendment.

By copy of this letter, we are advising the below-listed individuals and their respective agencies that the proposal, as conditioned, complies with our Comprehensive Plan.

Any aggrieved person, including the developer/applicant, may appeal the decision of the Land Management Administrator by serving written notice to the secretary of the North Slope Borough Planning Commission
and the developer/applicant within 30 days of receiving this decision. The notice shall state the reasons why the appellant believes the decision of the Land Management Administrator is improper.

If you have any questions please contact Darylynn Aveoganna, Land Management Specialist at (907) 852-0320 ext. 5413 or by email at darylynn.aveoganna@north-slope.org

Sincerely,

[Signature]

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Ties, Assessing Division, NSB
Nora Jane Burns, Marianne Rexford, Kaktovik Village Deputy Assistant, NSB
Olivia Cabinboy, Nunaputtarvik Village Deputy Assistant, NSB
Scott Danner, Public Works, NSB
Jeanne Proulx, AK DNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Barse, ADF&G Regional Supervisor/Director of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USD/FAW, Fairbanks
Jeanne Hanson, USD/NMFS, Anchorage
Josephina Delgado-Pikat, DCOM, Juneau
dec.water.oilandgas@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R Romaro, US Army COE, Mary.R.Romaro@usace.army.mil
Shane McCoy, US Army COE, Shane.McCoy@usace.army.mil
Donna Wixson, USD/BLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AK DNR/DQ&G, Anchorage
Katie Farley, State Pipeline Coordinating Office/ JPO, SOA
Dog.permitting@alaska.gov
Mark Major, Kuukpik Corporation, majorinor@live.com
Willow Hietrick, Kuukpik Corporation, willow@kuukpik.com
Joseph Nukapik, President, Kuukpik Village Corporation
Minnie Pardoe, Mayor, City of Nuiqsut
Raymond Ipalook, President, Native Village of Nuiqsut
Herbert Ipalook Jr., Rodney Atsangak Jr., Field Inspectors, Nuiqsut
Allyson Atons, Lead Field Inspector, Utqiagvik
Leroy Oeng Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPDG/HS, NSB

Files
**Land Management Regulations (LMR) Permit Application**

**Permit Number:** 21-143  
**Applicant:** Emerald House LLC  
**Address:** P.O. Box 112212, Anchorage, Alaska 99511-2212  
**Contact Person:** Erik Opstad - Vice President  
**Email:** erik.opstad@gmail.com  
**Location (TRS):** T: 01S to 09N R: 07E to 02W Sec: Varies  
(see Sec. 2 in Plan of Ops)  
**Zoning District:** Conservation  
**Proposed Start Date:** 12/20/2020  
**Purpose of Development:** Construct a 76 mile snow road south from the NSB CWAT (see Sec 2 in attached Plan of Operations)  
**Proposed Development:** Snow road to support access (mob/demob), in support of Merlin-1 & Harrier-1 drilling and testing operations by Emerald. Exploration wells, drill ice pads and staging pads are permitted separately.

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<td>Tundra Travel Season</td>
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<tr>
<td>NA</td>
<td>Generators &amp; equipment</td>
<td>Limited &gt;17mi from closest village</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Treatment</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>NA No onsite treatment; Limited solid waste stored in dumpsters &amp; disposed at NSB SA-10</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>Utility Development</th>
<th>Residential Development</th>
<th>CD-ROM Included</th>
<th>Maps Included</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Marine Tanker Facility</th>
<th>Seismic Work</th>
<th>Utility Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Causeway Construction</td>
<td>Offshore Drilling</td>
<td>Residential Development</td>
</tr>
<tr>
<td>Airport or Helicopter Pad</td>
<td>Oil Transportation System</td>
<td>CD-ROM Included</td>
</tr>
</tbody>
</table>

Page 1 of 2  
Land Management Regulations - General Application  
October 2011
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES
- SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NAD 1983 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLL FREE (IN-STATE): (800) 476-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

[Signature]
Authorization Signature

11/24/2020
Date

Erik Opstad
Name

$12,000
Vice President
Title

$2,000, plus $500/well

$1,500

$3,000

$2000

DECISION

☐ ADMINISTRATIVELY APPROVED
This is a minor alteration to a previously approved development permit for commercial recreation.

☐ REZONING APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan Conditions, lease stipulations, and provisions of the state and federal law and permit served thereunder.

☒ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory policies, represents the developer's best efforts to implement all relevant best efforts and minimization policies, and as long as conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter.)

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land that is listed as conditional development, for which a use permit has been issued by the NSB Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

NSB Land Management Administrator

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reasons why you believe the decision is incorrect. NSMBC §19.30.130.
Attachment 2

Plan of Operations for Peregrine Snow Road

Peregrine Exploration Program
Table of Contents

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2  Peregrine Snow Road Location and Layout .................................................. 1
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5  Fluids Management, Storage and Spill Response ........................................ 4
6  Solid Waste Management ........................................................................... 4
7  Snow Road Construction ............................................................................ 4
8  Heavy Equipment ....................................................................................... 7
9  Permit Requirements .................................................................................. 8
10 Subsistence Plan ....................................................................................... 9
11 Rehabilitation Plan ................................................................................... 10
12 Measures to Minimize Adverse Effects .................................................... 11
13 Emerald Project Contacts ......................................................................... 12
14 Plans, Studies and References .................................................................. 12

Appendix A to Plan of Operations: Aircraft Use Plan

Note Figures are included in NSB LMR Application as Attachment 1.....
# Introduction and Project Overview

Emerald House LLC (Emerald) plans on drilling two exploration oil and gas exploration wells on the North Slope of Alaska. The proposed wells will be drilled from ice pads within the Peregrine Lease Block in the National Petroleum Reserve in Alaska (NPR-A) during winter 2020/2021 (Figures 1 and 2 in Attachment 1). Access will be by the North Slope Borough Community Winter Access Trail (NSB CWAT) and then by the Peregrine Snow Road which will pioneer south from the NSB CWAT within the NPR-A (Figures 2 to 4). The NSB CWAT will be a shared snow road operated by others on which Emerald will travel as a contracting party. Emerald will help in the construction and maintenance of this shared snow road.

Emerald’s planned winter operations include constructing/maintaining an ice staging pad (“PEP 2P Staging Pad”) at the start of the NSB CWAT, constructing/maintaining another 76 miles of the Peregrine Snow Road, constructing/maintaining the Merlin-1 and Harrier-1 ice drilling pads, plus drilling and testing the Merlin-1 and Harrier-1 exploration wells. Access also may be by aircraft as well.

All facilities and snow roads will be temporary, and will be designed and constructed to meet federal, State and NSB regulatory requirements, industry standards and arctic oil field best practices. Additionally, the NSB Oil and Gas Technical Report (NSB 2104) was consulted along with the NSB Comprehensive Plan from 2019 to 2030 (adopted March 2019).

The focus of this application and plan of operations is the Peregrine Snow Road. **SEQUENCE and SCHEDULE of OPERATIONS**

<table>
<thead>
<tr>
<th>Project Milestones and Schedule</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Permitting</td>
<td>10 July 2020</td>
<td>10 January 2021</td>
</tr>
<tr>
<td>2. Perform Field Studies</td>
<td>14 August 2020</td>
<td>5 September 2020 (complete)</td>
</tr>
<tr>
<td>3. Pre-pack and construct staging ice pad and then snow roads</td>
<td>7 December 2020</td>
<td>5 January 2021</td>
</tr>
<tr>
<td>4. Use PEP 2P Staging Pad as logistics hub, swapping out loads</td>
<td>5 January 2021</td>
<td>27 April 2021</td>
</tr>
<tr>
<td>5. Construct drill ice pads (concurrent with and as snow road advances)</td>
<td>27 December 2020</td>
<td>5 January 2021</td>
</tr>
<tr>
<td>6. Mobilize drill rig, camp, and tangibles to first well</td>
<td>5 January 2021</td>
<td>15 January 2021</td>
</tr>
<tr>
<td>7. Drill Merlin-1</td>
<td>15 January 2021</td>
<td>1 February 2021</td>
</tr>
<tr>
<td>8. Haul camp, and tangibles to Harrier-1</td>
<td>2 February 2021</td>
<td>12 February 2021</td>
</tr>
<tr>
<td>9. Mobilize equipment and test Merlin-1</td>
<td>1 February 2021</td>
<td>15 February 2021</td>
</tr>
<tr>
<td>10. Mover drill rig and drill Harrier-1</td>
<td>12 February 2021</td>
<td>8 March 2021</td>
</tr>
<tr>
<td>11. Move testing spread from Merlin-1 and test Harrier-1</td>
<td>8 March 2021</td>
<td>22 March 2021</td>
</tr>
<tr>
<td>12. Demobilize drill rig and tangibles</td>
<td>22 March 2021</td>
<td>30 March 2021</td>
</tr>
<tr>
<td>13. Demobilize all equipment and camps, close snow roads and ice pads</td>
<td>30 March 2021</td>
<td>27 April 2021</td>
</tr>
<tr>
<td>14. Stock all roads and pads</td>
<td>1 August 2021</td>
<td>1 September 2021</td>
</tr>
</tbody>
</table>

## Peregrine Snow Road Location and Layout

The Peregrine Snow Road alignment is shown in Figures 2 through 4 in Attachment 1. Location by Umiat Meridian, Townships, Ranges and Sections (Umiat MTRS) for the Peregrine Snow Road are listed below, along with GPS Coordinates (WGS84) for start and end, and for the Merlin-1 and Harrier-1 Drill Pads.

<table>
<thead>
<tr>
<th>Pad and Snow Road Access Route Summary</th>
<th>Segment</th>
<th>Length</th>
<th>Umiat MTRS</th>
<th>Sections</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Start at NSB CWAT to Harrier-1</td>
<td>42 miles</td>
<td></td>
<td>T9N/R2E</td>
<td>13, 14</td>
<td>M00 Peregrine Snow Road at 70.127°/151.514°</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>T9N/R2E</td>
<td>24, 23, 26, &amp; 34</td>
<td>NPR-A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>T8N/R2E</td>
<td>4, 9, 16, 21, 20, 29, 30 &amp; 311, 12</td>
<td>NPR-A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>T7N/R1E</td>
<td>11, 14, 23, 22, 28, 29 &amp; 32</td>
<td>NPR-A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>T5N/R1E</td>
<td>8, 7 &amp; 18</td>
<td>NPR-A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>T8N/R1W</td>
<td>13, 24, 23, 26, 27, 33 &amp; 32</td>
<td>NPR-A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>T5N/R1W</td>
<td>8 &amp; 7</td>
<td>NPR-A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>T2N/R2W</td>
<td>12, 13, 14, 23, 26 &amp; 35</td>
<td>NPR-A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>T4N/R2W</td>
<td>2, 11, 10, 15, 22, 21, 28 &amp; 33</td>
<td>Peregrine Lease Block within NPR-A</td>
</tr>
</tbody>
</table>
### Pad and Snow Road Access Route Summary

<table>
<thead>
<tr>
<th>Segment</th>
<th>Length</th>
<th>Umiat MTRS</th>
<th>Sections</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harrier-1 Drill Ice Pad</td>
<td>16 miles</td>
<td>T3N/R2W2</td>
<td>17, 16, 15, 22, 23, 24, 25</td>
<td>Harrier-1 in Peregrine Lease Block within NPR-A</td>
</tr>
<tr>
<td>Harrier-1 to Merlin</td>
<td>16 miles</td>
<td>T3N/R2W1</td>
<td>30 &amp; 31</td>
<td>Peregrine Lease Block within NPR-A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T1N/R2W1</td>
<td>1, 2, 11, 10, 15, 22, 23, 26, 27 &amp; 34</td>
<td>Peregrine Lease Block within NPR-A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T1N/R2W34</td>
<td></td>
<td>Merlin-1 in Peregrine Lease Block within NPR-A</td>
</tr>
<tr>
<td>Merlin-1 Drill Ice Pad</td>
<td>18 miles</td>
<td>T1N/R2W4</td>
<td>3, 9, 16, 15 &amp; 22</td>
<td>500' x 500' ft ice pad at 69.484°/152.3664° (WGS84)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T1N/R2W23 &amp; 24</td>
<td></td>
<td>Peregrine Lease Block within NPR-A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T1N/R1W19</td>
<td>30, 29, 28, 32 &amp; 33</td>
<td>NPR-A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T1S/R1W4</td>
<td>5, 9 &amp; 3</td>
<td>NPR-A, Umiat</td>
</tr>
</tbody>
</table>

### 3 Temporary Buildings, Facilities and Utilities

#### Temporary Buildings

Temporary building facilities will be limited to three envirovac/warmup shacks staged on shooflys along the alignment, all spotted within lined secondary containment along with light plants.

#### Temporary Landing Strips

Additional details are provided in Appendix A: Aircraft Use Plan.

For safety and exposure control during the Coronavirus 19 Pandemic, Emerald also may use fixed wing aircraft to accomplish drill crew changes. The number of takeoffs and landings to support crew changes will be limited to the maximum extent possible. Therefore, Emerald plans on utilizing the Umiat airstrip which will allow larger aircraft to be employed, resulting in fewer flights.

Emerald, however, also may access the ice drill pads by fixed wing aircraft using lakes or the Peregrine Snow Road as landing strips. Theses landing strips will only be on areas that have adequate space for safely landing aircraft.

#### Temporary Airstrips on Lakes.

Emerald will create a flat area on predetermined grounded, frozen lakes to serve as landing strips to receive aircraft. During snow road construction, survey parties will scout lakes and identify grounded lakes along the snow road that can be used for this purpose, and then stake/locate landing strips only on grounded ice (< 4 ft). A rubber-tracked Steiger with a blade will then clear the snow to ice approximately 50 feet wide and 3500-feet long for the aircraft to land whether on wheels or skis.

Compacted/cleared areas on each lake will be long and narrow (airstrip shaped) and encompass a small area of the total lake/ice surface. Therefore, based on the airstrips located on grounded ice, and aircraft using the airstrip for a short period of time during landings & takeoffs, there should be no adverse effect on the overall hydrologic lake regimes and should not impact habitat or populations of fish, invertebrates, or waterfowl. Further, no ice chips or water will be used to construct a lake landing strip; rather the strip will be tightly baled to ice and compaction will be minimal.

#### Temporary Airstrips on Peregrine Snow Road.

If a single-engine Otter (or similar) fixed wing on skis uses the snow road as a landing strip, then Emerald will build the snow road about 50 feet wide & 3500 feet
long at least 1-foot thick of thoroughly compacted snow. If a Pilatus N-12 STOL on wheels is used, then Emerald also will use water and trimmed ice from Lakes P1 or P2 to reinforce the snow road to meet Pilatus N12 requirements, possibly building it up into a light ice road if need be.

**Monitoring Aviation Operations.** Landings will be recorded in an Aircraft Log that will be filled out electronically and sent to BLM. After use of the strip is no longer necessary, Emerald will inspect the location and record area conditions by GPS location to be included in the final reporting.

**Utilities**

No utilities are planned for this project.

## 4 Water and Wastewater

**Fresh Water and Ice Chips.** EMERALD will withdraw water and trim ice chips for the Peregrine Snow Road from five lakes along the alignment. Volumes, locations and access are listed below and shown in Figures 3 and 4.

### TWUA A2020-110 Water Sources Summary

<table>
<thead>
<tr>
<th>Source</th>
<th>Total Volume</th>
<th>Requested</th>
<th>Umat MTRS and (WGS84 Coordinates)</th>
<th>Access Road Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake P1</td>
<td>348,700,000</td>
<td>22,100,100</td>
<td>T3N R2W, Sec 4 &amp; T4N R2W, Sec 32,33 (69.653°/-152.409°)</td>
<td>&lt;100 ft</td>
</tr>
<tr>
<td>Lake P2</td>
<td>59,000,000</td>
<td>2,500,000</td>
<td>T2N R2W, Sec 15, 22 (69.652°/-152.369°)</td>
<td>&lt;100 ft</td>
</tr>
<tr>
<td>Lake P3</td>
<td>104,200,000</td>
<td>4,200,000</td>
<td>T2N R2W, Sec 28, 33 (69.684°/-152.373°)</td>
<td>&lt;100 ft</td>
</tr>
<tr>
<td>Lake P5</td>
<td>51,700,000</td>
<td>200,000</td>
<td>T5N R2W, Sec 23, 26 (69.776°/-152.312°)</td>
<td>&lt;100 ft</td>
</tr>
<tr>
<td>Lake L9006</td>
<td>50,900,000</td>
<td>5,000,000</td>
<td>T8N R6E, Sec 9, 10, 15&amp; 16 (70.053°/-150.637°)</td>
<td>&lt;100 ft</td>
</tr>
</tbody>
</table>

Max pump flow rate at all lakes = 700 gallons per minute

Water use will total up to 30 million gallons as follows:

- About 20 million gallons for snow road “armoring” and 5 million gallons for ice pads (fresh water and ice chips combined).
- Another 4 million gallons for drilling.
- Up to another 1 million gallons for hydraulic stimulation/fracturing and testing.

Snow cover may be removed from grounded portions of the lakes that are less than 4 feet to help provide access for water withdrawal. Water pumped from these lakes will be hauled in skid-mounted trailer tankers by Steigers, Pisten Bullys and by Volvo A45 Water Buffaloes during construction.

Light plants with built-in 110% containment will be placed within additional secondary containment areas (SCAs), spotted next to pump houses & road intersections and refueled daily following Emerald fuel transfer procedures.

Signs will be placed at lake access points to identify each permitted lake that is being actively used. Rolling stock equipment will not be refueled on frozen lake surfaces.

Water withdrawal from fish-bearing water bodies also will be authorized under Fish Habitat Permits from the Alaska Department of Fish and Game (ADF&G). Emerald is assuming all lakes are resistant fish bearing; therefore, all water intake hoses in all lakes will have ADF&G-approved screens at the intake points to prevent fish entrapment.

**Domestic Wastewater.** Domestic wastewater (both gray and black water) will be limited to 3,000 gallons per week collected from the envirovac holding tanks before being hauled to the NSB-SA-10 wastewater treatment plant for disposal. Domestic wastewater will not be treated on site.
5 Fluids Management, Storage and Spill Response

No aboveground Storage Tanks (ASTs) storing flammable and combustible liquids will be spotted along the snow road alignment. Fluid transfers will be limited to re-fueling envirovacs and light plants, generally every other day by a 5,000-gallon spreader tanker truck.

During fuel transfer operations, tundra underlying the Peregrine Snow Road will be protected from leaks or drips by using drip pans or other surface liners designed to catch and hold fluids under the equipment. Two spill technicians & fuel contractors (trained and certified oil handlers), operating under the EMERALD Fluid Transfer Procedures, will attend all bulk fluid transfer operations. Spills of hydrocarbons, or chemicals on snow roads also will be cleaned up immediately to prevent damage to the underlying tundra when the ice pad or roads melt.

EMERALD’s existing, Alaska Department of Environmental Conservation (ADEC)- reviewed spill plan: ADEC 20-CP-5256, covers spill response equipment to be staged along the snow road alignment; the Plan provides spill prevention and response considerations specific to this Project. The Plan includes immediate response actions for a spreader tank leak, reporting requirements, communication trees, receiving environments, spill cleanup mobilization response times, well control information and spill prevention guidance.

Additionally, the contractors providing fueling services will have updated and current Spill Prevention Control and Countermeasure (SPCC) Plans specific to their operations on-site. Contractor crews will be trained in the appropriate response & prevention strategies outlined in these plans.

6 Solid Waste Management

All waste management activities will be conducted in general accordance with the Emerald Peregrine Exploration Program Solid Waste Management Plan (WMP) and in conformance with EMERALD HSE Management Policies.

Additionally, the latest versions of the Alaska Safety Handbook (ASH), the North Slope Environmental Field Handbook (NSEFH) and the Alaska Waste Disposal & Reuse (“Redbook”) Guide are adopted as guidance, reference and standard operating procedures and workplace “best” safety, environmental and waste management practices for Emerald operations.

RCRA-exempt Wastes. Wastes generated from envirovacs will include domestic wastewater and fluids from household (camp) cleaning supplies used to clean the envirovacs. Both are exempt from regulation as Resource Conservation and Recovery Act (RCRA) hazardous wastes (“RCRA- exempt wastes”) per 40 CFR 261.4 and 261.7. The RCRA-exempt household wastes will be combined with domestic wastewater & temporarily stored in the envirovac holding tanks before being hauled to the NSB SA- 10 wastewater treatment plant for disposal.

Non-hazardous Solid Waste. Non-hazardous solid waste in the envirovacs will include municipal solid waste (MSW) comprised of lunch sacks and food scraps, etc. Bull cooks cleaning the envirovacs will collect the MSW from the envirovacs and then toss them into a MSW dumpster on each drill pad. The MSW dumpsters will have animal-proof lids and will be managed to avoid potential wildlife interactions. MSW dumpsters will be hauled offsite, generally on a weekly basis, for disposal in the NSB SA10 landfill.

Hazardous Waste. Hazardous solid waste includes listed, characteristic and universal wastes. No hazardous solid waste will be generated during Peregrine Snow Road construction or operations.

7 Snow Road Construction

Emerald will build the 76-mile Peregrine Snow Road within NPR-A (Figures 3 to 4) to accommodate drill rig and rig camp moves. Emerald also will build ice pads along the alignment large enough to safely carry
Plan of Operations: Peregrine Snow Road

out drilling and support operations.

The Peregrine Snow Road will be constructed and maintained using the generally accepted practices for the North Slope, subject to BLM tundra opening criteria as outlined in NPR-A IAP/FEIS. The snow road will generally be 25-35 feet wide and compacted with a minimum 6-inches thick snow, depending on drilling rig and vehicle requirements. Rig mats or other similar items may be used on or in the construction of snow roads at selected locations as necessitated by field conditions encountered during construction or during equipment movement. The rig mats will be removed prior to the end of the operating season. Additionally, ice bridges or ramps crossing streams may be required with ice chip aggregate and water coming from surrounding lakes.

Based on experience, best practices, conversations with NSB residents and reviews of the NSB Oil and Gas Technical Report and Nuiqsut Comprehensive Development Plan, Emerald developed the following objectives as a guide for constructing and operating snow roads.

1. Avoid sensitive tundra by as much as possible by using previous alignments and winter trails in the area.

2. Where sensitive tundra cannot be avoided, be sure adequate snow cover or ice chips are in place to support tussock and willow structure during construction.

3. Add a minimum of 6 inches of snow or ice to selected areas of the pre-packed snow cover on tundra during construction to ensure tundra protection and weight stability for equipment.

4. BLM and ADNR-DMLW may grant conditional approval for half-loaded water buffaloes to water the route in pre-packed areas if tundra opening criteria have not been met. Once BLM and ADNR-DMLW has confirmed that tundra opening criteria have been met along the route, fully loaded water buffaloes may be used for watering.

5. Sections of the route that have been watered and have met tundra opening criteria may be worked with snow, ice and water additions, as necessary. Do not make repeated passes over watered areas before they are frozen.

6. If tundra is showing along the route, back in snow/ice chips for cover with Cat 245 Hard Tail end dumps and have them back into the area to dump the snow/ice. Then smooth with Tuckers and water with a half-loaded water buffalo. Allow the area to freeze.

7. Cross rivers and streams where willow counts are at their least. Mound up snow, if needed, at the stream crossings during pre-packing to help cover the willows.

8. Cross streams in shallow waters that normally freeze to bottom or can be bridged by using ice ramps and abutments to allow free passage of fish.

9. Ensure ice ramps at river crossings do not exceed a 4% grade approach to meet safety criteria for rig transport.

10. Build alignments as straight as possible and avoid sharp corners. Accident data indicates most incidents occur on corners. Long sweeping corners will be installed where change in direction is needed.

11. Work with the NSB to construct ice road crossings at established subsistence trails to provide a smooth transition for safe passage across the snow road.

12. Avoid establishing checkpoints as a measure to minimize impacts to subsistence hunting and travel. Pre-packing snow roads and ice pads also may be required and will be conducted by compacting existing snow with snow machines, Tucker SnoCats, Steigers, Pisten Bullys or similar all terrain smooth-tracked vehicles that are approved for summer tundra travel.
Historical Properties and Cultural Resources

Emerald completed a consultation, along with survey and fieldwork to inventory prehistoric, historic, and archeological sites ("resources") on and around the proposed ice pads and Peregrine Snow Road alignment. Field studies in support of the survey were done by Charles M. Mobley & Associates, Inc. (CMMA) in August and September 2020 to assess known resources, and to also look for and locate unknown sites. As part of the survey, TLUI data also was obtained by CMMA from the NSB Inupiat Heritage and Language Center (NSB IHLC) and reviewed, along with data from Alaska Heritage Resource Survey and National Register of Historic Places.

Results of the field work and research are presented in the Cultural Resource Survey for the Winter 2020/2021 Peregrine Exploration Program, Peregrine Lease Block, National Petroleum Reserve in Alaska Report which was prepared by CMMA. This report will be submitted for review by the NSB Planning and Community Services Department - Cultural Resources Office, ADNR/OHA State Historic Preservation Office ("SHPO"), BLM State Archaeologist, and BLM Arctic District Archaeologist.

The data and letter report both indicate there are no registered archaeological, historic or cultural resources found within 500 feet of the Peregrine Snow Road alignment. One potential resource, Umiat Test Well #9, was found 80 feet south along of the original Peregrine Snow Road alignment. Therefore, Emerald moved the alignmentabout 600 feet to the east & south to avoid impacts to the site, essentially creating a >500-foot buffer ("environmentally sensitive zone") around the site where traffic will be excluded.

Combined with drilling operations limited to winter when the ground is frozen and covered snow, CMMA concluded that combined with the avoidance of Umiat Test #9 by moving the Peregrine Snow Road, then "...construction of the proposed Peregrine Snow Road and ice pads warrants a determination of no adverse effect to historic properties under the Section 106 process of the National Historic Preservation Act."

It is important to note the snow road will eventually become “armored” through snow compaction, and maintenance which include blading, and adding snow saturated with fresh water from lakes. This may allow conventional tractor/trailer units, vac trucks, water trucks and winch trucks to safely access the drill sites later during testing and demobilization.

Emerald installed monitoring stations in September 2020 (Figures 3 and 4); the stations are capable of collecting snow cover and active zone freeze-down data and starting in early November each year, Emerald will submit this data on a weekly basis to NSB. Finally, Emerald will provide the NSB with an as built of the snow road and ice pads after closure in late April 2021.

Peregrine Snow Road River & Lake Crossings

Descriptions of stream and river crossings along Peregrine Snow Road are summarized in below and shown in Figures 3 and 4.

The snow road route will cross lakes, rivers and stream on grounded ice whenever feasible. Ice thickness at all crossings will be confirmed by hand drilling during route pioneering. There may be areas, however, on rivers, streams and lakes that may need to be protected with snow when traversing from tundra to ice. Emerald will first construct snow or ice ramps in these areas and then confirm the ice is thick enough to cross. This will eliminate impacts to riverbanks, lake shoreline and or tundra.

Finally, Emerald could run into tundra where wind has blown off most snow cover. Emerald will remove snow covering from surrounding grounded lakes in areas less than 4 feet deep and, pushing ahead, build up at least 6 inches of compacted snow. By avoiding snow cover compaction or removal from fish bearing lakes at depths greater than 4 feet, Emerald can help maintain natural hydrologic regimes in soils surrounding lakes and also help maintain habitat.
8 Heavy Equipment

The number and types of vehicles and equipment used in an “snow/ice road kit” for construction and maintenance of ice pads and snow roads are listed below. Heavy equipment used during operations will first consist of Pisten Bully and Steiger tractor/trailer units hauling the modular drill rig, camps, tubulars, food supplies and other operational tangibles. Eventually, as the snow road is “armored” with water to increase load support, the tundra tractor/trailer units will be replaced by conventional tractor/trailer units.
### Snow Road and Ice Pad Construction Kit (Typical)

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Quantity</th>
<th>Equipment</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 2000 Tucker Snowcats on tundra track w/ice auger drills</td>
<td>1</td>
<td>Cat 345 hard tail end dumps on LGP tires</td>
<td>6</td>
</tr>
<tr>
<td>Challenger Cat D8 on low ground pressure (LGP) tracks</td>
<td>2</td>
<td>Cat 666C loader or similar wheeled trimmers</td>
<td>3</td>
</tr>
<tr>
<td>All Terrain Tractors w/ blades</td>
<td>10</td>
<td>Volvo A25 water buffaloes on LGP tires</td>
<td>3</td>
</tr>
<tr>
<td>Skid-mounted roll-on roll-off winch and low boy trailers</td>
<td>10</td>
<td>Pumps and pump houses</td>
<td>3</td>
</tr>
<tr>
<td>6-man self-contained spike camp</td>
<td>1</td>
<td>Light towers and Mobile Heaters</td>
<td>8</td>
</tr>
<tr>
<td>Mechanic field service truck (also 5000-gal fuel &quot;spreader&quot; truck)</td>
<td>1</td>
<td>Pickup trucks</td>
<td>10</td>
</tr>
<tr>
<td>Caterpillar Motor Grader</td>
<td>2</td>
<td>Crew Bus</td>
<td>1</td>
</tr>
</tbody>
</table>

*All terrain tractors include Steigers and Pisten Bullys; all tanks and trailers are on tracks, low-ground pressure tires, skids or sleds.

---

### 9 Permit Requirements

The following permits, permissions and approvals are required for construction and maintenance of the Peregrine Snow Road.

<table>
<thead>
<tr>
<th>Permit Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency</td>
</tr>
<tr>
<td>North Slope Borough (NSB) Department of Planning &amp; Community Services</td>
</tr>
<tr>
<td>NSB Department of Planning &amp; Community Services</td>
</tr>
<tr>
<td>NSB Department of Planning &amp; Community Services</td>
</tr>
<tr>
<td>ADNR / Division of Mining, Land &amp; Water (DML&amp;W)</td>
</tr>
<tr>
<td>ADNR / DML&amp;W</td>
</tr>
<tr>
<td>ADEC / Division of Spill Prevention &amp; Response (SPAR)</td>
</tr>
<tr>
<td>ADEC / Division of Environmental Health (EH)</td>
</tr>
<tr>
<td>AK Department of Fish &amp; Game (ADF&amp;G) / Division of Habitat</td>
</tr>
</tbody>
</table>

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8
Plan of Operations: Peregrine Snow Road

<table>
<thead>
<tr>
<th>Permit Information</th>
<th>Agency</th>
<th>Permit Type</th>
<th>Permit Number</th>
<th>Permit Status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>US Environmental Protection Agency</td>
<td>Spill Prevention, Control &amp; Countermeasure (SPCC) Plan</td>
<td>Stamped</td>
<td>PE No. 7794</td>
</tr>
<tr>
<td></td>
<td>US Department of Interior/ Bureau of Land Management (BLM) – Arctic District Office for NPR-a</td>
<td>ROW (ROW) Permit for Access by Snow Road</td>
<td>Surface Use Plan of Ops (SUPO)</td>
<td>SUPO submitted for review. SUPO will be submitted via AFMSS2</td>
</tr>
<tr>
<td></td>
<td>BLM Alaska State Archaeologist &amp; Arctic District Office Archaeologist</td>
<td>Results of cultural survey recommending a determination of No Historic Properties Affected</td>
<td>ARPA Permit AA-095756</td>
<td>Submitted</td>
</tr>
<tr>
<td></td>
<td>US Fish and Wildlife Service (USFWS)</td>
<td>Letter of Authorization (LOA) for Incidental take of Polar Bear</td>
<td>Submitted</td>
<td>USFWS is preparing LOA</td>
</tr>
<tr>
<td></td>
<td>US Army Corps of Engineers/ Alaska Division (USACOE)</td>
<td>Wetlands consultation</td>
<td>Complete</td>
<td>Wetlands not impacted</td>
</tr>
</tbody>
</table>

10 Subsistence Plan

The proposed operations are within Nuiqsut Subsistence Use Area.

Emerald understands subsistence is a way of life for Nuiqsut residents and it is important to protect subsistence resources, uses and access. Emerald also understands that due to the high costs of goods, fuel and transportation, subsistence harvests reduce food costs and, more important, provides cultural identity and spirit. Emerald has completed consultation and a review of recent subsistence field surveys and inventories of prehistoric, historic, and archaeological sites.

PURPOSE & SCOPE

The goal of Emerald is to provide measures to mitigate subsistence impacts and to ensure Project security and safety procedures do not unduly restrict or reduce access to wildlife by subsistence hunters during operations. This will be achieved by implementing the following.

MEASURES to MITIGATE SUBSISTENCE IMPACTS

Account for Subsistence Harvests When Scheduling Project Activities. This Project will take place in the area where there are active subsistence harvests by Nuiqsut. Therefore, Emerald has opted to delay the start of this Project until the colder and darker part of winter 2020/2021 when limited subsistence activities takes place, and is generally limited to trapping and hunting moose and/or caribou further south in the Umiat area. This can help reduce adverse impacts to subsistence use from this Project.

Community and Agency Communication. Emerald also has already established a dialog with the NSB, local villages, and affected public on its exploration programs. Additional Project meetings, consultations and updates will be held, as necessary, with the NSB Planning and Community Services Department and with stakeholders in Nuiqsut as well. These discussions will help with the development of a plan of cooperation regarding Emerald operations on the North Slope.

The purpose of this dialog will help identify and implement measures that will be taken to minimize adverse effects on the availability of fish and wildlife for commercial and subsistence uses, and to ensure that operations have no negative effect on the quality of life for Alaskans. Emerald will work with all concerned stakeholders to maintain efficient and effective communications with the affected communities for the duration of the project.

Subsistence Representatives and Access. Emerald is negotiating with Umiaq Environmental LLC, Ukpakvik Inupiat Corporation (UIC) and ASRC Energy Services (AES) for Subsistence Representatives during the winter drilling program to ensure that activities are conducted to minimize potential impact
to local subsistence activities. Emerald has worked with representatives from both companies in the past.

Emerald also will construct the snow road and snow road approaches and shoulders to allow for smooth and easy transition for snow machines traffic when crossing through the Project area and safety buffer zone along the ice road. With respect to access, Emerald will not restrict traditional and customary subsistence access to and harvesting in the Project area, except for a 100-foot safety zone around each ice pad and the alignment when aircraft operations are underway. Note that although public access to the ice pads must be restricted due to safety concerns, EMERALD will provide shelter and assistance to subsistence users in emergency situations.

**Documentation and Compliance.** If potential subsistence issues are identified, subsistence representatives will be contacted and updated during drilling and testing operations to minimize impacts. The permitting actions associated with the exploration well will be public notified as part of the permitting processes. If there are concerns with regards to the Project, EMERALD will be receptive and pro-active, and records of all concerns expressed by subsistence hunters during operations will be maintained.

**Responsibilities.** The Emerald Field Environmental Coordinator will be responsible implementing this plan and overseeing Subsistence Representatives during operation. The Emerald HSE Manager will be responsible for submitting required reports to State and local agencies; and for updating this plan.

### 11 Rehabilitation Plan

Upon completion of drilling and testing operations, both wells will either be plugged and abandoned (P&A) or suspended in accordance with AOGCC regulations, and equipment and structures will be removed from the Project area by early April 2021.

The snow road also will be “tight bladed” by grader to remove dark-colored drips missed by the ACS spill technician and the snow spoils will be thawed with resulting oily water disposed of at a permitted disposal facility.

Emerald also will inspect the Peregrine Snow Road for trash and debris and slot all ice bridges and snow ramps crossing rivers to facilitate water flow during spring break up. Emerald will then construct snow berms across the entrance to Peregrine Road to bar further use after closure. Trash and debris collected will be transported for disposal at NSB SA-10. Emerald will then conduct an inspection and “stick picking” operation via helicopter in Summer 2021 to ensure that NSB and State cleanup requirements have been met.

Overall, this approach will result in no long-term disturbances to the tundra, as activities will be conducted only on the ice pads, select lakes and the Peregrine Snow Road.

Nonetheless, impacts to vegetation and habitat may occur. Therefore, Emerald will inspect the Project area following snowmelt in 2021 during stick picking to confirm that tundra damage did not occur. If tundra damage is discovered, Emerald will consult with the State and the NSB to determine the appropriate methods for restoration and incorporate them into a Tundra Damage Rehabilitation/Remediation Plan that meets requirements found in NSBMC § 19.30, 19.500 and § 19.60, ADL 397201 lease conditions, and specific State requirements.

The Plan will address the area, type, and extent of damage and will be developed in accordance with the *Alaska Coastal Revegetation & Erosion Control Guide* (developed by the ADNR Plant Materials Center), the *Streambank Revegetation and Protection Guide* (developed by the Alaska Department of Fish and Game), and other relevant guidance documents. NSB and State personnel will be invited to verify that rehabilitation operations are complete and that any issues identified are addressed.
12 Measures to Minimize Adverse Effects

Emerald has completed consultation and a field survey to inventory prehistoric, historic, and archaeological sites on and around the proposed snow road alignment. This included consultation with the NSB Inupiat History, Language & Culture (IHLC) Commission who supplied Emerald with Traditional Land Use Inventory (TLUI) Data under NSB 21-001. Emerald has received concurrence from the ADNR/OHA State Historic Preservation Office ("SHPO") that “no historical properties are affected,” especially when PEP 2P Staging Pad activities are limited to winter with snow-covered tundra & frozen ground.” The same recommendation was made by the field archaeologist in survey reports provided to the BLM.

Based on the review recommendations and to further prevent impacts, Emerald located its snow road alignment and ice pad within a 500-foot buffer zone within which all Project activities will be conducted. Emerald’s intention is that historic, cultural or archaeological resources (or suspected resources) discovered during Project activities are not to be disturbed under any circumstance.

This will include providing training to all field personnel on what to do as part of required Project orientation. If archaeological sites are discovered during Project activities, the following steps will be taken.

1. Project personnel discovering suspected critical sites during operations will not disturb nor enter the site, and mark the area with flagging tape or some other means;
2. Project personnel will stop all activities and inform their job supervisor who will contact Emerald onsite representatives;
3. Emerald will immediately report these properties to SHPO and NSB ILHC for identification and assessment;
4. Emerald will then use identification and assessment consultations to guide further activities in the site area.

FISH & WILDLIFE HABITAT

Wildlife avoidance & interaction plans have been prepared and are under review by the ADF&G and USFWS. These plans are adopted by reference and will be covered extensively in the site orientation training for all Project personnel.

More detailed information is provided in the Emerald Wildlife Avoidance & Interaction Plan, Bear Avoidance Interaction Plan. All plans are adopted by reference.

Pads constructed of ice will only be used in winter months during the open winter tundra travel season. Emerald identified willow habitats and then moved the ice pad to avoid them. Emerald also focused on avoiding areas (especially south-southwest facing stream embankments, pingos and drained lakes) that appeared to be prime bear den habitats, keeping in mind required buffer zones.

Wildlife that also may be in the area during the winter season are owls, ravens, arctic fox, wolverine, musk ox, and possibly, over-wintering caribou. Grizzly bears are known to inhabit the general area of where the project will occur but are likely to be inactive during the winter season. Polar bear range and habitat is not within this program and they probably will not be encountered. Emerald and its contractors will exercise caution during the project. Should a grizzly bear or polar bear be encountered, Emerald will follow the procedures as outlined in our Bear Avoidance Interaction Plan. Any sightings will be reported immediately to the Company Man and Emerald’s Lead Field Environmental Coordinator to warn personnel of the bear. Agency reporting would follow within 24 hours as indicated below. Reporting contacts are listed in all plans.

In summary, all Emerald activities will be conducted to minimize impacts. This includes mitigation measures outlined in the ADL lease stipulations and adherence to State and NSB land management regulations and permit requirements.
TRAINING PROGRAM

All Operations. The Emerald training program has been designed to inform everyone assigned to the Project of the environmental, social, and cultural concerns that relate to their job functions. Training components include a review of permit stipulations and requirements, cultural awareness, spill prevention and reporting, wildlife interaction, site specific safety, waste management practices, etc.

All personnel will participate in a specific training program module for bear safety and a briefing of the Bear Avoidance, Interaction, and Mitigation Plan. In addition, Emerald employees and contractors are required to complete an 8-hour training program provided by the North Slope Training Cooperative (NSTC). The North Slope Field Environmental Handbook, Alaska Safety Handbook, and a North Slope Visitor’s Guide are used for the training. The latest versions of these handbooks are adopted by reference, and copies will be readily available to personnel in the field. The training program includes classes on the Alaska Safety Handbook, personal protective equipment, camp and safety orientation, hazard communication, HAZWOPER Level I, and Environmental Awareness.

INTERACTING with LOCAL COMMUNITIES and COMMUNITY GROUPS.

Emerald will continue its partnership with local contractors and businesses through competitive bid contracting opportunities. This includes contracting to provide the drill rig and drilling services, camp and catering services, fuel supply and transport services, mobilization & demobilization services, and providing contracted Subsistence Representatives.

Subsistence trails also are an integral part of travel within the NSB. Travel to and from communities for subsistence harvests is normally by snow machine. This means people using the subsistence trails will be crossing the snow road during subsistence harvest hunting and trapping. The snow road and subsistence trail intersection will be marked with road signs and delineators.

Public Involvement

As part of the permitting process, Emerald has published public notices detailing planned winter drilling program operations in Utqiagvik, Fairbanks and Anchorage, and has been responding to requests for additional information (RFAI) from individuals and government as well as non-government organizations interested in the Project.

Public involvement has been limited due to shutdowns and social distancing on the North Slope and throughout the State caused by the COVID 19 Pandemic. Nonetheless, Emerald consulted throughout August and September 2020 with the NSB Department of Planning and Community Services (NSB Planning) via email more than 20 times on facets of this Project, including field studies. Emerald also held a teleconference with the entire NSB Planning staff on 5 August 2020 and presented a detailed power point on the Project.

During the same period from 26 August to 3 September, Emerald also contacted and consulted with the KSOP in daily SIMOPs teleconference. The proposed Project was discussed regarding proposed field operations and potential subsistence issues as well as immediate issues that may arise during field studies. This was done in tandem with SIMOPs meetings with ConocoPhillips Alaska Inc. and Oil Search Alaska LLC. Emerald proposes to continue consultation with KSOP by email throughout the Project as well.

Finally, Emerald consulted with NSB Land Administrator Gordon Brower to provide an update on the Project and also discuss how the NSB CWAT could be shared, and what an agreement would look like.
Appendix A to NSB Peregrine Snow Road Plan of Operations
Emerald House LLC

Aircraft Use Plan

Authority: Emerald HSE Manager  Custodian: Emerald Field Environmental Coordinator
Scope: Temporary Aviation Operations in Support of Drilling Ops
Issue: 12/2/2020  Issuing Dept.: Emerald HSE
Review: 12/1/2021

Introduction and Scope
Emerald is moving forward with plans to drill two exploration wells (Harrier 1 and Merlin 1) in its Peregrine Lease Block within the NPR-A.

Emerald planned winter operations include construction and maintenance of 78 miles of snow road and two ice pads, plus drilling & testing both exploration wells.

Emerald, however, also may access the ice drill pads by fixed wing aircraft using lakes or the Peregrine Snow Road as landing strips for crew changes. In this case, this Aircraft Use Plan (AUP) will be used to provide guidance on aviation operations detailing the temporary airstrip construction methods and locations, flight altitudes over NPR-A, and safety.

Scope
The number of takeoffs and landings to support crew changes should be limited to the maximum extent possible. Therefore, if at all possible, Emerald plans on utilizing larger aircraft suitable to the task, resulting in fewer flights.

Based on this approach, Emerald expects up to five roundtrips per week as summarized below.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Aircraft Use Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Landings</td>
</tr>
<tr>
<td>Drill and Test Merlin 1 (15 January to 1 March)</td>
<td>30</td>
</tr>
<tr>
<td>Drill and Test Harrier 1 (15 January to 1 March)</td>
<td>30</td>
</tr>
<tr>
<td>Subtotal</td>
<td>60</td>
</tr>
<tr>
<td>Total with 20% Contingency</td>
<td>72</td>
</tr>
</tbody>
</table>

Temporary Airstrips on Lakes
Emerald will create a flat area on predetermined grounded, frozen lakes to serve as landing strips to receive the aircraft for crew changes. During snow road construction, survey parties will scout lakes and identify grounded lakes that can be used for this purpose, and then stake/locate landing strips only on grounded ice (< 4 ft.).

A rubber-tracked Steiger with a blade will clear the snow to ice approximately 50 feet wide and 3500-feet long for the aircraft to land whether on wheels or skis. Compacted areas on these lakes will be long and narrow (airstrip shaped) and encompass a small area of the total lake/ice surface.

Temporary Airstrips on Peregrine Snow Road
If a single-engine Otter (or similar) fixed wing on skis uses the snow road as a landing strip for crew changes, then Emerald will build the snow road approximately 50 feet wide and 3500-feet long and at least 1-foot thick, of thoroughly compacted snow. If a Pilatus N-12 STOL on wheels is used, then Emerald also will use water and trimmed ice from Lakes P1 or P2 to reinforce the snow road to meet Pilatus N12 requirements, possibly building it up into a light ice road if need be.
1 Objectives

The objectives of the Plan are threefold:

1. Minimize the effects of low-flying aircraft on wildlife, subsistence activities, and local communities.
2. Provide aviation data required to monitor aviation operations.
3. Provide safe aviation operations

Objective 1: Minimize Effects of Low-flying Aircraft

Fieldwork will avoid impacting subsistence activities, will follow general conditions found in BMP F-1 and BLM Lease Stipulations. Pilots and aircraft managers must be reminded of these conditions so that they too can be looking out for possible conflicts

- Aircraft operations must be sensitive to needs of the local people and keep in mind that people on the ground hear and see aircraft long before pilots see them.
- Emerald will notify the NSB and the Kuukpik Subsistence Oversight Panel (KSOP) and other operators when aviation operations start to help minimize disturbances.
- Hazing of wildlife by aircraft is prohibited. Pursuit of running wildlife is hazing. If wildlife begins to run as an aircraft approaches, the aircraft is too close and must break away.
- Use of aircraft, near known subsistence camps and cabins should be kept to a minimum.
- If caribou are seen, then aircraft must safely divert to avoid coming any closer to them. Consistent with air safety rules and mission requirements, this means trying to maintain an altitude of 1000 feet or more above ground level (AGL) over caribou winter ranges, unless doing so would endanger human life or violate safe flying practices.

Note the BLM AO authorizes caribou wintering areas annually after consulting with the ADF&G in defining caribou winter ranges. Emerald will request this information and pass it on to aviators under contract.

Objective 2: Provide aviation data to monitor aviation operations

The tail numbers of the aircrafts will be provided to NSB prior to the start of operations. Landings will be recorded in an Aircraft Log that will be filled out electronically and sent to NSB as part of the Project completion report. After use of the strip is no longer necessary, Emerald will inspect the location and log area conditions in final reporting as well.

Objective 3: Provide safe aviation operations

Temporary airstrips will only be on areas that have adequate space for safely landing aircraft; and Emerald will work closely with the charter provider on what is required.

Emerald will create a flat area on lakes and/ or will use or upgrade the snow road next to each ice drill pad to serve as landing strip to receive the aircraft. Airstrips will be oriented in northeast/southwest direction and will be sufficient width and length required for safe aircraft safety.
Black bags filled with snow will be placed along the sides of the berm to delineate the edge of landing strip along with lighting and windsock as needed. A proposed example of a Temporary Landing Strip (which will be vetted by the charter operators) is attached as Supplement 1 to the AUP.

Ground crew and airstrip operations safety procedures are included as Supplement 2 to the AUP.

2 Responsibilities
- The Emerald Field Environmental Coordinator (FEC) is responsible for implementing and managing this Plan in the field. This
- The EMERALD HSE Manager is responsible for ensuring this AUP is included as required reading and training with logistic companies and aircraft charter operations.
- The EMERALD FEC and HSE Manager will determine if additional measures are required after AUP implementation.

3 Safety Concerns and PPE Requirements
- Level D PPE for personnel.
- See Attachment 1 for additional safety equipment required at an airstrip.

4 Reference Documents
- 43 CFR Part 3160: Onshore Oil and Gas Order 1
- North Slope Environmental Field Handbook (NSEFH, latest edition adopted by reference)
- NPR-A Integrated Activity Plan Record of Decision, BMP B-2g and BMP F-1 (BLM, 2013)
- International Association of Oil & Gas Producers Report 590: Aircraft Management Guidelines (AMG) (IGOP, Version 2)

5 Requirements and Standards
Pursuant to NPR-A IAP BMP F-1, Emerald must ensure that aircraft used for permitted activities maintain altitudes according to the BMP F-1 guidelines.
This Plan helps meet NPR-A IAP/FEIS ROP M-2a requirements.

6 Recordkeeping
The Emerald FEC is responsible for implementing this Plan and keeping required records and reporting to BLM.

Revision Log

<table>
<thead>
<tr>
<th>Revision Date</th>
<th>Authority</th>
<th>Custodian</th>
<th>Revision Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/1/2020</td>
<td>Rob Crotty</td>
<td>Rob Crotty</td>
<td>Initial Release</td>
</tr>
</tbody>
</table>
Supplement 1: Example of Landing Strip

- Orange Edge Light
- Green/Red Threshold Light
- Black Garbage Bag
- GPS Point

Runway Length: 3500'

Runway Orientation: Setup NE-SW
Supplement 2

Airstrip Operations

Purpose:
To outline operational guidelines, roles and responsibilities associated with operation of the Emerald temporary landing airstrip.

Procedure:

Safety –
Safety at the Emerald landing strip, especially around the aircraft, is the primary concern during aircraft operations. All activities including radio communications, airstrip ground procedures, passenger loading, and freight handling must be conducted with safety as the prime concern.

All persons directly involved with the airstrip during aircraft operations will be trained and familiar with emergency procedures.

Passenger Flights –
The following requirements must be adhered to by all passengers traveling by aircraft:

- All passengers on the aircraft must be transported to and from the airstrip by the designated vehicle to assure control over the passengers and to reduce traffic at the airstrip.
- All passengers must follow the direction provided by the designated Emerald airstrip traffic personnel and Flight Crew for loading and unloading the aircraft and ground vehicles.
- No smoking will be allowed in the ground vehicle, near the aircraft or on the aircraft.
- Outgoing passengers shall remain in the ground vehicle until the driver conducts them to the aircraft, unless otherwise required to assist handling freight under the direction of the designated Emerald airstrip traffic personnel.
- Refer to “Fixed Wing Aircraft Travel” in the “TRANSPORTATION” section of the Alaska Safety Handbook.

Freight Flights –
The following requirements must be adhered to by all persons assisting in the loading or offloading of an aircraft at the Emerald Airstrip:

- All persons operating equipment or vehicles in support of freight operations must adhere to the direction of the designated Emerald airstrip traffic personnel during activities at the airstrip and near the airstrip.
- Heavy equipment operators shall be thoroughly familiar and briefed regarding operating their equipment near the aircraft. (Note: Extreme caution shall be taken when loading and unloading pallets and materials around the aircraft since any damage to the aircraft will most likely result in the grounding of the aircraft.)
- No unnecessary equipment or personnel shall be present during freight loading / offloading activities.

Runway Access During Times of Designed Aircraft Approach and Takeoff –
To assure that safety is maintained at the airstrip, the following procedures shall be observed by all persons driving vehicles on the runway or across:

- Vehicle drivers must stop at the STOP signs denoting the portion of the snow road or lack being used as an active landing strip and look for approaching aircraft prior to proceeding.
- If there is an aircraft operation in progress, drivers must obey any directions to hold behind the barricades short of the runway until specifically directed to travel onto the runway by the designated Emerald airstrip traffic personnel.
Responsibilities:
Designated Emerald Airstrip Traffic Personnel –
Anyone giving weather information to flight crews must be a National Weather Service trained Weather Observer.

The Emerald Overall Camp Supervisor position is the person responsible for airstrip operations with support from Emerald operations personnel as needed with the following responsibilities.

- Communicating with other airstrips and aircraft to obtain upcoming flight arrival information.
- Confirming the loading passengers and baggage onto the ground vehicle safely and in time to arrive at the airstrip prior to the aircraft arrival.
- Organizing and directing the loading of freight onto the appropriate ground vehicle safely and in time to arrive at the airstrip prior to the aircraft arrival.
- Manifesting all passengers / freight being loaded onto all aircraft.
- Safely managing all vehicles approaching the aircraft once cleared by the flight crew to do so.
- Maintaining control over all passengers moving from vehicle to aircraft or aircraft to vehicle.
- Notifying flight crew when ground operations are complete, and all equipment is moving away from the aircraft.
- Arriving at the airstrip prior to aircraft operations and remaining until aircraft has left the landing strip traffic pattern.
- Taking regular weather observations to communicate current conditions as well as trends to flight crews as requested.
- Overall radio communications during flight operations including ground-to-ground and ground to air.
- Providing flight crews with weather, runway conditions and clearance information during flight times.
- Maintaining visual contact with the runway and all traffic in the area during airstrip operations.
- Controlling traffic onto airstrip while aircraft is on the ground.
- Inspecting the runway to observe and correct any obstructions; inspecting navigational aids, lighting and traffic markers to ensure operational integrity.
- If necessary, notify the ACS Environmental Technician for hazing of wildlife that may be a threat to aircraft operations.
- As necessary prior to take off, checking the runway for obstructions and security.
- Maintaining in working condition airstrip facilities, navigational aids, communications equipment, lighting and related elements.
- Ensuring compliance with all company policies concerning operation and maintenance of the Emerald airstrip.

Reference and Resources
Alaska Safety Handbook (ASH)
Source of Base Map: Lands, Minerals and Realty - BLM, Alaska

General Land Status Map
Peregrine Exploration Program
Figure 2
January 5, 2021

Jacobs/CH2M Hill for North Slope Borough CIPM
C/O Ian Van Blankenstein
949 E. 36th Ave., Ste. 500
Anchorage, Alaska 99508
Email: ian.vanblankenstein@jacobs.com


Dear Mr. Blankenstein:

We have completed our review of your request to construct an addition to the existing WTP; then demolish the old washerteria building and shop within Wainwright, Alaska, Village District.

**Project Description**

Jacobs/CH2m Hill has prepared a design for the North Slope Borough-CIPM to upgrade the existing Wainwright WTP. The purpose of this project is to replace aged and deteriorated infrastructure. The newest part of the plant (Area 3), which contains the water treatment processes, will be preserved and the oldest adjacent areas (Areas 1 and 2) will be demolished and replaced. The design work includes the following:

1. Demolish existing facility Areas 1 and 2 (see Figure 1 below)
2. New modular exterior emergency power standby generator
3. Design 4,670 square foot addition to remaining facility (Area 3, see below)
4. New addition to include:
   a. Garage/maintenance room
   b. Boiler room
   c. Break area
   d. Administrative offices
   e. Restroom, and shower room
   f. Storage
6. An adequate number of culverts shall be installed and maintained under fills authorized under this permit to avoid interruption of natural surface drainage. Excessive ponding of areas next to fills indicates non-compliance this condition.

7. There shall be no discharge of fill material for pad or road construction within 100 feet of the high tide line of any tidal water nor within 100 feet of the ordinary high water mark of any lake, stream, river, pond, slough, or other non-tidal water without the approval of the Land Management Administrator.

8. The lands and facilities subject to this permit must be maintained in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain approval from the Land Management Administrator or his/her designated representative, which may require restoration and or re-vegetation of the area.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, and/or herbert.ipalook@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-
If you have any questions please contact Darylynn Aveoganna, Land Management Specialist at (907) 852-0320 ext. 5413 or by email at darylynn.aveoganna@north-slope.org.

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Raymond Nashookpuk, Wainwright Village Deputy Assistant, NSB
Scott Danner, Public Works, NSB
Jeanne Proulx, AKNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Braze, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDI/F&WS, Fairbanks
Jeanne Hanson, USDI/NMFS, Anchorage
Josephine Delgado-Pikat, DCOM, Juneau
dcc.water.oil@ndpsm@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.McCoy@usace.army.mil
Donna Wixson, USDI/BLM
Shelly Jones, BLM District Manager
Jeanne Frazier, AKNR/DD&G, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
dog.permitting@alaska.gov
Hugh Pakootok Sr., President, Olgoonik Corporation
Raymond Nashookpuk, Mayor, City of Wainwright
Howard Pakotok, President, Wainwright Tribal Council
Herbert Ipalook Jr., Rodney Ahtuangaruk Jr., Field Inspectors, Nuiqsut
Allyson Atos, Lead Field Inspector, Utqiagvik
Levy Oenga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Raymond Agulili Jr., Inupiat Community of the Arctic Slope Board Member, Wainwright
Amy Bodfish, Inupiat Community of the Arctic Slope Liaison, Wainwright
Files

N21-145/GRB/mk/Ik acting LMR Manager/da
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES
- SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NA4 1983 ALBERS OR GEOGRAPHIC.
- DESIGN PLAN (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-8320 TOLL FREE (IN-STATE): (800) 476-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

Steven Decker
Authorized Signature

[Signature]

2/26/2020
Date

Project Administrator

Name

Steven Decker

Title

FEE PAID

☐ SPECIAL PLANNING COMMISSION MEETING $12,000

☑ DEVELOPMENT PERMIT $2,000, plus $500/well

☐ ADMINISTRATIVE APPROVALS $1,500

☐ CONDITIONAL DEVELOPMENT PERMITS $3,000

AMOUNT PAID

DECISION

☐ ADMINISTRATIVELY APPROVED
This is a minor alteration to a previously approved development permit for commercial recreation.

☐ REZONING APPROVED
This proposal development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan Conditions, lease stipulations, and provisions of the state and federal law and permit served hereunder.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable regulatory policies, represents the developer's best efforts to implement all relevant best efforts and minimization policies, and as long as conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter.)

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land that is listed as a conditional development for this zoning district or has been elevated by the NSB Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

[Signature]
NSB Land Management Administrator

DATE

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect. NSMBE §19.30.130.
DRAFT DEVELOPMENT PERMIT - REQUEST FOR COMMENTS

COMMENTS DUE BY: DECEMBER 31, 2020

This is a Draft Development Permit only for the purposes of review and gathering comments during the comment period prescribed by NSBMC Title 19. It contains conditions proposed for inclusion in a final permit, if a decision is made to issue a final permit. This draft permit should not be taken to mean that the proposed project is, or will, be approved. Only upon issuance of a final permit will the proposed project be approved to commence.

December 11, 2020

Great Bear Pantheon LLC (GBP)
C/O Patrick Galvin, Chief Commercial Officer
3705 Arctic Blvd, Suite 2324
Anchorage, Alaska 99503
Email: pat@greatbearpetro.com

RE: NSB 21-146, Draft Development Permit, Talitha A Exploration Well, TSN, R12E, Section 3, Conservation District.

Dear Mr. Galvin:

We are in the process of reviewing your request for the Talitha A Exploration project located within the Conservation District.

Project Description

Project Overview

Great Bear Pantheon will drill the Talitha A well this winter. The well will be located eight miles west of the Dalton Highway, and 25 miles south of Deadhorse, adjacent to Franklin Bluffs.
The drillsite will be located on state oil and gas lease ADL 391658, at Umiat Meridian, Township 05N, Range 12E, Section 03; at coordinates 69° 49' 23.11" N, -149° 5' 25.90 W. It will be accessed via an 8-mile ice road that will have a driveway on the Dalton Highway at Milepost 386.7.

The Well

The Talitha A well will be drilled as winter ice road/pad supported operation. It will be drilled using the Nordic-Calista Rig #3. Targeted spud date is 1/25/21. It will be a vertical well drilled to the base of the Kuparuk sand to approximately 10,200’. There are multiple targets in the Brookian and Kuparuk intervals that will be evaluated. The well will be logged, cased, and will likely be fracture stimulated at the most prospective interval encountered. If logistically possible, a small lateral will be drilled into a prospective interval as well. A decision on a lateral and/or stimulation will be made based on seasonal timing and logging results. The log suites are expected to include: Quad Combo, FMI, RFT, rotary sidewall cores, NMRI, Caliper, and possibly others. Unless the results are significantly below expectations, the well is expected to be suspended for potential use as a producer.

Pad Layout

The ice drill pad will be 520’ x 240’ (124,800 sq ft, 2.86 acres) as the working surface, larger at the base, and is expected to be 3 feet thick. Support facilities will include a satellite office camp, with an 11-bed capacity for the Company Man and alternate (sufficient for the entire crew to shelter in place in case of emergency need), storage areas (e.g., fuel storage, drilling waste or fluid components storage), and maintenance buildings. The crew will be housed at a camp (or the Aurora Hotel) in Deadhorse and shuttled to the well site for their shifts. The layout of the buildings on the ice pad is shown in the attachment.

Fuel and Hazardous Materials

Fuel will be stored on the drilling pads and possibly at emergency shelters (if used). Fuel storage tanks will include secondary containment that will hold a minimum of 110 percent (110%) of the single largest tank or any group of tanks permanently manifold together. Fuel storage, handling, transfers, and spill reporting will be conducted in accordance with the regulatory requirements as described in the Great Bear Exploration Project C-Plan, North Slope Environmental Field Handbook, and Alaska Safety Handbook. All bulk fuel and fluid transfers in excess of 500 gallons will be monitored by an Alaska Clean Seas (ACS) Spill Technician. The size of the day tank on the rig may vary, but it will be less than a 10,000-gallon capacity. The maximum amount of fuel stored at a drill site will be 9,000 gallons. All fuel and hazardous materials stored at the drill site will be kept more than 100 feet from a waterbody. Drip pans will be placed under vehicles and equipment capable of leaking hazardous fluid. No vehicle refueling will take place in an active river floodplain. All independent fuel and hazardous substance containers will be marked with the contents and the lessee’s or contractor’s name using paint or a permanent label.

Solid Waste

All waste disposal procedures will conform to local, state and federal requirements. The general approach to waste management will be to temporarily store wastes and periodically haul waste materials to existing North Slope facilities for proper treatment and disposal.

Solid, non-burnable waste will be deposited in dumpsters located at each site. These containers will be hauled to the NSB landfill at Prudhoe Bay. The food waste that could attract wildlife will be stored in enclosed containers pending periodic hauling or such wastes will be hauled each day to an approved
disposal center (such as PBU). To reduce the amount of trash that must be hauled from the drilling location, all solid, burnable waste could be incinerated at the location in accordance with 18 AAC 50. The ash will be hauled to the NSB landfill. Camp wastewater will be hauled to an approved disposal facility on the North Slope. The satellite office camp should generate less than 500 gallons per day of domestic wastewater.

Drill cuttings will be promptly trucked to an approved G&I facility when generated. Waste drilling fluids and produced reservoir fluids will be processed on-site for reuse where possible or trucked to an approved facility in Prudhoe Bay for injection. Used oil will be recycled or packaged in drums and hauled to Prudhoe Bay for shipment to an approved recycle facility. A metal temporary drill cuttings storage container will be located on the pad to facilitate backhaul operations and continuity of off-site annular injection, if permitted by AOGCC.

Wastewater will be stored in tanks until taken to the Prudhoe Bay Unit (PBU) Grind & Inject (G&I) facility for disposal. The wastewater will be hauled off to G&I as frequently as possible so as not to create build-up at site location. The PBU G&I is a Class II facility. The majority of wastewater will be sent there for disposal. A small amount of wastewater will be Class I and will be sent to a facility at Prudhoe Bay Pad 3. Cuttings will be immediately hauled to G&I for disposal when generated.

After the removal of drilling waste from the storage area, a visual site inspection will be performed to verify that all drilling waste has been removed. A final site inspection report including drilling waste volume and final disposition of waste will submitted to ADEC within seven days of the site inspection as required under 18 AAC 60.430. All drilling waste will be disposed of prior to completion of winter operations.

**Water Use**

Potable water will be obtained from service providers in Deadhorse. The remaining water will be obtained from permitted waterbodies near the ice road route or the drill site. Great Bear has current Temporary Water Use Authorizations for some of the intended water sources, and will acquire permits for additional sources, as necessary.

**Purpose**

The purpose of this project is for the Talitha A Exploration project.

This project is scheduled to commence on January 15, 2021, with a completion date of May 15, 2021.

We have preliminarily determined that your proposed development is consistent with Title 19 provided that you comply with the following conditions:

**WILDLIFE STIPULATION**

1. The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of
bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Land Management Divisions before the start of any field activities.

ICE ROADS AND PADS STIPULATIONS

1. Water may be extracted only from sources approved by the Alaska Department of Natural Resources.

2. Onshore ice roads/pads construction is not to commence until frost has penetrated the ground to a depth of one-foot. The ice road/pad is to be maintained at a minimum thickness of six (6) inches. NSBMC 19.50.030(J); NSBMC 19.60.040(O).

3. Spills of fuels, hydrocarbons, or chemicals on ice roads/pads shall be cleaned up thoroughly prior to break-up to prevent damage to the underlying tundra when the ice road/pad melts. NSBMC 19.50.030 (J); NSBMC 19.60.040(O).

4. In the event that an alternate ice road route is required, all surface vehicles are to confine travel as much as possible to only those areas and times of year with sufficient (6 inches) snow cover in order to protect the underlying tundra. NSBMC 19.60.040(O).

SPILL RESPONSE REQUIREMENTS

1. GBP shall have an approved spill response and contingency plan. The approved Plan shall be attached to this file for reference. NSBMC 19.70.050 I (11)

SPILL RESPONSE TACTICS

1. Place drip pans under vehicles parked over 5 minutes.

2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks.

3. Impermeable lining and diking is required for fuel storage facilities with a capacity greater than 660 gallons.

Pink dye is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by GBP.

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.
2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the
minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and
3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC
19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be
backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 L. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor’s initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 L. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. GBP shall
consult with ICAS Realty Director, at (907) 852-4227 and when seeking permits must meet
requirements of ICAS prior to commencement of project. Communications with ICAS Realty must be
submitted to NSB Planning Dept for further review.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural
Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes,
ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the
use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may
be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the
surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North
Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be
allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost
depth conditions exist for the activities intended as determined by an authorized field representative of
the Land Management Administrator. Certain on-tundra activities may begin sooner than others
depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the
river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by
the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC
19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This
report shall contain the following information:

- Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.
- A list of vehicles used for any off-road travel, which may have taken place.
- Statement of clean-up activities.
Methods of disposal of garbage, and other camp debris.

A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.

Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspector at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.

Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, and/or herbert.ipalook@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Anaktuvuk Pass at (907) 661-3612 and Nunamiut Corporation at (907) 661-3036 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project.
NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

Our review of your application dated December 9, 2020, is being conducted in accordance with NSBMC, Title 19. The purpose of our review is to ensure that your project achieves the goals and objectives, and implements the policies, of the Borough Comprehensive Plan; to ensure that the future growth and development of the Borough is in accord with the values of its residents; to identify and secure, for present and future residents, the beneficial impacts of development; to identify and avoid, mitigate, or prohibit the negative impacts of development; and to ensure that future development is of the proper type, design and location, and is served by a proper range of public services and facilities.

You are encouraged to contact this office if you wish to discuss the applicability of the above conditions to this approval. By copy of this letter, we are soliciting comments from the below-listed individuals and their respective agencies regarding the adequacy of the above stipulations to meet the purpose of our review.

Comments on the adequacy of these stipulations should be sent to Ralph Burke, Land Management Specialist at the address above or by email at: ralph.burke@north-slope.org or by telephone at (907) 852-0320 ext. 5414.

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
    Selene Tirre, Assessing Division, NSB
    Della Tagurook, Anaktuvuk Pass Village Deputy Assistant, NSB
    Jeanne Proulx, AKDNR, Fairbanks
    Lee McKinley, ADF&G JPO Liaison, Anchorage
    Andrae Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
    Jewel Bennett, Louise Smith, USDfF&WS, Fairbanks
    Jeanne Hanson, USDfF/NSMS, Anchorage
    Josephina Delgado-Plikat, DCOM, Juneau
    dec.water.oilandgas@alaska.gov
    Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
    Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
    Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
    Shana McCoy, US Army COE, Shana.McCoy@usace.army.mil
    Donna Wixson, USDfF/BLM
    Shelly Jones, BLM District Manager
    Jeanne Frazier, AkDNR/DO&G, Anchorage
    Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
    Dog.permitting@alaska.gov
Lawrence Burris, President, Nunamiut Corporation
Mayor, City of Anaktuvuk Pass
Tommy Nageak, Cultural Resource Specialist, NSB
Darren W. Aiken, TLUI Technician, NSB
Herbert Ipalook Jr., Field Inspector, Nuiqsut
Allyson Atos, Lead Field Inspector, Utqiagvik
Leroy Oenga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Inupiat Community of the Arctic Slope Village Liaison, Anaktuvuk Pass
Files
## Land Management Regulations (LMR) Permit Application

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<tr>
<td>Applicant:</td>
<td>Great Bear Pantheon LLC</td>
</tr>
<tr>
<td>Address:</td>
<td>3705 Arctic Blvd, Suite 2324, Anchorage, AK 99503</td>
</tr>
<tr>
<td>Contact Person:</td>
<td>Patrick Galvin</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:pat@greatbearpetro.com">pat@greatbearpetro.com</a></td>
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<td>Drill and test Talitha A oil and gas exploration well</td>
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<td>☑ Off Road Travel</td>
<td>Period: 1/15/21 - 5/15/21</td>
<td>Maximum Amount: 1 million gallons</td>
</tr>
<tr>
<td>☑ Fuel Storage</td>
<td>Type: Diesel</td>
<td>Equipment: Rig and support vehicles</td>
</tr>
<tr>
<td>☑ Hazardous Material Storage</td>
<td>Type: Down-hole testing fluid and oil</td>
<td>Amount: Varies</td>
</tr>
<tr>
<td>☑ Solid Waste</td>
<td>Treatment: Camp waste to Deadhorse landfill; liquid down-hole waste to grind &amp; inject facility</td>
<td></td>
</tr>
</tbody>
</table>
| ☑ Mining | Habitat: 
| ☑ Air Emissions | Type: Exploration rig | Amount: standard |
| ☑ Noise/Vibrations | Type: | Amount: |
| ☑ Sensitive Habitat | Floodplain: | Shoreline: |
| ☑ Transportation | Type: | 
| ☑ Marine Tanker Facility | Seismic Work | Utility Development | 
| ☑ Causeway Construction | Offshore Drilling | Residential Development | 
| ☑ Airport or Helicopter Pad | Oil Transportation System | CD-ROM Included | 
| ☑ Snow Removal | ☑ Maps Included | 

North Slope Borough
Department of Planning and Community Services
Land Management Regulation Division

Page 1 of 2
Land Management Regulations - General Application
October 2011
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES
- SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GIS SHAPE FILE OR GODETABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NAD 1927 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (FLOOR PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-6320 TOLL FREE (IN-STATE): (800) 476-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

Authorized Signature

Patrick Galvin
Name

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING $12,000
☐ DEVELOPMENT PERMIT $2,000, plus $500/well
☐ ADMINISTRATIVE APPROVALS $1,500
☐ CONDITIONAL DEVELOPMENT PERMITS $3,000

AMOUNT PAID

Date
10/28/2020

Chief Commercial Officer
Title

DECISION

☐ ADMINISTRATIVELY APPROVED
This is a minor alteration to a previously approved development permit for commercial recreation.

☐ REZONING APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan Conditions, lease stipulations, and provisions of the state and federal law and permit issued thereunder.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan Conditions, lease stipulations, and provisions of the state and federal law and permit issued thereunder.

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
The proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan Conditions, lease stipulations, and provisions of the state and federal law and permit issued thereunder.

☐ PERMIT DENIED
(See accompanying letter)

NSB Land Management Administrator

Date

If you wish to appeal this decision, you must submit written notice to the Commissioner Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect.

NSMB §19.30.130.
Talitha A Well
Winter 2020/2021

Project Overview
Great Bear Pantheon intends to drill the Talitha A well this winter. The well will be located approximately eight miles west of the Dalton Highway, approximately 25 miles south of Deadhorse, adjacent to Franklin Bluffs.

The drillsite will be located on state oil and gas lease ADL 391658, at Umiat Meridian, Township 05N, Range 12E, Section 03; at coordinates 69° 49' 23.11" N, -149° 5' 25.90 W. It will be accessed via an 8-mile ice road that will have a driveway on the Dalton Highway at approximately Milepost 386.7, as shown below.

The Well
The Talitha A well will be drilled as winter ice road/pad supported operation. It will be drilled using the Nordic-Calista Rig #3. Targeted spud date is 1/25/21. It will be a vertical well drilled to the base of the Kuparuk sand to approximately 10,200’. There are multiple targets in the Brookian and Kuparuk intervals that will be evaluated. The well will be logged, cased, and will
likely be fracture stimulated at the most prospective interval encountered. If logistically possible, a small lateral may be drilled into a prospective interval as well. A decision on a lateral and/or stimulation will be made based on seasonal timing and logging results. The log suites are expected to include: Quad Combo, FMI, RFT, rotary sideward cores, NMRI, Caliper, and possibly others. Unless the results are significantly below expectations, the well is expected to be suspended for potential use as a producer.
Pad Layout
The ice drill pad will be approximately 520’ x 240’ (124,800 sq ft, 2.86 acres) as the working surface, larger at the base, and is expected to be approximately 3 feet thick. Support facilities will include a satellite office camp, with an 11-bed capacity for the Company Man and alternate (sufficient for the entire crew to shelter in place in case of emergency need), storage areas (e.g., fuel storage, drilling waste or fluid components storage), and maintenance buildings. The crew will be housed at a camp (or the Aurora Hotel) in Deadhorse and shuttled to the well site for their shifts. The layout of the buildings on the ice pad is shown above.

Fuel and Hazardous Materials
Fuel will be stored on the drilling pads and possibly at emergency shelters (if used). Fuel storage tanks will include secondary containment that will hold a minimum of 110 percent (110%) of the single largest tank or any group of tanks permanently manifold together. Fuel storage, handling, transfers, and spill reporting will be conducted in accordance with the regulatory requirements as described in the Great Bear Exploration Project C-Plan, North Slope Environmental Field Handbook, and Alaska Safety Handbook. All bulk fuel and fluid transfers in excess of 500 gallons will be monitored by an Alaska Clean Seas (ACS) Spill Technician. The size of the day tank on the rig may vary, but it will be less than a 10,000-gallon capacity. The maximum amount of fuel stored at a drill site will be 9,000 gallons. All fuel and hazardous materials stored at the drill site will be kept more than 100 feet from a waterbody. Drip pans will be placed under vehicles and equipment capable of leaking hazardous fluid. No vehicle refueling will take place in an active river floodplain. All independent fuel and hazardous substance containers will be marked with the contents and the lessee’s or contractor’s name using paint or a permanent label.

Solid Waste
All waste disposal procedures will conform to local, state and federal requirements. The general approach to waste management will be to temporarily store wastes and periodically haul waste materials to existing North Slope facilities for proper treatment and disposal.

Solid, non-burnable waste will be deposited in dumpsters located at each site. These containers will be hauled to the NSB landfill at Prudhoe Bay. The food waste that could attract wildlife will be stored in enclosed containers pending periodic hauling or such wastes will be hauled each day to an approved disposal center (such as PBU). To reduce the amount of trash that must be hauled from the drilling location, all solid, burnable waste may be incinerated at the location in accordance with 18 AAC 50. The ash will be hauled to the NSB landfill. Camp wastewater will be hauled to an approved disposal facility on the North Slope. The satellite office camp should generate less than 500 gallons per day of domestic wastewater.

Drill cuttings will be promptly trucked to an approved G&I facility when generated. Waste drilling fluids and produced reservoir fluids will be processed on-site for reuse where possible or trucked to an approved facility in Prudhoe Bay for injection. Used oil will be recycled or packaged in drums and hauled to Prudhoe Bay for shipment to an approved recycle facility. A
metal temporary drill cuttings storage container will be located on the pad to facilitate backhaul operations and continuity of off-site annular injection, if permitted by AOGCC.

Wastewater will be stored in tanks until taken to the Prudhoe Bay Unit (PBU) Grind & Inject (G&I) facility for disposal. The wastewater will be hauled off to G&I as frequently as possible so as not to create build-up at site location. The PBU G&I is a Class II facility. The majority of wastewater will be sent there for disposal. A small amount of wastewater will be Class I and will be sent to a facility at Prudhoe Bay Pad 3. Cuttings will be immediately hauled to G&I for disposal when generated.

After the removal of drilling waste from the storage area, a visual site inspection will be performed to verify that all drilling waste has been removed. A final site inspection report including drilling waste volume and final disposition of waste will submitted to ADEC within seven days of the site inspection as required under 18 AAC 60.430. All drilling waste will be disposed of prior to completion of winter operations.

Water Use
Potable water will be obtained from service providers in Deadhorse. The remaining water will be obtained from permitted waterbodies near the ice road route or the drill site. Great Bear has current Temporary Water Use Authorizations for some of the intended water sources, and will acquire permits for additional sources, as necessary.

Roads
Approximately 8 miles of ice road connected to the Dalton Highway at Milepost 386.7 will be required to access the Talitha A site. The ice road will be approximately 35 feet wide and will have a minimum of 0.5 feet of ice cover over the tundra. A diagram of the driveway at the Dalton Highway is shown below.
Standard methods will be used to minimize impacts to vegetation, such as filling in small streambeds with extra snow for additional insulation. The routes will be surveyed to ensure that the approved route is followed during construction activities. Some minor re-routes may be required depending on site specific conditions at the time of construction. Great Bear plans to have thermistor strings placed along ice road routes and at proposed ice pad locations and will be used to monitor ground temperatures.

Ice roads will be built using a combination of existing snow along the route, water, and ice chips from approved water sources. Ice construction activities, including any pre-packing, will be performed in accordance with DNR approvals. Additional water and ice from permitted sources will be used to maintain ice roads in good condition throughout the winter drilling season.

Other Facilities
Twenty-four-hour phone service and internet will be available at the site. Operational radio communications will be provided using fixed base stations and truck-mounted, mobile “breadboard” radios. Operational frequencies will be coordinated between the various Great Bear field supervisors, ice road and support contractors, and well service providers. Small communications towers will be placed at the site. All communication towers are temporary and will be removed at demobilization. In the event of a serious emergency, resources would be mobilized from Deadhorse. Medical evacuation, if necessary, would be provided to the clinic in Deadhorse for patient stabilization and/or transfer to Fairbanks or Anchorage hospital facilities.
Site Rehabilitation

Upon completion of drilling and evaluation operations, wells will either be plugged and abandoned or suspended in accordance with AOGCC regulations. All equipment will be removed, and the site closed. As part of site closure activities, any remaining debris will be hauled to an approved disposal site. Any spills discovered as part of site closure activities, or ice pads and roads with contaminated ice or snow, will be chipped or scraped to remove the contaminated material. This material will be transported to an appropriate facility for disposal.

Once all the equipment is removed from the pad, cleanup, rehab, and remediation is estimated to take approximately 3 days. Additional cleanup operations (“stick picking”) will be conducted the summer (June or July) after the winter drilling program to remove any remaining debris not identified and removed during demobilization activities and to identify any issues not identified during the winter drilling program. Stick picking is expected to take only a day or two. Agency personnel will be invited on site visits to verify that cleanup operations are complete and that any issues identified are addressed.

In the event that tundra damage is discovered at any point during the winter drilling program or during summer cleanup operations, Great Bear will notify DNR and NSB in accordance with permit requirements (DNR will be notified within 72 hours of discovery; NSB will be notified within 24 hours of discovery). Reports of tundra damage will include the date, time, and location of damage, the size of the impacted area, and cause of damage (if known). Great Bear will coordinate with DNR to identify the level of tundra damage and develop a plan for restoration, rehabilitation, and monitoring. The plan will address the area, type, and extent of damage and will be developed in accordance with the Alaska Coastal Revegetation & Erosion Control Guide developed by the State of Alaska Plant Materials Center, the Streambank Revegetation and Protection Guide developed by the Alaska Department of Fish and Game, and other relevant guidance documents.
230 ft. x 500 ft. Gravel Pad
115,000 sf = 2.64 Acres
To: All NSB Departments

From: Gordon R. Brower, Director of Planning and Community Services

Date: December 2, 2020

Subject: Delegation of Authority

I hereby delegate Mabel J. Kaleak as Acting Director of Planning and Community Services effective December 1, 2020 until further notice.

Please extend your cooperation to Mabel during this time.

Thank you,
DRAFT DEVELOPMENT PERMIT - REQUEST FOR COMMENTS

COMMENTS DUE BY: DECEMBER 31, 2020

This is a Draft Development Permit only for the purposes of review and gathering comments during the comment period prescribed by NSBMC Title 19. It contains conditions proposed for inclusion in a final permit, if a decision is made to issue a final permit. This draft permit should not be taken to mean that the proposed project is, or will, be approved. Only upon issuance of a final permit will the proposed project be approved to commence.

December 11, 2020

Great Bear Pantheon LLC (GBP)
C/O Patrick Galvin, Chief Commercial Officer
3705 Arctic Blvd, Suite 2324
Anchorage, Alaska 99503
Email: pat@greatbearpetro.com

RE: NSB 21-147, Draft Development Permit, Three Mile Ice Road, T6N, R13E Section 31, T6N, R35 & 36, T5N, R12E, Section 3, Conservation District.

Dear Mr. Galvin:

We are in the process of reviewing your request to construct a 3 mile ice road located within the Conservation District.

Project Description

Roads

Approximately 8 miles of ice road connected to the Dalton Highway at Milepost 386.7 will be required to access the Talitha A site. The ice road will be approximately 35 feet wide and will have a minimum of 0.5 feet of ice cover over the tundra. A diagram of the driveway at the Dalton Highway is shown in the attachments.
Standard methods will be used to minimize impacts to vegetation, such as filling in small streambeds with extra snow for additional insulation. The routes will be surveyed to ensure that the approved route is followed during construction activities. Some minor re-routes may be required depending on site specific conditions at the time of construction. Great Bear plans to have thermistor strings placed along ice road routes and at proposed ice pad locations and will be used to monitor ground temperatures.

Ice roads will be built using a combination of existing snow along the route, water, and ice chips from approved water sources. Ice construction activities, including any pre-packing, will be performed in accordance with DNR approvals. Additional water and ice from permitted sources will be used to maintain ice roads in good condition throughout the winter drilling season.

The first five miles are permitted under NSB 21-154 and last three are und NSB 21-147.

Purpose

This project is needed in support of the Talitha A Exploration Project.

This project is scheduled to commence on January 15, 2021, with a completion date of May 15, 2021.

We have preliminarily determined that your proposed development is consistent with Title 19 provided that you comply with the following conditions:

WILDLIFE STIPULATION

1. The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Land Management Divisions before the start of any field activities.

ICE ROADS AND PADS STIPULATIONS

1. Water may be extracted only from sources approved by the Alaska Department of Natural Resources.

2. Onshore ice roads/pads construction is not to commence until frost has penetrated the ground to a depth of one-foot. The ice road/pad is to be maintained at a minimum thickness of six (6) inches. NSBMC 19.50.030(J); NSBMC 19.60.040(O).

3. Spills of fuels, hydrocarbons, or chemicals on ice roads/ pads shall be cleaned up thoroughly prior to break-up to prevent damage to the underlying tundra when the ice road/pad melts. NSBMC 19.50.030) (J); NSBMC 19.60.040)(O).

4. In the event that an alternate ice road route is required, all surface vehicles are to confine travel as much as possible to only those areas and times of year with sufficient (6 inches) snow cover in order to protect the underlying tundra. NSBMC 19.60.040)(O).
SPILL RESPONSE REQUIREMENTS

1. GBP shall have an approved spill response and contingency plan. The approved Plan shall be attached to this file for reference. NSBMC 19.70.050 I (11)

SPILL RESPONSE TACTICS

1. Place drip pans under vehicles parked over 5 minutes.

2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks.

**Pink dye** is added to all diesel fuel prior to transporting to the field crews to aid in spill detection.
All spills will be reported and cleaned up by GBP.

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 I. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 I. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. GBP shall consult with ICAS Realty Director, at (907) 852-4227 and when seeking permits must meet requirements of ICAS prior to commencement of project. Communications with ICAS Realty must be submitted to NSB Planning Dept for further review.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.
9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

   o Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.

   o A list of vehicles used for any off-road travel, which may have taken place.

   o Statement of clean-up activities.

   o Methods of disposal of garbage, and other camp debris.

   o A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.

   o Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalkok Jr., Rodney Ahtuangaruak Jr, Field Inspector at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.

   o Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to
become a part of this permit file. NSBMC 19.70.050(1)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, and/or herbert.ipalook@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(l)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Anaktuvuk Pass at (907) 661-3612 and Nunamiut Corporation at (907) 661-3036 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

Our review of your application dated December 9, 2020, is being conducted in accordance with NSBMC, Title 19. The purpose of our review is to ensure that your project achieves the goals and objectives, and implements the policies, of the Borough Comprehensive Plan; to ensure that the future growth and development of the Borough is in accord with the values of its residents; to identify and secure, for present and future residents, the beneficial impacts of development; to identify and avoid, mitigate, or prohibit the negative impacts of development; and to ensure that future development is of the proper type, design and location, and is served by a proper range of public services and facilities.

You are encouraged to contact this office if you wish to discuss the applicability of the above conditions to this approval. By copy of this letter, we are soliciting comments from the below-listed individuals and
their respective agencies regarding the adequacy of the above stipulations to meet the purpose of our review.

Comments on the adequacy of these stipulations should be sent to Ralph Burke, Land Management Specialist at the address above or by email at: ralph.burke@north-slope.org or by telephone at (907) 852-0320 ext. 5414

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Tirre, Assessing Division, NSB
Della Tagarook, Anaktuvuk Pass Village Deputy Assistant, NSB
Jeanne Proulx, AKDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDA/FWS, Fairbanks
Jeanne Hanson, USDA/NMFS, Anchorage
Josephine Delgado-Plikat, DCOM, Juneau
dewater.oilandgas@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEQ, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R Romero, US Army COE, Mary.R.Romero@usace.army.mil
Shane McCoy, US Army COE, Shane.Mccoy@usace.army.mil
Donna Wixon, USDA/BLM
Shelley Jones, BLM District Manager
Jeannie Frazier, AKDNR/DOIG, Anchorage
Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
Dog.permitting@alaska.gov
Lawrence Burrus, President, Nunamiut Corporation
Mayor, City of Anaktuvuk Pass
Tommy Nageak, Cultural Resource Specialist, NSB
Darren W. Aiken, TLUI Technician, NSB
Herbert Ipalook Jr., Field Inspector, Nuiqut
Allyson Atos, Lead Field Inspector, Utqiagvik
Leroy Oonga Jr. Ralph Kaleak Sr., Field Inspectors, Utqiagvik
Wayne Cary, Assistant Attorney, NSB
Charmaine Hingada, Jonathan Aiken Jr., CPD/GIS, NSB
Inupiat Community of the Arctic Slope Village Liaison, Anaktuvuk Pass
Files

N21-147/GRB/mk/pdl LMR Manager/rjb
## Land Management Regulations (LMR) Permit Application

<table>
<thead>
<tr>
<th>Permit Number:</th>
<th>21-197</th>
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<tbody>
<tr>
<td>Applicant:</td>
<td>Great Bear Petroleum L.L.C</td>
</tr>
<tr>
<td>Address:</td>
<td>3705 Arctic Blvd, Suite 2324, Anchorage, AK 99503</td>
</tr>
<tr>
<td>Contact Person:</td>
<td>Patrick Galvin</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:pat@greatbearpetro.com">pat@greatbearpetro.com</a></td>
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<tr>
<td>Location (TRS):</td>
<td>T: 05N-06N R: 12E-13N Sec: Various</td>
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<tr>
<td>Zoning District:</td>
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<tr>
<td>Proposed Start Date:</td>
<td>1/15/2021</td>
</tr>
<tr>
<td>Completion Date:</td>
<td>5/15/2021</td>
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<tr>
<td>Proposed Development:</td>
<td>Ice Road and ice pad to support the Talitha A oil and gas exploration well, including pre-packing</td>
</tr>
<tr>
<td>Purpose of Development:</td>
<td>Oil and gas exploration.</td>
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- Fill/Dredge
- Oil & Gas Wells
- Temp. Water Use
- Off Road Travel
- Fuel Storage
- Hazardous Material Storage
- Solid Waste
- Mining
- Air Emissions
- Noise/Vibrations
- Sensitive Habitat
- Transportation

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<tr>
<th>Material</th>
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<th>Maximum Amount</th>
<th>Equipment</th>
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<td></td>
<td></td>
<td>snow road/ice road</td>
<td>3 million gallons</td>
<td>Rig and support vehicles</td>
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- Seismic Work
- Utility Development
- Recreational Development
- Offshore Drilling
- Residential Development
- CD-ROM Included
- Oil Transportation System
- Snow Removal
- Maps Included
ATTACH TO THIS APPLICATION THE FOLLOWING:

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- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES
- SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NAD 1927 ALASKA ALBERS OR GEOGRAPHIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLL FREE (IN-STATE): (800) 476-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

Authorized Signature

Date 10/28/2020

Patrick Galvin

Name

Chief Commercial Officer

Title

FEE PAID

☐ SPECIAL PLANNING COMMISSION MEETING $12,000

☒ DEVELOPMENT PERMIT $2,000, plus $500/well

☐ ADMINISTRATIVE APPROVALS $1,500

☐ CONDITIONAL DEVELOPMENT PERMITS $3,000

AMOUNT PAID

DECESSION

☐ ADMINISTRATIVELY APPROVED
This is a minor alteration to a previously approved development permit for commercial recreation.

☐ REZONING APPROVED
This proposal development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan Conditions, lease stipulations, and provisions of the state and federal law and permit served thereunder.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable mandatory policies, represents the developer’s best efforts to implement all relevant best efforts and minimization policies, and as long as conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter.)

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land that is listed as a conditional development for this zoning district or has been elevated by the NSB Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

NSB Land Management Administrator

Date

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect. NSMBC §19.30.130.
Talitha A Well
Winter 2020/2021

Project Overview
Great Bear Pantheon intends to drill the Talitha A well this winter. The well will be located approximately eight miles west of the Dalton Highway, approximately 25 miles south of Deadhorse, adjacent to Franklin Bluffs.

The drillsite will be located on state oil and gas lease ADL 391658, at Umiat Meridian, Township 05N, Range 12E, Section 03; at coordinates 69° 49' 23.11" N, -149° 5' 25.90 W. It will be accessed via an 8-mile ice road that will have a driveway on the Dalton Highway at approximately Milepost 386.7, as shown below.

The Well
The Talitha A well will be drilled as winter ice road/pad supported operation. It will be drilled using the Nordic-Calista Rig #3. Targetted spud date is 1/25/21. It will be a vertical well drilled to the base of the Kuparuk sand to approximately 10,200’. There are multiple targets in the Brookian and Kuparuk intervals that will be evaluated. The well will be logged, cased, and will
likely be fracture stimulated at the most prospective interval encountered. If logistically possible, a small lateral may be drilled into a prospective interval as well. A decision on a lateral and/or stimulation will be made based on seasonal timing and logging results. The log suites are expected to include: Quad Combo, FMI, RFT, rotary sidewall cores, NMRI, Caliper, and possibly others. Unless the results are significantly below expectations, the well is expected to be suspended for potential use as a producer.
Pad Layout
The ice drill pad will be approximately 520’ x 240’ (124,800 sq ft, 2.86 acres) as the working surface, larger at the base, and is expected to be approximately 3 feet thick. Support facilities will include a satellite office camp, with an 11-bed capacity for the Company Man and alternate (sufficient for the entire crew to shelter in place in case of emergency need), storage areas (e.g., fuel storage, drilling waste or fluid components storage), and maintenance buildings. The crew will be housed at a camp (or the Aurora Hotel) in Deadhorse and shuttled to the well site for their shifts. The layout of the buildings on the ice pad is shown above.

Fuel and Hazardous Materials
Fuel will be stored on the drilling pads and possibly at emergency shelters (if used). Fuel storage tanks will include secondary containment that will hold a minimum of 110 percent (110%) of the single largest tank or any group of tanks permanently manifold together. Fuel storage, handling, transfers, and spill reporting will be conducted in accordance with the regulatory requirements as described in the Great Bear Exploration Project C-Plan, North Slope Environmental Field Handbook, and Alaska Safety Handbook. All bulk fuel and fluid transfers in excess of 500 gallons will be monitored by an Alaska Clean Seas (ACS) Spill Technician. The size of the day tank on the rig may vary, but it will be less than a 10,000-gallon capacity. The maximum amount of fuel stored at a drill site will be 9,000 gallons. All fuel and hazardous materials stored at the drill site will be kept more than 100 feet from a waterbody. Drip pans will be placed under vehicles and equipment capable of leaking hazardous fluid. No vehicle refueling will take place in an active river floodplain. All independent fuel and hazardous substance containers will be marked with the contents and the lessee’s or contractor’s name using paint or a permanent label.

Solid Waste
All waste disposal procedures will conform to local, state and federal requirements. The general approach to waste management will be to temporarily store wastes and periodically haul waste materials to existing North Slope facilities for proper treatment and disposal.

Solid, non-burnable waste will be deposited in dumpsters located at each site. These containers will be hauled to the NSB landfill at Prudhoe Bay. The food waste that could attract wildlife will be stored in enclosed containers pending periodic hauling or such wastes will be hauled each day to an approved disposal center (such as PBU). To reduce the amount of trash that must be hauled from the drilling location, all solid, burnable waste may be incinerated at the location in accordance with 18 AAC 50. The ash will be hauled to the NSB landfill. Camp wastewater will be hauled to an approved disposal facility on the North Slope. The satellite office camp should generate less than 500 gallons per day of domestic wastewater.

Drill cuttings will be promptly trucked to an approved G&I facility when generated. Waste drilling fluids and produced reservoir fluids will be processed on-site for reuse where possible or trucked to an approved facility in Prudhoe Bay for injection. Used oil will be recycled or packaged in drums and hauled to Prudhoe Bay for shipment to an approved recycle facility. A
metal temporary drill cuttings storage container will be located on the pad to facilitate backhaul operations and continuity of off-site annular injection, if permitted by AOGCC.

Wastewater will be stored in tanks until taken to the Prudhoe Bay Unit (PBU) Grind & Inject (G&I) facility for disposal. The wastewater will be hauled off to G&I as frequently as possible so as not to create build-up at site location. The PBU G&I is a Class II facility. The majority of wastewater will be sent there for disposal. A small amount of wastewater will be Class I and will be sent to a facility at Prudhoe Bay Pad 3. Cuttings will be immediately hauled to G&I for disposal when generated.

After the removal of drilling waste from the storage area, a visual site inspection will be performed to verify that all drilling waste has been removed. A final site inspection report including drilling waste volume and final disposition of waste will submitted to ADEC within seven days of the site inspection as required under 18 AAC 60.430. All drilling waste will be disposed of prior to completion of winter operations.

Water Use
Potable water will be obtained from service providers in Deadhorse. The remaining water will be obtained from permitted waterbodies near the ice road route or the drill site. Great Bear has current Temporary Water Use Authorizations for some of the intended water sources, and will acquire permits for additional sources, as necessary.

Roads
Approximately 8 miles of ice road connected to the Dalton Highway at Milepost 386.7 will be required to access the Talitha A site. The ice road will be approximately 35 feet wide and will have a minimum of 0.5 feet of ice cover over the tundra. A diagram of the driveway at the Dalton Highway is shown below.
Standard methods will be used to minimize impacts to vegetation, such as filling in small streambeds with extra snow for additional insulation. The routes will be surveyed to ensure that the approved route is followed during construction activities. Some minor re-routes may be required depending on site specific conditions at the time of construction. Great Bear plans to have thermistor strings placed along ice road routes and at proposed ice pad locations and will be used to monitor ground temperatures.

Ice roads will be built using a combination of existing snow along the route, water, and ice chips from approved water sources. Ice construction activities, including any pre-packing, will be performed in accordance with DNR approvals. Additional water and ice from permitted sources will be used to maintain ice roads in good condition throughout the winter drilling season.

Other Facilities
Twenty-four-hour phone service and internet will be available at the site. Operational radio communications will be provided using fixed base stations and truck-mounted, mobile “breadboard” radios. Operational frequencies will be coordinated between the various Great Bear field supervisors, ice road and support contractors, and well service providers. Small communications towers will be placed at the site. All communication towers are temporary and will be removed at demobilization. In the event of a serious emergency, resources would be mobilized from Deadhorse. Medical evacuation, if necessary, would be provided to the clinic in Deadhorse for patient stabilization and/or transfer to Fairbanks or Anchorage hospital facilities.
Site Rehabilitation
Upon completion of drilling and evaluation operations, wells will either be plugged and abandoned or suspended in accordance with AOGCC regulations. All equipment will be removed, and the site closed. As part of site closure activities, any remaining debris will be hauled to an approved disposal site. Any spills discovered as part of site closure activities, or ice pads and roads with contaminated ice or snow, will be chipped or scraped to remove the contaminated material. This material will be transported to an appropriate facility for disposal.

Once all the equipment is removed from the pad, cleanup, rehab, and remediation is estimated to take approximately 3 days. Additional cleanup operations ("stick picking") will be conducted the summer (June or July) after the winter drilling program to remove any remaining debris not identified and removed during demobilization activities and to identify any issues not identified during the winter drilling program. Stick picking is expected to take only a day or two. Agency personnel will be invited on site visits to verify that cleanup operations are complete and that any issues identified are addressed.

In the event that tundra damage is discovered at any point during the winter drilling program or during summer cleanup operations, Great Bear will notify DNR and NSB in accordance with permit requirements (DNR will be notified within 72 hours of discovery; NSB will be notified within 24 hours of discovery). Reports of tundra damage will include the date, time, and location of damage, the size of the impacted area, and cause of damage (if known). Great Bear will coordinate with DNR to identify the level of tundra damage and develop a plan for restoration, rehabilitation, and monitoring. The plan will address the area, type, and extent of damage and will be developed in accordance with the Alaska Coastal Revegetation & Erosion Control Guide developed by the State of Alaska Plant Materials Center, the Streambank Revegetation and Protection Guide developed by the Alaska Department of Fish and Game, and other relevant guidance documents.
DRAFT DEVELOPMENT PERMIT - REQUEST FOR COMMENTS

COMMENTS DUE BY JANUARY 5, 2021:

This is a Draft Development Permit only for the purposes of review and gathering comments during the comment period prescribed by NSBMC Title 19. It contains conditions proposed for inclusion in a final permit, if a decision is made to issue a final permit. This draft permit should not be taken to mean that the proposed project is, or will, be approved. Only upon issuance of a final permit will the proposed project be approved to commence.

December 16, 2020

Emerald House L.L.C
C/O Erik Opstad, Vice President
P. O. Box 112212
Anchorage, Alaska 99511-2212
Email: erik.opstad@gmail.com

RE: NSB 21-151, Draft Development Permit, Merlin 1 Exploration Drilling, T2N, R2W, Section 34, Conservation District.

Dear Mr. Opstad:

We are in the process of reviewing your request to conduct the Merlin 1 Exploration Program located within the Conservation District.

Project Description

Introduction and Project Overview

Emerald House LLC (Emerald) plans on drilling two exploration oil and gas exploration wells on the North Slope of Alaska. The proposed wells will be drilled from ice pads within Emerald's Peregrine Lease Block in the National Petroleum Reserve in Alaska (NPR-A) during winter 2020/2021. Access will be by the North Slope Borough Community Winter Access Trail (NSB CWAT) starting near the Kuparuk River Unit (KRU) Drillsite 2P production pad and then the Peregrine Snow Road which will pioneer south from the NSB CWAT west of the Colville River within the NPR-A.
The Project will require snow, water and ice chips for the construction and maintenance of about 118 miles of snow road, plus two ice drill pads (Merlin-1 and Harrier-1 Drilling Ice Pads) and an ice staging pad (PEP 2P Staging Ice Pad).

All facilities and snow roads will be temporary, and will be designed and constructed to meet federal, State and NSB regulatory requirements, industry standards and arctic oil field best practices. Additionally, the NSB Oil and Gas Technical Report (NSB 2104) was consulted along with the NSB Comprehensive Plan from 2019 to 2030 (adopted March 2019).

**Merlin-1 and Harrier-1 Exploration Wells**

The proposed general pad layouts for both drill pads are shown in Figures 5 and 6 in Attachment 1. Both wells will be drilled to about 4,500 feet true vertical depth (TVD) to test stacked conventional objectives within the Nanushuk Formation. This same target was found in surrounding exploration wells with development planned for the Greater Moose’s Tooth and Willow Projects by Conoco Phillips Alaska Inc. (CPAI).

Emerald will use the All American #111 modular North Slope land rig, operated by Chugach Energy Services, to drill and test both wells.

The wells will be designed and permitted in accordance with an Application for a Permit to Drill (APD) from the BLM and Permit to Drill (PTD) from the Alaska Oil and Gas Conservation Commission (AOGCC). Emerald intends to gather well data that includes Measuring While Drilling (MWD) Parameters, Logging While Drilling (LWD) Data, Wireline Logs, Sidewall and/or Conventional cores, Vertical Seismic Profiles (VSPs), and check-shot information or Drill Stem Test (DST) data. Conventional well development and completion, including hydraulically fracturing specific target zones, may follow in both wells. The wells will either be plugged and abandoned (P&A) or suspended pursuant to AOGCC regulations prior to demobilization.

Emerald also has developed and will maintain an approved well control plan for its drilling program that includes proactive measures during drilling to prevent blowouts, as well as primary and secondary blowout prevention systems, a well capping program, and a relief well plan designed for successful operations in winter arctic conditions.

Finally, while still on diverter when drilling from surface to the base of permafrost at up to 2,500 feet TVD, Emerald will place the end of the diverter into a 315-bbl shale bin within the ice-covered footprint of the pad and construct 1-foot high ice berms around the south half of the pad to create additional secondary containment.

The shale bin will help dissipate blowout energy and contain blow out fluids at 3 times the volume of the borehole, and along with bermed SCA, will help protect underlying tundra from damage from water-based drill fluids.

**Temporary Buildings and Utilities**

The drilling ice pads will be 500 feet by 500 feet and will cover roughly 8.6 acres in plan and will vary in thickness from 1 to 2 feet due to grade change across the pad.

Temporary facilities on the drill pad will include All American #111 drill rig and tank farms within lined SCAs for drill fluids, two rig camps: a 30-bed trailer camp and 60-bed modular camp. Both
camps will include offices, restroom, and food service and recreation areas. Other temporary facilities on the drill pad used to support the winter exploration program will include storage and laydown areas, spill response connexes, and maintenance shops. Additionally, a tank farm within lined SCA for fuel will be on the ice pad.

**Water and Wastewater**

**Fresh Water and Ice Chips.** Overall and for fill Project activities, Emerald will withdraw 20 million gallons of water and will trim 10 million gallons of ice chips from 5 lakes issued under TWUA A2020-110 from the ADNR/DML&W.

Water and ice chips used for construction of the Merlin-1 ice drill pad and Harrier-1 ice drill pad will total 2 million gallons, at 1 million gallons for each ice pad.

Snow will be removed from portions of both lakes prior to water withdrawal to help provide access for water trucks and ice chippers. Water pumped from lakes will be transported by low ground pressure vehicles or rolling stock once winter tundra travel is approved by ADNR. Rolling stock will only use trails that have been improved with a firm ice surface or packed snow to support the weight and pressure of the vehicles.

**Domestic Wastewater.** Camp and drill support operations are expected to generate less than 5,000 gallons per day of domestic wastewater (both gray and black water). Domestic wastewater may be temporarily stored in camp wastewater and sewage tank modules before being hauled to the NSBSA-10 wastewater treatment plant for disposal. Alternatively, Emerald may use a state approved & certified modular wastewater treatment plant (WWTP) to treat wastewater prior to tundra disposal.

**Potable Water.** Emerald will use a state approved & certified modular potable water treatment plant for potable water. Alternatively, potable water may be sourced from CPAI KRU Central Production Facility or the NSBSA-10.

**Fluids Management, Storage and Spill Response**

Hazardous substance storage will comply with State and federal oil pollution prevention and contingency requirements found in 18 AAC 75, 40 CFR 112 and NSBMC § 19.50 and § 19.70. Aboveground Storage Tanks (ASTs) storing flammable and combustible liquids will comply with the International Fire Code (IFC) and 13 AAC 50.025 regulations.

Water-based mud (WBM) drilling fluids and drill waste fluids will be stored in in double-walled 400-barrel ASTs staged within lined secondary containment areas (SCAs) providing 110% containment (Figures 5 and 6). Ultra-low sulfur diesel (ULSD) will be stored in double-walled AST that are <9,999 gallons and spotted within SCA. Red dye will be added to ULSD and no ULSD AST will be filled greater than 90% capacity (8,999 gallons). Other chemicals, required for testing & well stimulation, also may be brought in. These various additives will be stored in 5-gallon pails, 55-gallon drums or 250-gallon isocontainers within lined SCA.

Crude oil testing tanks (typically 400-barrel capacity) will be staged on the pad for flow testing of the well. Again, these skid-mounted, double-walled steel tanks will be within lined SCA.

All storage tanks, containers and lined SCAs will be inspected daily by an on-site Alaska Clean Seas (ACS) spill technician, and conditions will be documented.
During fuel and fluid transfer operations, equipment storage or maintenance activities, the drill site and underlying tundra will be protected from leaking or dripping fuel and hazardous substances by using drip pans or other surface liners designed to catch and hold fluids under the equipment. Two spill technicians & fuel contractors (trained and certified oil handlers), operating under the Emerald Fluid Transfer Procedures, will attend all fluid transfer operations. Spills of hydrocarbons or chemicals on ice pads will be cleaned up immediately to prevent damage to the underlying tundra when the ice pad or roads melt.

The All American #111 drill rig and the solids control modules will be spotted within bermed liner creating a secondary containment area (SCA).

**Solid Waste Management for Merlin-I & Harrier-I Drilling Pads and Exploration Wells**

All waste management activities will be conducted in general accordance with the Emerald Peregrine Exploration Program Solid Waste Management Plan (WMP) and in conformance with Emerald HSE Management Policies.

Additionally, the latest versions of the Alaska Safety Handbook (ASH), the North Slope Environmental Field Handbook (NSEFH) and the Alaska Waste Disposal & Reuse ("Redbook") Guide are adopted as guidance, reference and standard operating procedures (SOPs) and workplace "best" safety, environmental and waste management practices for Emerald operations.

**Merlin-I and Harrier-I Exploration Wells: RCRA-Exempt E&P Fluids and Solids**

One waste stream, E&P fluids and solids from drilling and testing operations, will be generated during drilling operations. These solid wastes are exempt from regulation as Resource Conservation and Recovery Act (RCRA) hazardous wastes ("RCRA-exempt wastes") per 40 CFR 261.4 and 261.7.

Up to 10,000 barrels (bbls) of drilling waste fluid and solids (drill cuttings) and another 7,000 bbls of test fluids will be temporarily stored onsite (if necessary), before being hauled and disposed by injection in either offsite Class I or Class II UIC disposal wells at the Hilcorp Alaska Prudhoe Bay Waste Disposal Facility (PB WDF), Hilcorp Alaska Milne Point Unit WDF (MPU WDF), or the ConocoPhillips Alaska Inc. Waste Injection Facility at the Kuparuk River Unit (KRU WIF). Non-oily E&P solid drill cuttings may also be hauled the NSB SA 10 landfill for beneficial reuse as sanitary cover if acceptance criteria are met. The NSB SA-10 is a Class I municipal solid waste landfill that is approved and regulated by the ADEC.

**Merlin-I and Harrier-I Ice Drill Pads: RCRA Exempt and Nonhazardous**

Additionally, the latest versions of the Alaska Safety Handbook (ASH), the North Slope Environmental Field Handbook (NSEFH) and the Alaska Waste Disposal & Reuse ("Redbook") Guide are adopted as guidance, reference and standard operating procedures and workplace "best" safety, environmental and waste management practices for Emerald operations.

**RCRA-exempt Wastes.** Besides domestic wastewater, rig camps on each drill pad are expected to generate <1 gallon per day of household (camp) hazardous wastes such cleaning supplies. These wastes are exempt from regulation as Resource Conservation and Recovery Act (RCRA) hazardous wastes ("RCRA-exempt wastes") per 40 CFR 261.4 and 261.7.
RCRA-exempt household hazardous wastes will be combined with domestic wastewater & temporarily stored in the camp sewage tank modules before being hauled to the NSB SA-10 WWTP for disposal.

**Universal Waste.** Universal wastes are hazardous wastes that are not listed nor characteristically toxic, reactive, corrosive or flammable. These include used oil and lubricants, printer cartridges and batteries.

These waste streams will be temporarily stored on site in Satellite Accumulation Areas (SAAs) in the camp area within lined SCA. Used oil will be packaged in drums for transport and recycled or disposed at an approved facility. Batteries and cartridges will be hauled offsite for disposal and/or recycling at approved facilities. (Please see attachments for more details).

**Purpose**

This project is needed in support of the Merlin 1 Exploration Program.

This project is scheduled to commence upon approval of the final permit with a completion date of April 27, 2021.

We have preliminarily determined that your proposed development is consistent with Title 19 provided that you comply with the following conditions:

**PROJECT ADVISORY**

This permit is valid only for the Merlin 1 Exploration Program.

**PROJECT SPECIFIC STIPULATIONS**

1. Emerald House shall get a Non-Objection letter from all land owners and provide a copy to the North Slope Borough Land Management Division.

2. Emerald House shall have two trained fuel handlers on sight during all fueling/refueling activities.

**WILDLIFE STIPULATION**

The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Land Management Divisions before the start of any field activities.

**SPILL RESPONSE REQUIREMENTS**

1. Emerald House shall have an approved spill response and contingency plan. The approved Plan shall be attached to this file for reference. NSBMC 19.70.050 1(11)
SPILL RESPONSE TACTICS

1. Place drip pans under vehicles parked over 5 minutes.
2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks.
3. Impermeable lining and diking is required for fuel storage facilities with a capacity greater than 660 gallons.

Pink dye is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by Emerald House.

ICE ROADS AND PADS STIPULATIONS

1. Water may be extracted only from sources approved by the Department of Natural Resources.
2. Onshore ice road construction is not to commence until frost has penetrated the ground to a depth of one-foot. The ice road is to be maintained at a minimum thickness of six (6) inches. NSBMC 19.50.030(J); NSBMC 19.60.040(O).
3. Spills of fuels, hydrocarbons, or chemicals on ice pads shall be cleaned up thoroughly prior to break-up to prevent damage to the underlying tundra when the ice pad melts. NSBMC 19.50.030) (J); NSBMC 19.60.040(O).
4. In the event that an alternate ice road route is required, all surface vehicles are to confine travel as much as possible to only those areas and times of year with sufficient (6 inches) snow cover in order to protect the underlying tundra. NSBMC 19.60.040(O).

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.
2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.
3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050 K. 2.
4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 L. 4. and 5.
5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 L. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. Emerald House shall consult with ICAS Realty Director, at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

   o Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.

   o A list of vehicles used for any off-road travel, which may have taken place.

   o Statement of clean-up activities.

   o Methods of disposal of garbage, and other camp debris.

   o A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.

   o Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuangaruak Jr., Field Inspector at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.

   o Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.
GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, herbert.ipalook@north-slope.org and/or rodney.ahtuangaruak@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

Our review of your application dated December 10, 2020, is being conducted in accordance with NSBMC, Title 19. The purpose of our review is to ensure that your project achieves the goals and objectives, and implements the policies, of the Borough Comprehensive Plan; to ensure that the future
growth and development of the Borough is in accord with the values of its residents; to identify and secure, for present and future residents, the beneficial impacts of development; to identify and avoid, mitigate, or prohibit the negative impacts of development; and to ensure that future development is of the proper type, design and location, and is served by a proper range of public services and facilities.

You are encouraged to contact this office if you wish to discuss the applicability of the above conditions to this approval. By copy of this letter, we are soliciting comments from the below-listed individuals and their respective agencies regarding the adequacy of the above stipulations to meet the purpose of our review.

Comments on the adequacy of these stipulations should be sent to Ralph Burke, Land Management Specialist at the address above or by email at: ralph.burke@north-slope.org or by telephone at (907) 852-0320 ext. 5414

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
    Brian Person, NSB Wildlife (caribou/fox/goose/vegetation)
    Robert Suycam, NSB Wildlife (Birds/Bowhead/Beaufort)
    Selene Tirre, Assessing Division, NSB
    Olivia Cahnboy, Nuiqsut Village Deputy Director, NSB
    Jeanne Proulx, AkDNR, Fairbanks
    Lee McKinley, ADF&G JPO Liaison, Anchorage
    Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
    Jewel Bennett, Louise Smith, USD/A&F, Fairbanks
    Jeanne Hanson, USD/NMFS, Anchorage
    Josephine Delgado-Pilis, DCOM, Juneau
    dce.water.oilandgas@alaska.gov
    Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
    Donna Wixon, USD/BLM
    Shelly Jones, BLM District Manager
    Jeannine Frazier, AkDNR/DOG, Anchorage
    Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
    Dog.permittings@alaska.gov
    Mark Major, Kuukpik Corporation, majorinor@live.com
    Willow Hetrick, Kuukpik Corporation, willow@kuukpik.com
    Mamic Pardue Mayor, City of Nuiqsut
    Raymond Ipaloak, President, Native Village of Nuiqsut
    Tommy Nageak, Cultural Resource Specialist, NSB
    Darren W. Aiken, TLUI Technician, NSB
    Herbert Ipaloak Jr., Rodney Ahtuanggartak Jr., Field Inspectors, Nuiqsut
    Allyson Atos, Lead Field Inspector, Utqiagvik
    Leroy Oenga Jr. Ralph Kakeak Sr., Field Inspectors, Utqiagvik
    Wayne Cary, Assistant Attorney, NSB
    Charmaine Hingada, Jonathan Aiken Jr., CPO/GIS, NSB
    Files

N21-151/GRB/mk/pdl LMR Manager/rjb
**Land Management Regulations (LMR) Permit Application**

<table>
<thead>
<tr>
<th>Permit Number:</th>
<th>Permit Type: Land Development Permit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant:</td>
<td>Date: 11/24/2020</td>
</tr>
<tr>
<td>Address:</td>
<td>State ID: NA</td>
</tr>
<tr>
<td>Contact Person:</td>
<td>Phone: 907-244-5210</td>
</tr>
<tr>
<td>Email:</td>
<td>Project Name: Peregrine Exploration Program</td>
</tr>
<tr>
<td>Location (TRS):</td>
<td>Field Name &amp; Pad: NA</td>
</tr>
<tr>
<td>Zoning District: Conservation</td>
<td>Proposed Start Date: 12/27/2020</td>
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<tr>
<td>Proposed Development:</td>
<td>Completion Date: 4/27/2021</td>
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<tr>
<td>Purpose of Development:</td>
<td>Construct drill ice pads, and then drill and test Merlin-1 &amp; Harrier-1 exploration oil wells</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Fill/Dredge</th>
<th>Oil &amp; Gas Wells</th>
<th>Temp. Water Use</th>
<th>Off Road Travel</th>
<th>Fuel Storage</th>
<th>Hazardous Material Storage</th>
<th>Solid Waste</th>
<th>Mining</th>
<th>Air Emissions</th>
<th>Noise/Vibrations</th>
<th>Sensitive Habitat</th>
<th>Transportation</th>
<th>Marine Tanker Facility</th>
<th>Causeway Construction</th>
<th>Airport or Helicopter Pad</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>NA</td>
<td>Lakes P1 &amp; P2 (see Sec. 4 in Plan of Ops)</td>
<td>N/A</td>
<td>Diesel with red dye</td>
<td>Store in dbl-walled ASTs w/in lined SCA; fluid transfers by certified oil handlers per Plan of Ops</td>
<td>No treatment on site. Water-based drill waste solids (cuttings) &amp; fluids generated temporarily stored in cutting bins w/in lined SCA and then disposed offsite. See Section 5 in Plan of Ops</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NA</td>
<td>Build ice pads &amp; then use in drill/test ops</td>
<td>N/A</td>
<td></td>
<td>Crude oil &amp; oily water</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NA</td>
<td>Snow Roads</td>
<td>N/A</td>
<td></td>
<td>4 million gallons</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Material: NA
- Acres: N/A
- Number of New Surface Holes: 1
- Sources: Lakes P1 & P2
- Access: Snow Roads
- Maximum Amount: 4 million gallons
- Equipment: See Sec. 8 in Plan of Operations
ATTACH TO THIS APPLICATION THE FOLLOWING:
• GENERAL VICINITY MAP
• SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES
• SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
• A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
• THE PROJECTIONS SHOULD BE NAD 1983 ALASKA ALBERS OR GEOGRAPHIC.
• DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
• SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-3320 TOLL FREE (IN-STATE): (800) 476-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

Authorized Signature 11/24/2020

Erik Opstad Vice President
Name Title

FEE PAID SPECIAL PLANNING COMMISSION MEETING $12,000
☑ DEVELOPMENT PERMIT $2,000, plus $500/well
☐ ADMINISTRATIVE APPROVALS $1,500
☐ CONDITIONAL DEVELOPMENT PERMITS $3,000

AMOUNT PAID $3,000

DECISION
☐ ADMINISTRATIVELY APPROVED
  This is a minor alteration to a previously approved development permit for commercial recreation.

☐ REZONING APPROVED
  This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan Conditions, lease stipulations, and provisions of the State and Federal law and permit served therewith.

☐ DEVELOPMENT PERMIT APPROVED
  The proposed development meets all applicable mandatory policies, represents the developer's best efforts to implement all relevant best efforts and minimization policies, and as long as conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter.)

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
  This is a use of land that is listed as a conditional development for this zoning district or has been elevated by the NSB Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
  (See accompanying letter)

NSB Land Management Administrator
Date

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect. NSMBC §19.30.130.
1 Introduction and Project Overview

Emerald House LLC (Emerald) plans on drilling two exploration oil and gas exploration wells on the North Slope of Alaska. The proposed wells will be drilled from ice pads within Emerald’s Peregrine Lease Block in the National Petroleum Reserve in Alaska (NPR-A) during winter 2020/2021 (Figures 1 and 2). Access will be by the North Slope Borough Community Winter Access Trail (NSB CWAT) starting near the Kuparuk River Unit (KRU) Drillsite 2P production pad and then the Peregrine Snow Road which will pioneer south from the NSB CWAT west of the Colville River within the NPR-A (Figures 2 to 4).

The Project will require snow, water and ice chips for the construction and maintenance of about 118 miles of snow road, plus two ice drill pads (Merlin-1 and Harrier-1 Drilling Ice Pads) and an ice staging pad (PEP 2P Staging Ice Pad).

All facilities and snow roads will be temporary, and will be designed and constructed to meet federal, State and NSB regulatory requirements, industry standards and arctic oil field best practices. Additionally, the NSB Oil and Gas Technical Report (NSB 2104) was consulted along with the NSB Comprehensive Plan from 2019 to 2030 (adopted March 2019).

SEQUENCE and SCHEDULE of All PROJECT OPERATIONS

<table>
<thead>
<tr>
<th>Project Milestones and Schedule</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Permitting</td>
<td>10 July 2020</td>
<td>10 January 2021</td>
</tr>
<tr>
<td>2. Perform Field Studies</td>
<td>14 August 2020</td>
<td>5 September 2020</td>
</tr>
<tr>
<td>3. Stake, pre-pack and construct staging ice pad and then snow roads</td>
<td>7 December 2020</td>
<td>5 January 2021</td>
</tr>
<tr>
<td>4. Construct drill ice pads (concurrent with and as snow road advances)</td>
<td>27 December 2020</td>
<td>5 January 2021</td>
</tr>
<tr>
<td>5. Mobilize drill rig, camp, and tangibles to first well</td>
<td>5 January 2021</td>
<td>15 January 2021</td>
</tr>
<tr>
<td>6. Drill Merlin-1</td>
<td>15 January 2021</td>
<td>1 February 2021</td>
</tr>
<tr>
<td>7. Haul camp, and tangibles to Harrier-1</td>
<td>2 February 2021</td>
<td>12 February 2021</td>
</tr>
<tr>
<td>8. Mobilize equipment and tent Merlin-1</td>
<td>1 February 2021</td>
<td>15 February 2021</td>
</tr>
<tr>
<td>9. Move drill rig and drill Harrier-1</td>
<td>12 February 2021</td>
<td>6 March 2021</td>
</tr>
<tr>
<td>10. Move testing spread from Merlin-1 and test Harrier-1</td>
<td>8 March 2021</td>
<td>22 March 2021</td>
</tr>
<tr>
<td>11. Demobilize drill rig and tangibles</td>
<td>22 March 2021</td>
<td>30 March 2021</td>
</tr>
<tr>
<td>12. Demobilize all equipment and camps, close snow roads and ice pads</td>
<td>30 March 2021</td>
<td>27 April 2021</td>
</tr>
<tr>
<td>13. Stick pick ice roads and pads</td>
<td>1 August 2021</td>
<td>1 September 2021</td>
</tr>
</tbody>
</table>

The focus of this application and plan of operations is the Merlin-1 and Harrier-1 ice drill pads and exploration wells.

2 Merlin-1 and Harrier-1 Exploration Wells

The proposed general pad layouts for both drill pads are shown in Figures 5 and 6 in Attachment 1. Both wells will be drilled to about 4,500 feet true vertical depth (TVD) to test stacked conventional objectives within the Nanushuk Formation. This same target was found in surrounding exploration wells with development planned for the Greater Moose’s Tooth and Willow Projects by Conoco Phillips Alaska Inc. (CPAI).

Emerald will use the All American #111 modular North Slope land rig, operated by Chugach Energy Services, to drill and test both wells.

The wells will be designed and permitted in accordance with an Application for a Permit to Drill (APD) from the BLM and Permit to Drill (PTD) from the Alaska Oil and Gas Conservation Commission (AOGCC). Emerald intends to gather well data that includes Measuring While Drilling (MWD) Parameters, Logging While Drilling (LWD) Data, Wireline Logs, Sidewall and/or Conventional cores, Vertical Seismic Profiles (VSPs), and check-shot information or Drill Stem Test (DST) data. Conventional well development and completion, including hydraulically fracturing specific target zones, may follow in both wells. The wells will either be plugged and abandoned (P&A) or suspended pursuant to AOGCC regulations prior to demobilization.

Emerald also has developed and will maintain an approved well control plan for its drilling program that includes proactive measures during drilling to prevent blowouts, as well as primary and secondary blowout prevention systems, a well capping program, and a relief well plan designed for successful operations in winter arctic conditions. Proactive measures to prevent blowouts are further discussed in the "Measures to Minimize Adverse Effects" Section below.
Plan of Operations: Drilling Ice Pads and Exploration Wells

Finally, while still on diverter when drilling from surface to the base of permafrost at up to 2,500 feet TVD, Emerald will place the end of the diverter into a 315-bbl shale bin within the ice-covered footprint of the pad and construct 1-foot high ice berms around the south half of the pad to create additional secondary containment.

The shale bin will help dissipate blowout energy and contain blow out fluids at 3 times the volume of the borehole, and along with bermed SCA, will help protect underlying tundra from damage from water-based drill fluids.

3 Temporary Buildings and Utilities

General layouts of the proposed drill pads are shown in Figures 5 & 6 in Attachment 1. Merlin-1 and Harrier-1 surface hole locations also are shown in Figures 2 through 4.

The drilling ice pads will be 500 feet by 500 feet will cover roughly 8.6 acres in plan and will vary in thickness from 1 to 2 feet due to grade change across the pad.

Temporary facilities on the drill pad will include All American #111 drill rig and tank farms within lined SCAs for drill fluids, two rig camps: a 30-bed trailer camp and 60-bed modular camp. Both camps will include offices, restroom, food service and recreation areas. Other temporary facilities on the drill pad used to support the winter exploration program will include storage and laydown areas, spill response connexes, and maintenance shops. Additionally, a tank farm within lined SCA for fuel will be on the ice pad.

No utilities are planned for this project.

4 Water and Wastewater

Fresh Water and Ice Chips. Overall and for all Project activities, Emerald will withdraw 20 million gallons of water and will trim 10 million gallons of ice chips from 5 lakes issued under TWUA A2020-110 from the ADNR/DML&W.

Water and ice chips used for construction of the Merlin-1 ice drill pad and Harrier-1 ice drill pad will total 2 million gallons, at 1 million gallons for each ice pad.

Water from Lake P1 will be used for Harrier-1 ice drill pad and from Lake P2 for Merlin-1 ice drill pad.

<p>| TWUA A2020-110 Water Sources Summary | | | |</p>
<table>
<thead>
<tr>
<th>Source</th>
<th>Total Volume</th>
<th>Max Volume/Day</th>
<th>Requested</th>
<th>Umat MTRS (WGS84 Coordinates)</th>
<th>Access Road</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake P1</td>
<td>348,700,000</td>
<td>924,000</td>
<td>22,100,000</td>
<td>T3N R2W, Sec. 4 &amp; T4N R2W, Sec. 32, 33 (69.657°/152.409°)</td>
<td>&lt;100 ft</td>
</tr>
<tr>
<td>Lake P2</td>
<td>59,000,000</td>
<td>924,000</td>
<td>2,500,000</td>
<td>T2N R2W, Sec. 15, 22 (69.652°/152.969°)</td>
<td>&lt;100 ft</td>
</tr>
</tbody>
</table>

Snow may be removed from portions of both lakes prior to water withdrawal to help provide access for water trucks and ice chippers. Water pumped from lakes will be transported by low ground pressure vehicles or rolling stock once winter tundra travel is approved by ADNR. Rolling stock will only use trails that have been improved with a firm ice surface or packed snow to support the weight and pressure of the vehicles.

Domestic Wastewater. Camp and drill support operations are expected to generate less than 5,000 gallons per day of domestic wastewater (both gray and black water). Domestic wastewater may be temporarily stored in camp wastewater and sewage tank modules before being hauled to the NSB-SA-10 wastewater treatment plant for disposal. Alternately, Emerald may use a state approved & certified modular wastewater treatment plant (WWTP) to treat wastewater prior to tundra disposal.

Potable Water. Emerald may use a state approved & certified modular potable water treatment plant for potable water. Alternatively, potable water may be sourced from CPAI KRU Central Production Facility or the NSB SA-10.

5 Fluids Management, Storage and Spill Response

Hazardous substance storage will comply with State and federal oil pollution prevention and contingency requirements found in 18 AAC 75, 40 CFR 112 and NSBMC § 19.50 and § 19.70. Aboveground Storage Tanks (ASTs) storing flammable and combustible liquids will comply with the International Fire Code (IFC) and 13 AAC 50.025 regulations.
Water-based mud (WBM) drilling fluids and drill waste fluids will be stored in in double-walled 400-barrel ASTs staged within lined secondary containment areas (SCAs) providing 110% containment (Figures 5 and 6). Ultra-low sulfur diesel (ULSD) will be stored in double-walled AST that are >9,999 gallons and spotted within SCA. Red dye will be added to ULSD and no ULSD AST will be filled greater than 90% capacity (8,999 gallons). Other chemicals, required for testing & well stimulation, also may be brought in. These various additives will be stored in 5-gallon pails, 55-gallon drums or 250-gallon isocontainers within lined SCA.

Crude oil testing tanks (typically 400-barrel capacity) will be staged on the pad for flow testing of the well. Again, these skid-mounted, double-walled steel tanks will be within lined SCA (Figure 8).

All storage tanks, containers and lined SCAs will be inspected daily by an on-site Alaska Clean Seas (ACS) spill technician, and conditions will be documented.

During fuel and fluid transfer operations, equipment storage or maintenance activities, the drill site and underlying tundra will be protected from leaking or dripping fuel and hazardous substances by using drip pans or other surface liners designed to catch and hold fluids under the equipment. Two spill technicians & fuel contractors (trained and certified oil handlers), operating under the Emerald Fluid Transfer Procedures, will attend all fluid transfer operations. Spills of hydrocarbons, or chemicals on ice pads will be cleaned up immediately to prevent damage to the underlying tundra when the ice pad or roads melt.

Finally, the All American #111 drill rig and the solids control modules will be spotted within berm liner creating a secondary containment area (SCA).

EMERALD’s existing, Alaska Department of Environmental Conservation (ADEC)-reviewed spill plan: ADEC 20-CP-5256, covers spill response equipment to be staged at the facility; and provides spill prevention and response considerations specific to this Project. The Plan includes immediate response actions, reporting requirements, communication trees, receiving environments, spill cleanup mobilization response times, well control information and spill prevention guidance. Emerald’s Well Control Emergency Response Plan focuses on addressing steps for preventing and then mitigating impacts from a blowout. Both plans will be kept on site and easily accessible.

Additionally, the All American #111 drill rig and well testing contractors will have Spill Prevention Control and Countermeasure (SPCC) Plans specific to their operations on-site. Contractor crews will be trained in the appropriate response & prevention strategies outlined in these plans.

6 Solid Waste Management for Merlin-1 & Harrier-1 Drilling Pads and Exploration Wells

All waste management activities will be conducted in general accordance with the Emerald Peregrine Exploration Program Solid Waste Management Plan (WMP) and in conformance with Emerald HSE Management Policies.

Additionally, the latest versions of the Alaska Safety Handbook (ASH), the North Slope Environmental Field Handbook (NSEFH) and the Alaska Waste Disposal & Reuse (“Redbook”) Guide are adopted as guidance, reference and standard operating procedures (SOPs) and workplace “best” safety, environmental and waste management practices for Emerald operations.

Merlin-1 and Harrier-1 Exploration Wells: RCRA-Exempt E&P Fluids and Solids

One waste stream, E&P fluids and solids from drilling and testing operations, will be generated during drilling operations. These solid wastes are exempt from regulation as Resource Conservation and Recovery Act (RCRA) hazardous wastes (“RCRA-exempt wastes”) per 40 CFR 261.4 and 261.7.

Up to 10,000 barrels (bbls) of drilling waste fluid and solids (drill cuttings) and another 7,000 bbls of test fluids will be temporarily stored onsite (if
necessary), before being hauled and disposed by injection in either offsite Class I or Class II UIC disposal wells at the Hilcorp Alaska Prudhoe Bay Waste Disposal Facility (PB WDF), Hilcorp Alaska Milne Point Unit WDF (MPU WDF), or the ConocoPhillips Alaska Inc. Waste Injection Facility at the Kuparuk River Unit (KRU WIF). Non-only E&P solid drill cuttings may also be hauled the NSB SA 10 landfill for beneficial reuse as sanitary cover if acceptance criteria are met. The NSB SA-10 is a Class I municipal solid waste landfill that is approved and regulated by the ADEC.

**Merlin-1 and Harrier-1 Ice Drill Pads: RCRA Exempt and Nonhazardous**

Additionally, the latest versions of the Alaska Safety Handbook (ASH), the North Slope Environmental Field Handbook (NSEFH) and the Alaska Waste Disposal & Reuse ("Redbook") Guide are adopted as guidance, reference and standard operating procedures and workplace “best” safety, environmental and waste management practices for Emerald operations.

**RCRA-exempt Wastes.** Besides domestic wastewater, rig camps on each drill pad are expected to generate <1 gallon per day of household (camp) hazardous wastes such cleaning supplies. These wastes are exempt from regulation as Resource Conservation and Recovery Act (RCRA) hazardous wastes ("RCRA-exempt wastes") per 40 CFR 261.4 and 261.7.

RCRA-exempt household hazardous wastes will be combined with domestic wastewater & temporarily stored in the camp sewage tank modules before being hauled to the NSB SA-10 WWTP for disposal.

**Non-hazardous Solid Waste.** Non-hazardous solid waste will include municipal solid waste (MSW) such as kitchen waste, construction & demolition (C&D) waste such as plastic, empty aerosol cans & timbers, as well as used metal. Each waste stream will be stored in separate dumpsters. MSW and C&D dumpsters will be managed to avoid potential wildlife interactions by covering. MSW and C&D dumpsters will be hauled offsite for disposal in the NSB SA10 landfill. Used metal will be sent offsite to Fairbanks for recycling.

**Universal Waste.** Universal wastes are hazardous wastes that are not listed nor characteristically toxic, reactive, corrosive or Sflammable. These include used oil and lubricants, printer cartridges and batteries.

These waste streams will be temporarily stored on site in Satellite Accumulation Areas (SAAs) in the camp area within lined SCA. Used oil will be packaged in drums for transport and recycled or disposed at an approved facility. Batteries and cartridges will be hauled offsite for disposal and/or recycling at approved facilities.

### Exploration Well and Ice Drill Pad Locations

Location by Umiat Meridian, Townships, Ranges and Sections (MTRS) for both well pads are listed below, along with GPS Coordinates.

The drilling ice pads will be large enough to safely carry out drill support operations and will be constructed and maintained using generally accepted practices for the North Slope.

<table>
<thead>
<tr>
<th>Well Name</th>
<th>BLM Lease NPR-A</th>
<th>Umiat Meridian</th>
<th>WGS84 Latitude</th>
<th>WGS84 Longitude</th>
<th>NAD87 Latitude</th>
<th>NAD87 Longitude</th>
<th>ASPC Zone 4 – NAD83</th>
<th>Distance (miles)</th>
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</thead>
<tbody>
<tr>
<td>Harrier-1</td>
<td>2018-L-047</td>
<td>T3N/R2W, S8</td>
<td>68.622°</td>
<td>152.4317°</td>
<td>69.622°</td>
<td>152.429°</td>
<td>1330355 ft</td>
<td>107 - 82 - 92</td>
</tr>
<tr>
<td>Merlin-1</td>
<td>2018-L-032</td>
<td>T2N/R2W, S34</td>
<td>68.484°</td>
<td>152.367°</td>
<td>69.485°</td>
<td>152.364°</td>
<td>1336618 ft</td>
<td>111 - 87 - 99</td>
</tr>
</tbody>
</table>

### Heavy Equipment

Types and number of heavy equipment used to construct the ice drill pads and support the winter drilling and testing program are listed below along with information on operational activity. Equipment types are the same as used at other North Slope operations and will be obtained from North Slope contractors.

**Snow Road and Ice Pad Construction Kit (Typical)**

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Quantity</th>
<th>Equipment</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 2000 Tucker Snow-Cats on tundra track w/ice auger drills</td>
<td>1</td>
<td>Cat 245 hard tail end dumps on LGP tires</td>
<td>6</td>
</tr>
</tbody>
</table>
### Plan of Operations: Drilling Ice Pads and Exploration Wells

#### Snow Road and Ice Pad Construction Kit (Typical)

<table>
<thead>
<tr>
<th>Equipment¹</th>
<th>Quantity</th>
<th>Equipment¹</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Challenger Cat D8 on low ground pressure (LGP) tracks</td>
<td>2</td>
<td>Cat 966C loader or similar</td>
<td>3</td>
</tr>
<tr>
<td>All Terrain Tractors w/ blades</td>
<td>10</td>
<td>Volvo A25 water buffaloes on LGP tires</td>
<td>3</td>
</tr>
<tr>
<td>Skid-mounted roll-on roll-off winch and low boy trailers</td>
<td>10</td>
<td>Pumps and pump houses</td>
<td>3</td>
</tr>
<tr>
<td>5000-gal fuel &quot;spreader&quot; truck</td>
<td>1</td>
<td>Mobile Heaters</td>
<td>8</td>
</tr>
<tr>
<td>Mechanic field service truck</td>
<td>1</td>
<td>Pickup trucks</td>
<td>10</td>
</tr>
<tr>
<td>Caterpillar Motor Grader</td>
<td>2</td>
<td>Crew Bus</td>
<td>1</td>
</tr>
</tbody>
</table>

¹ All terrain tractors include Steigers and Pisten Bullys; all tanks and trailers are on tracks, low-ground pressure tires, skids or sleds

As noted, drilling operations will be conducted by using the All American #111 mobile modular land drill rig (or similar) that is capable of being mobilized by all terrain tractor (ATT) tundra vehicles which have been approved for summer tundra travel by ADNR. At each well location on an ice pad, the rig will be spotted on rig mats within a lined secondary containment area (SCA). Equipment that may be used for a typical drilling spread at both wells is listed below along with equipment for development, completion and testing.

#### Drilling, Completion and Equipment Spreads (Typical)

<table>
<thead>
<tr>
<th>Equipment¹</th>
<th>Quantity</th>
<th>Equipment¹</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drilling Equipment Spread</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conductor Auger Drill Rig (Texoma 500 or similar)</td>
<td>1</td>
<td>ATTs/188-bbl Dragon Boxes (primary storage) for cuttings</td>
<td>10</td>
</tr>
<tr>
<td>All American 111 Drill Rig or similar</td>
<td>1</td>
<td>Cat 966C loader or similar</td>
<td>2</td>
</tr>
<tr>
<td>All Terrain Tractors (ATTs) / roll-on/roll-off trailers</td>
<td>10</td>
<td>ATT/Hot oil truck</td>
<td>1</td>
</tr>
<tr>
<td>All Terrain Tractors (ATTs) / 240-bbl vacuum tankers</td>
<td>6</td>
<td>80-ton Rough Terrain crane</td>
<td>1</td>
</tr>
<tr>
<td>ATTs/winch and low boy trailers</td>
<td>6</td>
<td>ATT/E-line logging unit</td>
<td>1</td>
</tr>
<tr>
<td>Cement silos</td>
<td>2</td>
<td>Light towers</td>
<td>8</td>
</tr>
<tr>
<td>Challenger Cat D8 on low ground pressure (LGP) tracks</td>
<td>2</td>
<td>Mobile Heaters</td>
<td>8</td>
</tr>
<tr>
<td>5000-gal fuel &quot;spreader&quot; truck</td>
<td>1</td>
<td>Geologging and mud engineering shack</td>
<td>3</td>
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<tr>
<td>70-cy Cutting bins (contingency storage) w/ln SCA</td>
<td>2</td>
<td>Volvo A25 water buffaloes on LGP tires</td>
<td>2</td>
</tr>
<tr>
<td>Well Development &amp; Completion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATT/Hot oil truck</td>
<td>1</td>
<td>Cat 966C loader or similar</td>
<td>2</td>
</tr>
<tr>
<td>Growler/blender</td>
<td>1</td>
<td>Frac Pumps</td>
<td>6</td>
</tr>
<tr>
<td>All Terrain Tractors (ATTs) / roll-on/roll-off trailers</td>
<td>12</td>
<td>Chemical trailer</td>
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<tr>
<td>All Terrain Tractors (ATTs) / 240-bbl vacuum tankers</td>
<td>6</td>
<td>80-ton crane</td>
<td>1</td>
</tr>
<tr>
<td>ATTs/winch and low boy trailers</td>
<td>6</td>
<td>Light towers</td>
<td>8</td>
</tr>
<tr>
<td>Tiger tanks and skid-mounted 400-bbl tanks</td>
<td>4</td>
<td>Mobile Heaters</td>
<td>8</td>
</tr>
<tr>
<td>AOP/Blender</td>
<td>1</td>
<td>Volvo A25 water buffaloes on LGP tires</td>
<td>3</td>
</tr>
<tr>
<td>Pickup trucks</td>
<td>10</td>
<td>Hydraulic power units</td>
<td>2</td>
</tr>
<tr>
<td>5000-gal fuel &quot;spreader&quot; truck</td>
<td>1</td>
<td>Generators</td>
<td>2</td>
</tr>
<tr>
<td>Production Testing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 bbl Sand (Refill) Tank</td>
<td>1</td>
<td>80-ton crane</td>
<td>1</td>
</tr>
<tr>
<td>Choke House</td>
<td>1</td>
<td>Cat 966C loader or similar</td>
<td>2</td>
</tr>
<tr>
<td>Sand separator</td>
<td>1</td>
<td>25 KW Generators</td>
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</tr>
<tr>
<td>All Terrain Tractors (ATTs) / roll-on/roll-off trailers</td>
<td>6</td>
<td>90 Foot Flare Stack</td>
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</tr>
<tr>
<td>All Terrain Tractors (ATTs) / 240-bbl vacuum tankers</td>
<td>12</td>
<td>Nitrogen pumping unit</td>
<td>1</td>
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<tr>
<td>Genset/Air Compressor</td>
<td>1</td>
<td>P&amp;A Christmas tree</td>
<td>1</td>
</tr>
<tr>
<td>Glycol Boiler</td>
<td>1</td>
<td>5000-gal fuel &quot;spreader&quot; truck</td>
<td>1</td>
</tr>
<tr>
<td>Vertical Gas Scrubber</td>
<td>1</td>
<td>Light towers</td>
<td>8</td>
</tr>
<tr>
<td>ATT/E-line logging unit</td>
<td>1</td>
<td>Mobile Heaters</td>
<td>8</td>
</tr>
<tr>
<td>Ten 400-bbl tank farm &amp; tangibles w/ln SCA</td>
<td>1</td>
<td>3-phase Separator</td>
<td>1</td>
</tr>
</tbody>
</table>

¹ All terrain tractors include Steigers and Pisten Bullys; all tanks and trailers are on tracks or low-ground pressure tires hauling trailers & tanks on skids or sleds
9 Permit Requirements

The following permits are required for the successful drilling and testing of the proposed Merlin-1 and Harrier-1 exploration wells.

<table>
<thead>
<tr>
<th>Permit Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agency</td>
</tr>
<tr>
<td>NSB Department of Planning &amp; Community Services</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>ADNR / Division of Mining, Land &amp; Water (DML&amp;W)</td>
</tr>
<tr>
<td>AK Oil and Gas Conservation Commission (AOGCC)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>ADEC / Division of Air Quality</td>
</tr>
<tr>
<td>ADEC / Division of Spill Prevention &amp; Response (SPAR)</td>
</tr>
<tr>
<td>ADEC / Division of Environmental Health (EH)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>AK Department of Fish &amp; Game (ADF&amp;G) / Division of Habitat</td>
</tr>
<tr>
<td>US Environmental Protection Agency</td>
</tr>
<tr>
<td>US Department of Interior – Bureau of Land Management (BLM)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>US Fish and Wildlife Service (USFWS)</td>
</tr>
<tr>
<td>US Army Corps of Engineers/Alaska Division (USACE)</td>
</tr>
</tbody>
</table>

10 Subsistence Plan

The proposed operations are within Nuiqsut Subsistence Use Area.

Emerald understands subsistence is a way of life for Nuiqsut residents and it is important to protect subsistence resources, uses and access. Emerald also understands that due to the high costs of goods, fuel and transportation,
subsistence harvests reduce food costs and, more important, provides cultural identity and spirit. Emerald has completed consultation and a review of recent subsistence field surveys and inventories of prehistoric, historic, and archeological sites.

**PURPOSE & SCOPE**

The goal of Emerald is to provide measures to mitigate subsistence impacts and to ensure Project security and safety procedures do not unduly restrict or reduce access to wildlife by subsistence hunters during operations. This will be achieved by implementing the following.

**MEASURES to MITIGATE SUBSISTENCE IMPACTS**

**Account for Subsistence Harvests When Scheduling Project Activities.** This Project will take place in the area where there are active subsistence harvests by Nuiqsut. Therefore, Emerald has opted to delay the start of this Project until the colder and darker part of winter 2020/2021 when limited subsistence activities take place, and is generally limited to trapping and hunting moose and/or caribou further south in the Umiaq area.¹ This can help reduce adverse impacts to subsistence use from this Project.

**Community and Agency Communication.** Emerald also has already established a dialog with the NSB, local villages, and affected public on its exploration programs. Additional Project meetings, consultations and updates will be held, as necessary, with the NSB Planning and Community Services Department and with stakeholders in Nuiqsut as well. These discussions will help with the development of a plan of cooperation regarding Emerald operations on the North Slope.

The purpose of this dialog will help identify and implement measures that will be taken to minimize adverse effects on the availability of fish and wildlife for commercial and subsistence uses, and to ensure that operations have no negative effect on the quality of life for Alaskans. Emerald will work with all concerned stakeholders to maintain efficient and effective communications with the affected communities for the duration of the project.

**Subsistence Representatives and Access.** Emerald is negotiating with Umiak Environmental LLC, Ukpaaquvik Inupiat Corporation (UIC) and ASRC Energy Services (AES) for Subsistence Representatives during the winter drilling program to ensure that activities are conducted to minimize potential impact to local subsistence activities. Emerald has worked with representatives from both companies in the past.

Emerald also will construct the ice pads and snow road approaches and shoulders to allow for smooth and easy transition for snow machines traffic when crossing through the Project area and safety buffer zone along the ice road. With respect to access, Emerald will not restrict traditional and customary subsistence access to and harvesting in the Project area, except for a 100-foot safety zone around each ice pad. Note that although public access to the ice pads must be restricted due to safety concerns, Emerald will provide shelter and assistance to all subsistence users in emergency situations.

**Documentation and Compliance.** If potential subsistence issues are identified, subsistence representatives will be contacted and updated during drilling and testing operations to minimize impacts. The permitting actions associated with the exploration well will be public noticed as part of the permitting processes. If there are concerns with regards to the Project, Emerald will be receptive and pro-active, and records of all concerns expressed by subsistence hunters during operations will be maintained.

**Responsibilities.** The Emerald Field Environmental Coordinator will be responsible implementing this plan and overseeing Subsistence Representatives during operation. The Emerald HSE Manager will be responsible for submitting required reports to State and local agencies; and for updating this plan.

11 **Rehabilitation Plan**

Upon completion of drilling and testing operations, both wells will either be plugged and abandoned (P&A) or suspended in accordance with AOGCC regulations, and equipment and structures will be removed from the Project area by 27 April 2021.

If a well is P&A, then the well location will be surveyed, and surface and intermediate casing cemented back as directed by AOGCC. Surface casing will be cut off about 10 feet below ground surface, and the
well cellar will be removed. The open excavation will then be backfilled and mounded with gravel to account for soil subsidence, and then capped with a lift of organic-rich lift.

All ice pads also will be “tight bladed” by grader to remove dark-colored drips missed by the ACS spill technician and the snow spoils will be thawed with resulting oily water disposed of at a permitted disposal facility. Trash and debris will be removed and transported for disposal at NSB SA-10. Emerald will conduct an inspection and “stick picking” operation via helicopter in Summer 2021 to ensure that NSB and State cleanup requirements have been met.

Although activities will be conducted only on the ice pad, impacts to vegetation and habitat may occur. Therefore, Emerald will inspect the Project area following snowmelt in 2021 during stick picking to confirm that tundra damage did not occur. If tundra damage is discovered, Emerald will consult with the State and the NSB to determine the appropriate methods for restoration and incorporate them into a Tundra Damage Rehabilitation/Remediation Plan that meets requirements found in NSBMC § 19.30, 19.500 and § 19.60, ADL 397201 lease conditions, and specific State requirements. The Plan will address the area, type, and extent of damage and will be developed in accordance with the Alaska Coastal Revegetation & Erosion Control Guide (developed by the ADNR Plant Materials Center), the Streambank Revegetation and Protection Guide (developed by the Alaska Department of Fish and Game), and other relevant guidance documents. NSB and State personnel will be invited to verify that rehabilitation operations are complete and that any issues identified are addressed.

12 Measures to Minimize Adverse Effects
1. Project personnel discovering suspected critical sites during operations will not disturb nor enter the site, and mark the area with flagging tape or some other means;
2. Project personnel will stop all activities and inform their job supervisor who will contact Emerald on siterepresentatives;
3. Emerald will immediately report these properties to SHPO and NSB LIHC for identification and assessment;
4. Emerald will then use identification and assessment consultations to guide further planned activities in the site area.

FISH & WILDLIFE HABITAT

Wildlife avoidance & interaction plans have been prepared and are under review by the ADF&G and USFWS. These plans are adopted by reference and will be covered extensively in the site orientation training for all Project personnel.

Pads constructed of ice will only be used in winter months during the open winter tundra travel season. Emerald identified willow habitats and then moved the ice pad to avoid them. Emerald also focused on avoiding areas (especially south- southwest facing stream embankments, pingos and drained lakes) that appeared to be prime bear den habitat, keeping in mind required buffer zones.

Wildlife that also may be in the area during the winter season are owls, ravens, arctic fox, wolverine, musk ox, and possibly, over-wintering caribou. Grizzly bears are known to inhabit the general area of where the project will occur but are likely to be inactive during the winter season. Polar bear range and habitat is not within this program and they probably will not be encountered.

Emerald and its contractors will exercise caution during the project. Should a grizzly bear or polar bear be encountered, Emerald will follow the procedures as outlined in our Bear Avoidance Interaction Plan. Any sightings will be reported immediately to the Company Man and Emerald Lead Field Environmental Coordinator to warn personnel of the bear. Agency reporting would follow within 24 hours as indicated below. Reporting contacts are listed.

More detailed information is provided in the Emerald Wildlife Avoidance & Interaction Plan, Bear Avoidance Interaction Plan. All plans are adopted by reference.
Plan of Operations: Drilling Ice Pads and Exploration Wells

in all plans.

In summary, all Emerald activities will be conducted to minimize impacts. This includes mitigation measures outlined in the ADL lease stipulations and adherence to State and NSB land management regulations and permit requirements.

SHALLOW HAZARDS (GAS) DURING DRILLING

Emerald is aware of a recent shallow gas blowout that occurred close to Nuiqsut and made this a focus to address these concerns during the drill planning process.

Emerald has conducted extensive 2D and 3D seismic surveys within the Emerald lease block project area. This data will be evaluated as part of the Shallow Geophysical Hazard Study, required for the AOGCC Permit to Drill (PTD) application, review and approval process. This study will identify shallow gas hazards (if any) and allow for the refinement of the exploration well design to plan for and include the appropriate structural, mechanical or drilling process related mitigation measures. AOGCC regulations require that the surface casing be terminated below the base of the permafrost and cemented in competent rock. For a typical North Slope exploration well this depth usually ranges up 2,500 feet. A review of the project area adjacent wells showed that no shallow gas hazards were encountered during exploration drilling operations.

Nonetheless, this area is considered to pose a low shallow hazard risk. Therefore, to further mitigate the risk, Emerald will drill to about 2,500 feet TVD, trip out, install a surface casing to depth, cement it back and install a 5,000-psi blowout preventer (BOP) and conduct a formation integrity test (FIT) before re-entering and resuming drilling. This means any potential gas that could cause a blowout will not be open to atmosphere.

Additionally, while still on diverter when drilling from surface to approximately 2,500 feet TVD, Emerald will place the end of the diverter into a 315-bbl shale bin within the ice-covered footprint of the drill pad and construct 1-foot ice berms around the perimeter to create SCA. The shale bin will help dissipate blowout energy and contain blow out fluids at 3 times the volume of the borehole, and along with the ice SCA, also will help protect underlying tundra from damage from water-based drill fluids.

TRAINING PROGRAM

Exploration Wells. Personnel involved in drilling operations have additional training requirements. The primary well control prevention training program for drilling personnel is a comprehensive 32-hour minimum well control course which is required by all drilling supervisors, tool pushers, drillers, floormen, motormen, and derrickmen. This 4-day basic course is required once every two years. The well control program includes classroom and simulator instruction on all types of blowout preventer equipment, causes of kicks and blowouts, kick killing procedures, warning signs of kicks, kick detection, shutting in procedures, and above all, personnel safety.

All Operations. The Emerald training program has been designed to inform everyone assigned to the Project of the environmental, social, and cultural concerns that relate to their job functions. Training components include a review of permit stipulations and requirements, cultural awareness, spill prevention and reporting, wildlife interaction, site specific safety, waste management practices, etc.

All personnel will participate in a specific training program module for bear safety and a briefing of the Bear Avoidance, Interaction, and Mitigation Plan. In addition, Emerald employees and contractors are required to complete an 8-hour training program provided by the North Slope Training Cooperative (NSTC). The North Slope Field Environmental Handbook, Alaska Safety Handbook, and a North Slope Visitor's Guide are used for the training. The latest versions of these handbooks are adopted by reference, and copies will be readily available to personnel in the field. The training program includes classes on the Alaska Safety Handbook, personal protective equipment, camp and safety orientation, hazard communication, HAZWOPER Level I, and Environmental Awareness.

Finally, Emerald also requires that all company personnel and contractors attend rig and location safety
meetings (pre-tour, SIMOPS, and weekly), as well as participate in the contractor’s behavioral safety practice program ("RA/ISEA, PTW, STOP," etc.) and on-site training orientation.

**INTERACTING with LOCAL COMMUNITIES and COMMUNITY GROUPS.**

As part of the permitting process, Emerald has published public notices detailing planned winter drilling program operations in Utqiaġvik, Fairbanks and Anchorage, and has been responding to requests for additional information (RFAI) from individuals and government as well as non-government organizations interested in the Project.

### 13 Emerald Project Contacts

In mid-November, Emerald will finalize a personnel contact list for drilling operations. In the interim, the following are available to answer questions and address concerns.

- **Erik Opstad** – Vice President 907-244-5210, erik_opstad@gmail.com
- **Steve Rog** – HSE Manager 907-345-0022, stevehog@gni.net
- **Rob Crotty** – Lead Field Coordinator 907-952-6803, crottyrob@gmail.com
- **Sonny Kula** – Lead Field Coordinator 907-315-4423, sonny.kula66@gmail.com

### 14 Plans, Studies and References

The following completed studies, reference documents and consultations were utilized by Emerald in the planning and permitting efforts for the Peregrine Exploration Program:


   - Zoning District (Map B-2)
   - Distribution of Subsistence Use (Map B-5)
   - Anadromous Streams (Map B-6)
   - Caribou Summer & Winter Ranges (Map B-11)


6. **NSB TLUI 18-005 Clearance Certificate noting no TLUI data in immediate area** (October 2020)


8. Telephonic Conversation and Personal Communication with McKenzie Johnson/USF&WS-Marine Mammals Division regarding the Project area, polar bear dens, low probability of encountering polar bears within the
Plan of Operations: Drilling Ice Pads and Exploration Wells

Project alignment and LOA consultation. (17 November 2020).

11. *Peregrine Exploration Program Oil Discharge Prevention and Contingency Plan* (ADEC 20-CP-5256), Revision 0
ICE ROAD MAINTENANCE KIT STAGING

Fuel Storage

Genset

WWTP

GALENA Camp

KUSKOKWIM CAMP

Tubular Storage

W/ Thread Protectors & Misc Equipment Storage

Rig Spares Storage

Rig Equipment Storage

Tubular Storage W/ Thread Protectors

Palletized Mud & Salt

Environac

Processing & Storage Area

Equipment Maintenance Area

Waste Treatment & Storage

Staging & Lay Down w/ Potential for Spills

Lined SCA

0.5-ft ICE Berm

Legend

Typical Drill Operations Layout - Ice Drill Pad

Peregrine Exploration Program

Similar Charlie #1 Ice Drill Pad (2019/2020)

Figure 5
DRAFT DEVELOPMENT PERMIT - REQUEST FOR COMMENTS

COMMENTS DUE BY: JANUARY 4, 2020

This is a Draft Development Permit only for the purposes of review and gathering comments during the comment period prescribed by NSBMC Title 19. It contains conditions proposed for inclusion in a final permit, if a decision is made to issue a final permit. This draft permit should not be taken to mean that the proposed project is, or will, be approved. Only upon issuance of a final permit will the proposed project be approved to commence.

December 15, 2020

Emerald House LLC (Emerald)
C/O Erik Opstad, Vice President
P.O Box 112212
Anchorage, Alaska 99511-2212
Email: erik.opstad@gmail.com

RE: NSB 21-155, Draft Development Permit, Peregrine Exploration Program Temporary Ice Airstrip, T1N, R2W, Section 34, Conservation District.

Dear Mr. Opstad:

We are in the process of reviewing your request to construct and operate a temporary ice airstrip next to Merlin 1 ice pad within the Conservation District.

Project Description

Emerald will drill two oil and gas exploration wells from ice pads within Emerald’s Peregrine Lease Block in the National Petroleum Reserve in Alaska (NPR-A) during winter. Access will be by North Slope Borough Community Winter Access Trail (NSB CWAT) snow road and then the Peregrine Snow Road.
Emerald will also use fixed wing aircraft to accomplish drill crew changes by using the Peregrine Snow Road.

**Peregrine Temporary Airstrip Location and Layout**

The proposed airstrip will be on the Peregrine Snow Road adjacent to the Merlin 1 ice drill pad. This puts it in the Umiat Meridian, Township 1N, Range 2W, Section 34.

**Temporary Landing Strips.** Temporary facilities will be limited to the airstrip and associated portable aviation navigation (NAVAID) lights used to mark the runway and to help delineate terrain in flat lights.

Emerald expects to receive five flights per week, all on the same day. For landing/takeoff the Peregrine Snow Road will be blocked at both ends, and portable NAVAIDs placed along the alignment. After takeoff, the portable NAVAIDs will be removed, and the airstrip/snow road re-opened to ground traffic.

**Temporary Airstrip Construction**

Emerald House will construct the footprint of the Peregrine Snow Road next to Merlin 1 into a temporary airstrip by:

- Expanding the width of the snow road from 25 feet to 59 feet a length of 3,500 feet for safe aviation operations. (Figure 4).
- Constructing the airstrip out of a 1-foot lift of water and ice, thus strengthening/armoring for operations.
- Installing/removing portable NAVAIDs as required.

**Aircraft Use Plan**

Emerald can access the ice drill pads by fixed wing aircraft using lakes or the Peregrine Snow Road as landing strips for crew changes. In this case, this Aircraft Use Plan (AUP) will be used to provide guidance on aviation operations detailing the temporary airstrip construction methods and locations, flight altitudes over NPR-A and safety.

The number of takeoffs and landings to support crew changes should be limited to the maximum extent possible. Therefore, if at all possible, Emerald plans on utilizing larger aircraft suitable to the task, resulting in fewer flights.

Based on this approach, Emerald expects up to five roundtrips per week as summarized below.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Aircraft Use Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drill &amp; Test Merlin 1 (January 15 to March 1)</td>
<td>Landings</td>
</tr>
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<td></td>
<td>30</td>
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Drill and Test Harrier 1 (January 15 to March 1)  

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<th>Subtotal</th>
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<tr>
<td>Total with 20%</td>
<td>60</td>
<td>60</td>
<td>Varies</td>
</tr>
<tr>
<td>Contingency</td>
<td>72</td>
<td>72</td>
<td>Varies</td>
</tr>
</tbody>
</table>

**Temporary Airstrip on Peregrine Snow Road**

If a single-engine Otter (or similar) fixed wing on skis uses to snow road as a landing strip for crew changes, the Emerald will build the snow road approximately 50 feet wide and 3500 feet long and at least 1-foot thick, of thoroughly compacted snow. If a Pilatus N-12 STOL on wheels is used, then Emerald also will use water and trimmed ice from Lakes P1 or P2 to reinforce the snow road to meet Pilatus N 12 requirements, possibly building it up into a light ice road if need be.

Black bags filled with snow will be placed along the sides of the berm to delineate the edge of landing strip along with lighting and windsock as needed. A proposed example of a Temporary Landing Strip (which will be vetted by the charter operators) is attached as Figure 4 to the Plan of Operations. See attached project description, Aircraft Use Plan and figures for additional details.

**Purpose**

The purpose of this project is to reduce exposure to Covid-19 during crew changes in support of Merlin 1 & Harrier-1 drilling and testing.

This project is scheduled to commence upon approval of final permit with a completion date of April 27, 2021.

We have preliminarily determined that your proposed development is consistent with Title 19 provided that you comply with the following conditions:

**PROJECT SPECIFIC STIPULATIONS**

1. Emerald shall get a Non-Objection letter from all land owners and provide a copy to the North Slope Borough Land Management Division.

**HELICOPTER STIPULATIONS/FIXED WING AIRCRAFT**

1. Emerald shall avoid impacting subsistence activities by communicating with the village of Utqiagvik by setting up a communications link. NSBMC 19.70.050 (L), NSBMC 19.70.050 (J) 3.
2. Emerald shall employ subsistence representatives from the village of Utqiagvik that will serve to minimize impacts to wildlife and local subsistence activities. NSBMC 19.70.050 (L) 4, NSBMC 19.70.050 (J) 3.

3. Helicopter/Fixed Wing Aircraft use in support of exploration activities shall maintain an altitude of 1500 feet over concentrations of 25 or more caribou, and with hunter in the area of pursuit of subsistence animals. NSBMC 19.70.050 (L) 4, NSBMC 19.70.050 (J) 3.

4. To minimize impacts to subsistence activities, a helicopter/fixed wing aircraft route shall be established from routine site locations, OCS shall not deviate from that prescribed route, unless avoidance of large concentration of animals is occurring, or for human safety. NSBMC 19.70.050 (L) 4, NSBMC 19.70.050 (J) 3.

5. Vehicles, vessels, and aircraft that are likely to cause significant disturbance must avoid areas where species that are sensitive to noise or movement are concentrated at times when such species are concentrated. Concentrations may be seasonal or year-round and may be due to behavior (e.g., flocks or herds) or limited habitat (e.g., polar bear denning, seal haulouts). Horizontal and vertical buffers will be required where appropriate. Concern for human safety will be given special consideration when applying this policy. 2.4.4(a)

**SPILL RESPONSE TACTICS**

1. Place drip pans under vehicles parked over 5 minutes,

2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks.

*Pink dye* is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by Emerald.

**ICE ROADS AND PADS STIPULATIONS**

1. Water may be extracted only from sources approved by the Alaska Department of Natural Resources.

2. Onshore ice roads/pads construction is not to commence until frost has penetrated the ground to a depth of one-foot. The ice road/pad is to be maintained at a minimum thickness of six (6) inches. NSBMC 19.50.030(J); NSBMC 19.60.040(O).

3. Spills of fuels, hydrocarbons, or chemicals on ice roads/ pads shall be cleaned up thoroughly prior to break-up to prevent damage to the underlying tundra when the ice road/pad melts. NSBMC 19.50.030) (J); NSBMC 19.60.040(O).
4. In the event that an alternate ice road route is required, all surface vehicles are to confine travel as much as possible to only those areas and times of year with sufficient (6 inches) snow cover in order to protect the underlying tundra. NSBMC 19.60.040(O).

WILDLIFE STIPULATION

1. The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Land Management Divisions before the start of any field activities.

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauling to an authorized solid waste disposal facility NSBMC 19.70.050 I. 4. and 5.

5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 I. 11.
7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. Emerald shall consult with ICAS Realty Director, at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

   o Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.

   o A list of vehicles used for any off-road travel, which may have taken place.

   o Statement of clean-up activities.

   o Methods of disposal of garbage, and other camp debris.

   o A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.
● Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipalook Jr., Rodney Ahtuanenuak Jr., Field Inspectors at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.

● Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.

GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cells, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, and/or herbert.ipalook@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030
6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

Our review of your application dated December 11, 2020, is being conducted in accordance with NSBMC, Title 19. The purpose of our review is to ensure that your project achieves the goals and objectives, and implements the policies, of the Borough Comprehensive Plan; to ensure that the future growth and development of the Borough is in accord with the values of its residents; to identify and secure, for present and future residents, the beneficial impacts of development; to identify and avoid, mitigate, or prohibit the negative impacts of development; and to ensure that future development is of the proper type, design and location, and is served by a proper range of public services and facilities.

You are encouraged to contact this office if you wish to discuss the applicability of the above conditions to this approval. By copy of this letter, we are soliciting comments from the below-listed individuals and their respective agencies regarding the adequacy of the above stipulations to meet the purpose of our review.

Comments on the adequacy of these stipulations should be sent to Lilly Kilapsuk, Land Management Specialist at the address above or by email at: lilly.kilapsuk@north-slope.org or by telephone at (907) 852-0320 ext. 5411.

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
Selene Tarre, Assessing Division, NSB
Olivia Cahinboy, Nuiqsut Village Deputy Assistant, NSB
Jeanne Proulx, AKDNR, Fairbanks
Lee McKinley, ADF&G JPO Liaison, Anchorage
Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
Jewel Bennett, Louise Smith, USDI/F&WS, Fairbanks
Jeanne Hanson, USDI/NMFS, Anchorage
Josephina Delgado-Plikat, DCOM, Juneau
dec.water.cilandprns@alaska.gov
Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
Ryan Winn, US Army COE, ryan.h.winn@usace.army.mil
Mary R. Romero, US Army COE, Mary.R.Romero@usace.army.mil
Land Management Regulations (LMR) Permit Application

Permit Number: 21-155
Applicant: Emerald House LLC
Address: P.O. Box 112212, Anchorage, Alaska 99511-2212
Contact Person: Erik Opstad - Vice President
Email: erik.opstad@gmail.com
Location (TRS): T: 01N R: 02W Sec:34
Zoning District: Conservation

Proposed Start Date: 1/15/2020
Completion Date: 4/27/2021
Proposed Development: Construct and operate a temporary ice airstrip next to Merlin 1 ice pad.
Purpose of Development: Reduce exposure to Covid-19 during crew changes in support of Merlin-1 & Harrier-1 drilling and testing. Note snow roads, ice pads, and wells permitted separately.

Material: NA
Number of New Surface Holes: NA
Sources: Lake P2; see Section 4 in Plan of Ops
Purpose: Water & ice chips for airstrip construction in conjunction with snow road.

Access: From Peregrine Snow Road
Maximum Amount: 500,000 gallons -estimated
Equipment: See Section 8 Plan of Ops

Type: NA - None onsite
Handling: NA - No transfers

Type: NA - None onsite
Handling: NA

Treatment: NA None onsite

Habitat: NA

Type: Light tower for NAVAIDs
Amount: Low level meeting ADEC AQ stds.

Type: Light tower for NAVAIDs
Amount: Limited - >50 mi from closest village

Floodplain: NA

Type: NA

Seismic Work
Utility Development
Recreational Development

Offshore Drilling
Residential Development
CD-ROM Included

Oil Transportation System
Snow Removal
Maps Included
ATTACH TO THIS APPLICATION THE FOLLOWING:
- GENERAL VICINITY MAP
- SPECIFIC LOCATION MAP, INCLUDING NEARBY EXISTING DEVELOPMENT AND NATURAL FEATURES
- SITE SPECIFIC FOOTPRINT (IN ESRI SHAPE FILE FORMAT) ON A CD-ROM.
- A DIGITAL GIS SHAPE FILE OR GEODATABASE OF THE PERMIT AREA WITH NO ATTRIBUTES.
- THE PROJECTIONS SHOULD BE NAD 1983 ALASKA ALBERS OR GEODEGIC.
- DESIGN PLANS (PLOT PLAN), ELEVATIONS, CROSS SECTIONS, PROFILES, AS APPROPRIATE.
- SUPPLEMENTAL INFORMATION, AERIAL PHOTOGRAPHS, STUDIES, ETC. (AS NEEDED).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLL FREE (IN-STATE): (800) 476-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

Authorized Signature: ____________________________  Date: 12/11/2020
Erik Opstad  Vice President
Name: ____________________________  Title: ____________________________

FEE PAID
☐ SPECIAL PLANNING COMMISSION MEETING  $12,000
☐ DEVELOPMENT PERMIT  $2,000, plus $500/well
☐ ADMINISTRATIVE APPROVALS  $1,500
☐ CONDITIONAL DEVELOPMENT PERMITS  $3,000

AMOUNT PAID: $2000

DECISION
☐ ADMINISTRATIVELY APPROVED
   This is a minor alteration to a previously approved development permit for commercial recreation.

☐ REZONING APPROVED
   This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan Conditions, lease stipulations, and provisions of the state and federal law and permit served thereunder.

☐ DEVELOPMENT PERMIT APPROVED
   This proposed development meets all applicable mandatory policies, represents the developer's best efforts to implement all relevant best efforts and minimization policies, and as long as conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter.)

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
   This is a use of land that is listed as a conditional development for the mining district or has been elevated by the NSB Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
   (See accompanying letter)

NSB Land Management Administrator: ____________________________  Date: ____________________________

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect. NSMBE §19.30.130.

North Slope Borough
Department of Planning and Community Services
Land Management Regulation Division
Attachment 2

Plan of Operations for Peregrine Snow Road

Peregrine Exploration Program
Plan of Operations: Aviation Operations and Temporary Airstrip

Emerald House LLC
Peregrine Exploration Program

Emerald House LLC
P.O. Box 112212
Anchorage, Alaska
99511-2212

December 2020
1 Introduction and Overall Project Overview

Emerald House LLC (Emerald) plans on drilling two exploration oil and gas exploration wells from ice pads within Emerald’s Peregrine Lease Block in the National Petroleum Reserve in Alaska (NPR- A) during winter. Access will be by the North Slope Borough Community Winter Access Trail (NSB CWAT) snow road and then the Peregrine Snow Road.

Emerald also will use fixed wing aircraft to accomplish drill crew changes by using the Peregrine Snow Road.

The focus of this application and plan of operations is the Temporary Airstrip that Emerald will construct to support its field operations.

2 Peregrine Temporary Airstrip Location and Layout

The proposed airstrip will be on the Peregrine Snow Road adjacent to the Merlin 1 ice drill pad. This puts it in the Umiat Meridian, Township 1N/Range 2W, Section 34.

3 Temporary Buildings, Facilities and Utilities

Temporary Buildings and Utilities. No temporary buildings are planned. No utilities are planned for this project.

Temporary Landing Strips. Temporary facilities will be limited to the airstrip and associated portable aviation navigation (NAVAID) lights used to mark the runway and to help delineate terrain in flat light.

Emerald expects to receive five flights per week, all on the same day. For landing/takeoff the Peregrine Snow Road will be blocked at both ends, and portable NAVAIDs placed along the alignment. After takeoff, the portable NAVAIDs will be removed, and the airstrip/snow road re-opened to ground traffic. Additional detailed on these aviation operations are included in Appendix A to this plan.

4 Water and Wastewater

Wastewater: No wastewater will be generated.

Water. EMERALD will withdraw water and trim ice chips, under TWUA A2020-110, from Lake P2 to help armor the snow road for aircraft operations. Volumes, locations and access are listed below and shown in Figures 3 and 4.

<table>
<thead>
<tr>
<th>TWUA A2020-110 Water Sources Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>Lake P2</td>
</tr>
</tbody>
</table>

5 Fluids Management, Storage and Spill Response

No fuel storage will occur as part of aviation operations, and no fluid transfers will occur. Spill response is covered by EMERALD’s spill plan: ADEC 20-CP-5256. ADEC 20-CP-5256 which details spill prevention and response considerations specific to aviation operations.

6 Solid Waste Management

No solid waste will be generated during aviation operations.

7 Temporary Airstrip Construction

As noted, Emerald will construct the footprint of the Peregrine Snow Road next to Merlin 1 into a temporary airstrip by:

- Expanding the width of the snow road from 25 feet to 50 feet a length of 3,500 feet for safe aviation operations (Figure 4)
- Constructing the airstrip out of a 1-foot lift of water and ice, thus strengthening/armor for operations.
- Installing/removing portable NAVAIDs as required.
8 Historical Properties and Cultural Resources
Emerald has completed consultation and a field survey to inventory prehistoric, historic, and archeological sites on and around the proposed snow road alignment. This included consultation with the NSB Illupiat History, Language & Culture (IHLC) Commission who supplied Emerald with Traditional Land Use Inventory (TLUI) Data under NSB 21-001. Emerald has received concurrence from the ADNR/OGA State Historic Preservation Office ("SHPO") that "no historical properties are affected," especially when PEP 2P Staging Pad activities are limited to winter with snow-covered tundra & frozen ground." The same recommendation was made by the field archaeologist in survey reports provided to the BLM.

The data and letter report both indicate there are no registered archaeological, historic or cultural resources found within 10 miles of the proposed temporary airstrip.

9 Heavy Equipment
The number and types of vehicles and equipment used in a "snow/ice road kit" for maintenance of the temporary airstrip are the same for the Peregrine Snow Road. These are listed below.

<p>| Snow Road and Ice Pad Construction Kit (Typical) for Airstrip Construction &amp; Maintenance |
|---------------------------------|-----------------|------------------|------------------|</p>
<table>
<thead>
<tr>
<th>Equipment</th>
<th>Quantity</th>
<th>Equipment</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 2000 Tucker Snowcat on tundra track w/ Ice Auger drills</td>
<td>1</td>
<td>Cat 245 hard tail end dumps on LGP tires</td>
<td>6</td>
</tr>
<tr>
<td>Challenger Cat DB on low ground pressure (LGP) tracks</td>
<td>2</td>
<td>Cat 966C loader or similar w/ ice trimmers</td>
<td>3</td>
</tr>
<tr>
<td>All Terrain Tractors w/ blades</td>
<td>10</td>
<td>Volvo A25 water buffaloes on LGP tires</td>
<td>3</td>
</tr>
<tr>
<td>Skid-mounted rolloff winch and low boy trailers</td>
<td>10</td>
<td>Pumps and pump houses</td>
<td>3</td>
</tr>
<tr>
<td>8-man self-contained spike camp</td>
<td>1</td>
<td>Light towers and Mobile Heaters</td>
<td>8</td>
</tr>
<tr>
<td>Mechanic field service truck (also 5000-gal fuel &quot;spreaders&quot;) truck</td>
<td>1</td>
<td>Pickup trucks</td>
<td>10</td>
</tr>
<tr>
<td>Caterpillar Motor Grader</td>
<td>2</td>
<td>Crew Bus</td>
<td>1</td>
</tr>
</tbody>
</table>

*All terrain tractors include Steigers and Pisten Bullys; all tanks and trailers are on tracks, low-ground pressure tires, skis or sleds

10 Permit Requirements

<table>
<thead>
<tr>
<th>Permit Information</th>
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</thead>
<tbody>
<tr>
<td>Agency</td>
</tr>
<tr>
<td>NSB Dept. of Planning &amp; Community Services</td>
</tr>
<tr>
<td>NSB Dept. of Planning &amp; Community Services</td>
</tr>
<tr>
<td>ADNR / Division of Mining, Land &amp; Water</td>
</tr>
<tr>
<td>ASNE Office Historic Properties - SHPO</td>
</tr>
<tr>
<td>US DOI/ Bureau of Land Management (BLM) – Arctic District Office for NPR-A</td>
</tr>
<tr>
<td>BLM Alaska State Archaeologist &amp; Arctic District Office Archaeologist</td>
</tr>
</tbody>
</table>

11 Subsistence Plan
Subsistence is addressed in Aviation Operations Plan (Appendix A)

12 Rehabilitation Plan
The snow road also will be "tight bladed" by grader to remove dark-colored drips missed by the ACS spill technician and the snow spoils will be thawed with resulting oily water disposed of at a permitted disposal facility.

Emerald also will inspect the Peregrine Snow Road where it was used for an airstrip for trash and debris. Trash and debris collected will be transported for disposal at NSB SA-10. Emerald will then conduct an inspection and "stick picking" operation via helicopter in Summer 2021 to ensure that NSB and State cleanup requirements have been met.
Overall, this approach will result in no long-term disturbances to the tundra, as activities will be conducted only on the ice. Nonetheless, impacts to vegetation and habitat may occur. Therefore, Emerald will inspect the Project area following snowmelt in 2021 during stick picking to confirm that tundra damage did not occur. If tundra damage is discovered, Emerald will consult with the State and the NSB to determine the appropriate methods for restoration and incorporate them into a Tundra Damage Rehabilitation/Remediation Plan that meets requirements found in NSBMC § 19.30, 19.500 and § 19.60, ADL 397201 lease conditions, and specific State requirements.

The Plan will address the area, type, and extent of damage and will be developed in accordance with the Alaska Coastal Revegetation & Erosion Control Guide (developed by the ADNR Plant Materials Center), the Streambank Revegetation and Protection Guide (developed by the Alaska Department of Fish and Game), and other relevant guidance documents. NSB and State personnel will be invited to verify that rehabilitation operations are complete and that any issues identified are addressed.

13 Measures to Minimize Adverse Effects

HISTORIC and CULTURAL RESOURCES. Emerald located its snow road alignment and ice pad within a 500-foot buffer zone within which all Project activities will be conducted. Emerald’s intention is that historic, cultural or archaeological resources (or suspected resources) discovered during Project activities are not to be disturbed under any circumstance.

This will include providing training to all field personnel on what to do as part of required Project orientation. If archaeological sites are discovered during Project activities, the following steps will be taken.

1. Project personnel discovering suspected critical sites during operations will not disturb nor enter the site, and mark the area with flagging tape or some other means;
2. Project personnel will stop all activities and inform their job supervisor who will contact Emerald onsite representatives;
3. Emerald will immediately report these properties to SHPO and NSB ILHC for identification and assessment;
4. Emerald will then use identification and assessment consultations to guide further activities in the site area.

FISH & WILDLIFE HABITAT. Wildlife avoidance & interaction plans have been approved by the NSB, and are under review by the ADF&G and USFWS. In summary, all Emerald activities will be conducted to minimize impacts. This includes mitigation measures outlined in the ADL lease stipulations and adherence to State and NSB land management regulations and permit requirements. Measures to minimizing wildlife during aviation operations are addressed in the Aviation Safety Plan.

TRAINING PROGRAM. Training for aviation operations is addressed in Aviation Operations Plan in Appendix A.

INTERACTING with LOCAL COMMUNITIES and COMMUNITY GROUPS. Subsistence trails also are an integral part of travel within the NSB. Travel to and from communities for subsistence harvests is normally by snow machine. This means people using the subsistence trails will be crossing the snow road during subsistence harvest hunting and trapping. The snow road and subsistence trail intersection will be marked with road signs and delineators denoting aviation operations, and will be closed when active.

PUBLIC INVOLVEMENT. As part of the permitting process, Emerald has published public notices detailing planned winter drilling program operations in Utqiagvik, Fairbanks and Anchorage, and has been responding to requests for additional information (RFAI) from individuals and government as well as non-government organizations interested in the Project.

Public involvement has been limited due to shutdowns and social distancing on the North Slope and throughout the State caused by the COVID 19 Pandemic. Nonetheless, Emerald consulted throughout August and September 2020 with the NSB
Department of Planning and Community Services (NSB Planning) via email more than 20 times on facets of this Project, including field studies. Emerald also held a teleconference with the entire NSB Planning staff on 5 August 2020 and presented a detailed power point on the Project.

During the same period from 26 August to 3 September, Emerald also contacted and consulted with the KSOP in daily SIMOPs teleconference. The proposed Project was discussed regarding proposed field operations and potential subsistence issues as well as immediate issues that may arise during field studies. This was done in tandem with SIMOPs meetings with ConocoPhillips Alaska Inc. and Oil Search Alaska LLC. Emerald proposes to continue consultation with KSOP by email throughout the Project as well.

14 Emerald Project Contacts
In mid-November, Emerald will finalize a personnel contact list for drilling operations. In the interim, the following are available to answer questions and address concerns.

a. Erik Opstad – Vice President
   907-244-5210
   erik.opstad@gmail.com

b. Steve Rog – HSE Manager
   907-345-0022
   steve.rog@gci.net

c. Rob Crotty – Lead Field Coordinator 907-952-6803
   crottyrob@gmail.com

d. Sonny Kula – Lead Field Coordinator 907-315-4423
   sonny.kula66@gmail.com

15 Plans, Studies and References
The following completed studies, reference documents and consultations were utilized by Emerald in the planning and permitting efforts for the Peregrine Exploration Program:


5. NSB TLUI 18-005 Clearance Certificate noting no TLUI data in immediate area (October 2020)


7. Peregrine Exploration Program Oil Discharge Prevention and Contingency Plan (ADEC 20-CP-5256), Revision 0 (September 2020)

8. Emerald Aviation Safety Plan (Appendix A)
Aircraft Use Plan

Authority: Emerald HSE Manager
Custodian: Emerald Field Environmental Coordinator
Scope: Temporary Aviation Operations in Support of Drilling Ops
Issue: 12/2/2020
Review: 12/1/2021

Introduction and Scope
Emerald is moving forward with plans to drill two exploration wells (Harrier 1 and Merlin 1) in its Peregrine Lease Block within the NPR-A.

Emerald planned winter operations include construction and maintenance of 78 miles of snow road and two ice pads, plus drilling & testing both exploration wells.

Emerald, however, also may access the ice drill pads by fixed wing aircraft using lakes or the Peregrine Snow Road as landing strips for crew changes. In this case, this Aircraft Use Plan (AUP) will be used to provide guidance on aviation operations detailing the temporary airstrip construction methods and locations, flight altitudes over NPR-A, and safety.

Scope
The number of takeoffs and landings to support crew changes should be limited to the maximum extent possible. Therefore, if at all possible, Emerald plans on utilizing larger aircraft suitable to the task, resulting in fewer flights.

Based on this approach, Emerald expects up to five roundtrips per week as summarized below.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Aircraft Use Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Landings</td>
</tr>
<tr>
<td>Drill and Test Merlin 1 (15 January to 1 March)</td>
<td>30</td>
</tr>
<tr>
<td>Drill and Test Harrier 1 (15 January to 1 March)</td>
<td>30</td>
</tr>
<tr>
<td>Subtotal</td>
<td>60</td>
</tr>
<tr>
<td>Total with 20% Contingency</td>
<td>72</td>
</tr>
</tbody>
</table>

Temporary Airstrips on Peregrine Snow Road
If a single-engine Otter (or similar) fixed wing on skis uses the snow road as a landing strip for crew changes, then Emerald will build the snow road approximately 50 feet wide and 3500-feet long and at least 1-foot thick, of thoroughly compacted snow. If a Pilatus N-12 STOL on wheels is used, then Emerald also will use water and trimmed ice from Lakes P1 or P2 to reinforce the snow road to meet Pilatus N12 requirements, possibly building it up into a light ice road if need be.
1 Objectives
The objectives of the Plan are threefold:

1. Minimize the effects of low-flying aircraft on wildlife, subsistence activities, and local communities.
2. Provide aviation data required to monitor aviation operations.
3. Provide safe aviation operations

Objective 1: Minimize Effects of Low-flying Aircraft
Fieldwork will avoid impacting subsistence activities, will follow general conditions found in BMP F-1 and BLM Lease Stipulations. Pilots and aircraft managers must be reminded of these conditions so that they too can be looking out for possible conflicts.

- Aircraft operations must be sensitive to needs of the local people and keep in mind that people on the ground hear and see aircraft long before pilots see them.
- Emerald will notify the NSB and the Kuukpik Subsistence Oversight Panel (KSOP) and other operators when aviation operations start to help minimize disturbances.
- Hazing of wildlife by aircraft is prohibited. Pursuit of running wildlife is hazing. If wildlife begins to run as an aircraft approaches, the aircraft is too close and must break away.
- Use of aircraft, near known subsistence camps and cabins should be kept to a minimum.
- If caribou are seen, then aircraft must safely divert to avoid coming any closer to them. Consistent with air safety rules and mission requirements, this means trying to maintain an altitude of 1000 feet or more above ground level (AGL) over caribou winter ranges, unless doing so would endanger human life or violate safe flying practices.

Note the BLM AO authorizes caribou wintering areas annually after consulting with the ADF&G in defining caribou winter ranges. Emerald will request this information and pass it on to aviators under contract.

Objective 2: Provide aviation data to monitor aviation operations
The tail numbers of the aircrafts will be provided to NSB prior to the start of operations. Landings will be recorded in an Aircraft Log that will be filled out electronically and sent to NSB as part of the Project completion report. After use of the strip is no longer necessary, Emerald will inspect the location and log area conditions in final reporting as well.

Objective 3: Provide safe aviation operations
Temporary airstrips will only be on areas that have adequate space for safely landing aircraft; and Emerald will work closely with the charter provider on what is required.

Emerald will create a flat area on lakes and/or will use or upgrade the snow road next to each ice drill pad to serve as landing strip to receive the aircraft. Airstrips will be oriented in northeast/southwest direction and will be sufficient width and length required for safe aircraft safety.
Black bags filled with snow will be placed along the sides of the berm to delineate the edge of landing strip along with lighting and windsock as needed. A proposed example of a Temporary Landing Strip (which will be vetted by the charter operators) is attached as Figure 4 to the Plan of Operations in the NSB LMR Application for Aviation Operations.

Ground crew and airstrip operations safety procedures are included as Supplement 1 to the AUP.

2 Responsibilities
- The Emerald Field Environmental Coordinator (FEC) is responsible for implementing and managing this Plan in the field. This.
- The EMERALD HSE Manager is responsible for ensuring this AUP is included as required reading and training with logistic companies and aircraft charter operations.
- The EMERALD FEC and HSE Manager will determine if additional measures are required after AUP implementation.

3 Safety Concerns and PPE Requirements
- Level D PPE for personnel.
- See Attachment 1 for additional safety equipment required at an airstrip.

4 Reference Documents
- 43 CFR Part 3160: Onshore Oil and Gas Order 1
- North Slope Environmental Field Handbook (NSEFH, latest edition adopted by reference)
- NPR-A Integrated Activity Plan Record of Decision, BMP B-2g and BMP F-1 (BLM, 2013)
- International Association of Oil & Gas Producers Report 590: Aircraft Management Guidelines (AMG) (IGOP, Version 2)

5 Requirements and Standards
Pursuant to NPR-A IAP BMP F-1, Emerald must ensure that aircraft used for permitted activities maintain altitudes according to the BMP F-1 guidelines.

This Plan helps meet NPR-A IAP/FEIS ROP M-2a requirements.

6 Recordkeeping
The Emerald FEC is responsible for implementing this Plan and keeping required records and reporting to BLM.

Revision Log

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Supplement 1 to NSB Peregrine Snow Road Plan of Operations
Supplement 1

Airstrip Operations

Purpose:
To outline operational guidelines, roles and responsibilities associated with operation of the Emerald temporary landing airstrip.

Procedure:

Safety –
Safety at the Emerald landing strip, especially around the aircraft, is the primary concern during aircraft operations. All activities including radio communications, airstrip ground procedures, passenger loading, and freight handling must be conducted with safety as the prime concern.

All persons directly involved with the airstrip during aircraft operations will be trained and familiar with emergency procedures.

Passenger Flights –
The following requirements must be adhered to by all passengers traveling by aircraft:

- All passengers on the aircraft must be transported to and from the airstrip by the designated vehicle to assure control over the passengers and to reduce traffic at the airstrip.
- All passengers must follow the direction provided by the designated Emerald airstrip traffic personnel and Flight Crew for loading and unloading the aircraft and ground vehicles.
- No smoking will be allowed in the ground vehicle, near the aircraft or on the aircraft.
- Outgoing passengers shall remain in the ground vehicle until the driver conducts them to the aircraft, unless otherwise required to assist handling freight under the direction of the designated Emerald airstrip traffic personnel.
- Refer to “Fixed Wing Aircraft Travel” in the “TRANSPORTATION” section of the Alaska Safety Handbook.

Freight Flights –
The following requirements must be adhered to by all persons assisting in the loading or offloading of an aircraft at the Emerald Airstrip:

- All persons operating equipment or vehicles in support of freight operations must adhere to the direction of the designated Emerald airstrip traffic personnel during activities at the airstrip and near the airstrip.
- Heavy equipment operators shall be thoroughly familiar and briefed regarding operating their equipment near the aircraft. (Note: Extreme caution shall be taken when loading and unloading pallets and materials around the aircraft since any damage to the aircraft will most likely result in the grounding of the aircraft.)
- No unnecessary equipment or personnel shall be present during freight loading / offloading activities.

Runway Access During Times of Designed Aircraft Approach and Takeoff –
To assure that safety is maintained at the airstrip, the following procedures shall be observed by all persons driving vehicles on the runway or across:

- Vehicle drivers must stop at the STOP signs denoting the portion of the snow road or lack being used as an active landing strip and look for approaching aircraft prior to proceeding.
- If there is an aircraft operation in progress, drivers must obey any directions to hold behind the barricades short of the runway until specifically directed to travel onto the runway by the designated Emerald airstrip traffic personnel.
Responsibilities:
Designated Emerald Airstrip Traffic Personnel –

Anyone giving weather information to flight crews must be a National Weather Service trained Weather Observer.

The Emerald Overall Camp Supervisor position is the person responsible for airstrip operations with support from Emerald operations personnel as needed with the following responsibilities.

- Communicating with other airstrips and aircraft to obtain upcoming flight arrival information.
- Confirming the loading passengers and baggage onto the ground vehicle safely and in time to arrive at the airstrip prior to the aircraft arrival.
- Organizing and directing the loading of freight onto the appropriate ground vehicle safely and in time to arrive at the airstrip prior to the aircraft arrival.
- Manifesting all passengers / freight being loaded onto all aircraft.
- Safely managing all vehicles approaching the aircraft once cleared by the flight crew to do so.
- Maintaining control over all passengers moving from vehicle to aircraft or aircraft to vehicle.
- Notifying flight crew when ground operations are complete, and all equipment is moving away from the aircraft.
- Arriving at the airstrip prior to aircraft operations and remaining until aircraft has left the landing strip traffic pattern.
- Taking regular weather observations to communicate current conditions as well as trends to flight crews as requested.
- Overall radio communications during flight operations including ground-to-ground and ground to air.
- Providing flight crews with weather, runway conditions and clearance information during flight times.
- Maintaining visual contact with the runway and all traffic in the area during airstrip operations.
- Controlling traffic onto airstrip while aircraft is on the ground.
- Inspecting the runway to observe and correct any obstructions; inspecting navigational aids, lighting and traffic markers to ensure operational integrity.
- If necessary, notify the ACS Environmental Technician for hazing of wildlife that may be a threat to aircraft operations.
- As necessary prior to take off, checking the runway for obstructions and security.
- Maintaining in working condition airstrip facilities, navigational aids, communications equipment, lighting and related elements.
- Ensuring compliance with all company policies concerning operation and maintenance of the Emerald airstrip.

Reference and Resources
Alaska Safety Handbook (ASH)
DRAFT DEVELOPMENT PERMIT - REQUEST FOR COMMENTS

COMMENTS DUE BY JANUARY 5 2021:

This is a Draft Development Permit only for the purposes of review and gathering comments during the comment period prescribed by NSBMC Title 19. It contains conditions proposed for inclusion in a final permit, if a decision is made to issue a final permit. This draft permit should not be taken to mean that the proposed project is, or will, be approved. Only upon issuance of a final permit will the proposed project be approved to commence.

December 16, 2020

Emerald House LLC
C/O Erik Opstad, Vice President
P. O. Box 112212
Anchorage, Alaska 99511-2212
Email: erik.opstad@gmail.com

RE: NSB 21-156, Draft Development Permit, Harrier 1 Exploration Drilling, T3N, R2W, Section 34, Conservation District.

Dear Mr. Opstad:

We are in the process of reviewing your request to conduct the Harrier 1 Exploration Program located within the Conservation District.

Project Description

Introduction and Project Overview

Emerald House LLC (Emerald) plans on drilling two exploration oil and gas exploration wells on the North Slope of Alaska. The proposed wells will be drilled from ice pads within Emerald's Peregrine Lease Block in the National Petroleum Reserve in Alaska (NPR-A) during winter 2020/2021. Access will be by the North Slope Borough Community Winter Access Trail (NSB CWAT) starting near the Kuparuk River Unit (KRU) Drillsite 2P production pad and then the Peregrine Snow Road which will pioneer south from the NSB CWAT west of the Colville River within the NPR-A.
The Project will require snow, water and ice chips for the construction and maintenance of about 118 miles of snow road, plus two ice drill pads (Merlin-1 and Harrier-1 Drilling Ice Pads) and an ice staging pad (PEP 2P Staging Ice Pad).

All facilities and snow roads will be temporary, and will be designed and constructed to meet federal, State and NSB regulatory requirements, industry standards and arctic oil field best practices. Additionally, the NSB Oil and Gas Technical Report (NSB 2104) was consulted along with the NSB Comprehensive Plan from 2019 to 2030 (adopted March 2019).

**Merlin-1 and Harrier-1 Exploration Wells**

The proposed general pad layouts for both drill pads are shown in Figures 5 and 6 in Attachment 1. Both wells will be drilled to about 4,500 feet true vertical depth (TVD) to test stacked conventional objectives within the Nanushuk Formation. This same target was found in surrounding exploration wells with development planned for the Greater Moose’s Tooth and Willow Projects by Conoco Phillips Alaska Inc. (CPAI).

Emerald will use the All American #111 modular North Slope land rig, operated by Chugach Energy Services, to drill and test both wells.

The wells will be designed and permitted in accordance with an Application for a Permit to Drill (APD) from the BLM and Permit to Drill (PTD) from the Alaska Oil and Gas Conservation Commission (AOGCC). Emerald intends to gather well data that includes Measuring While Drilling (MWD) Parameters, Logging While Drilling (LWD) Data, Wireline Logs, Sidewall and/or Conventional cores, Vertical Seismic Profiles (VSPs), and check- shot information or Drill Stem Test (DST) data. Conventional well development and completion, including hydraulically fracturing specific target zones, may follow in both wells. The wells will either be plugged and abandoned (P&A) or suspended pursuant to AOGCC regulations prior to demobilization.

Emerald also has developed and will maintain an approved well control plan for its drilling program that includes proactive measures during drilling to prevent blowouts, as well as primary and secondary blowout prevention systems, a well capping program, and a relief well plan designed for successful operations in winter arctic conditions.

Finally, while still on diverter when drilling from surface to the base of permafrost at up to 2,500 feet TVD, Emerald will place the end of the diverter into a 315-bbl shale bin within the ice-covered footprint of the pad and construct 1-foot high ice berms around the south half of the pad to create additional secondary containment.

The shale bin will help dissipate blowout energy and contain blow out fluids at 3 times the volume of the borehole, and along with bermed SCA, will help protect underlying tundra from damage from water-based drill fluids.

**Temporary Buildings and Utilities**

The drilling ice pads will be 500 feet by 500 feet and will cover roughly 8.6 acres in plan and will vary in thickness from 1 to 2 feet due to grade change across the pad.

Temporary facilities on the drill pad will include All American #111 drill rig and tank farms within lined SCAs for drill fluids, two rig camps: a 30-bed trailer camp and 60-bed modular camp. Both
camps will include offices, restroom, and food service and recreation areas. Other temporary facilities on the drill pad used to support the winter exploration program will include storage and laydown areas, spill response connexes, and maintenance shops. Additionally, a tank farm within lined SCA for fuel will be on the ice pad.

**Water and Wastewater**

**Fresh Water and Ice Chips.** Overall and for fill Project activities, Emerald will withdraw 20 million gallons of water and will trim 10 million gallons of ice chips from 5 lakes issued under TWUA A2020-110 from the ADNR/DML&W.

Water and ice chips used for construction of the Merlin-1 ice drill pad and Harrier-1 ice drill pad will total 2 million gallons, at 1 million gallons for each ice pad.

Snow will be removed from portions of both lakes prior to water withdrawal to help provide access for water trucks and ice chippers. Water pumped from lakes will be transported by low ground pressure vehicles or rolling stock once winter tundra travel is approved by ADNR. Rolling stock will only use trails that have been improved with a firm ice surface or packed snow to support the weight and pressure of the vehicles.

**Domestic Wastewater.** Camp and drill support operations are expected to generate less than 5,000 gallons per day of domestic wastewater (both gray and black water). Domestic wastewater may be temporarily stored in camp wastewater and sewage tank modules before being hauled to the NSBSA-10 wastewater treatment plant for disposal. Alternately, Emerald may use a state approved & certified modular wastewater treatment plant (WWTP) to treat wastewater prior to tundra disposal.

**Potable Water.** Emerald will use a state approved & certified modular potable water treatment plant for potable water. Alternatively, potable water may be sourced from CPAI KRU Central Production Facility or the NSBSA-10.

**Fluids Management, Storage and Spill Response**

Hazardous substance storage will comply with State and federal oil pollution prevention and contingency requirements found in 18 AAC 75, 40 CFR 112 and NSBMC § 19.50 and § 19.70. Aboveground Storage Tanks (ASTs) storing flammable and combustible liquids will comply with the International Fire Code (IFC) and 13 AAC 50.025 regulations.

Water-based mud (WBM) drilling fluids and drill waste fluids will be stored in in double-walled 400-barrel ASTs staged within lined secondary containment areas (SCAs) providing 110% containment (Figures 5 and 6). Ultra-low sulfur diesel (ULSD) will be stored in double-walled AST that are <9,999 gallons and spotted within SCA. Red dye will be added to ULSD and no ULSD AST will be filled greater than 90% capacity (8,999 gallons). Other chemicals, required for testing & well stimulation, also may be brought in. These various additives will be stored in 5-gallon pails, 55-gallon drums or 250-gallon isocontainers within lined SCA.

Crude oil testing tanks (typically 400-barrel capacity) will be staged on the pad for flow testing of the well. Again, these skid-mounted, double-walled steel tanks will be within lined SCA.

All storage tanks, containers and lined SCAs will be inspected daily by an on-site Alaska Clean Seas (ACS) spill technician, and conditions will be documented.
During fuel and fluid transfer operations, equipment storage or maintenance activities, the drill site and underlying tundra will be protected from leaking or dripping fuel and hazardous substances by using drip pans or other surface liners designed to catch and hold fluids under the equipment. Two spill technicians & fuel contractors (trained and certified oil handlers), operating under the Emerald Fluid Transfer Procedures, will attend all fluid transfer operations. Spills of hydrocarbons or chemicals on ice pads will be cleaned up immediately to prevent damage to the underlying tundra when the ice pad or roads melt.

The All American #111 drill rig and the solids control modules will be spotted within bermed liner creating a secondary containment area (SCA).

Solid Waste Management for Merlin-1 & Harrier-1 Drilling Pads and Exploration Wells

All waste management activities will be conducted in general accordance with the Emerald Peregrine Exploration Program Solid Waste Management Plan (WMP) and in conformance with Emerald HSE Management Policies.

Additionally, the latest versions of the Alaska Safety Handbook (ASH), the North Slope Environmental Field Handbook (NSEFH) and the Alaska Waste Disposal & Reuse ("Redbook") Guide are adopted as guidance, reference and standard operating procedures (SOPs) and workplace "best" safety, environmental and waste management practices for Emerald operations.

Merlin-1 and Harrier-1 Exploration Wells: RCRA-Exempt E&P Fluids and Solids

One waste stream, E&P fluids and solids from drilling and testing operations, will be generated during drilling operations. These solid wastes are exempt from regulation as Resource Conservation and Recovery Act (RCRA) hazardous wastes ("RCRA-exempt wastes") per 40 CFR 261.4 and 261.7.

Up to 10,000 barrels (bbls) of drilling waste fluid and solids (drill cuttings) and another 7,000 bbls of test fluids will be temporarily stored onsite (if necessary), before being hauled and disposed by injection in either offsite Class I or Class II UIC disposal wells at the Hikorp Alaska Prudhoe Bay Waste Disposal Facility (PB WDF), Hilcorp Alaska Milne Point Unit WDF (MPU WDF), or the ConocoPhillips Alaska Inc. Waste Injection Facility at the Kuparuk River Unit (KRU WIF). Non-oily E&P solid drill cuttings may also be hauled the NSB SA 10 landfill for beneficial reuse as sanitary cover if acceptance criteria are met. The NSB SA-10 is a Class I municipal solid waste landfill that is approved and regulated by the ADEC.

Merlin-1 and Harrier-1 Ice Drill Pads: RCRA Exempt and Nonhazardous

Additionally, the latest versions of the Alaska Safety Handbook (ASH), the North Slope Environmental Field Handbook (NSEFH) and the Alaska Waste Disposal & Reuse ("Redbook") Guide are adopted as guidance, reference and standard operating procedures and workplace "best" safety, environmental and waste management practices for Emerald operations.

RCRA-exempt Wastes. Besides domestic wastewater, rig camps on each drill pad are expected to generate <1 gallon per day of household (camp) hazardous wastes such cleaning supplies. These wastes are exempt from regulation as Resource Conservation and Recovery Act (RCRA) hazardous wastes ("RCRA-exempt wastes") per 40 CFR 261.4 and 261.7.
RCRA-exempt household hazardous wastes will be combined with domestic wastewater & temporarily stored in the camp sewage tank modules before being hauled to the NSB SA-10 WWTP for disposal.

**Universal Waste.** Universal wastes are hazardous wastes that are not listed nor characteristically toxic, reactive, corrosive or flammable. These include used oil and lubricants, printer cartridges and batteries.

These waste streams will be temporarily stored on site in Satellite Accumulation Areas (SAAs) in the camp area within lined SCA. Used oil will be packaged in drums for transport and recycled or disposed at an approved facility. Batteries and cartridges will be hauled offsite for disposal and/or recycling at approved facilities. (Please see attachments for more details).

**Purpose**

This project is needed in support of the Harrier 1 Exploration Program.

This project is scheduled to commence February 22, 2020, with a completion date of April 27, 2021.

We have preliminarily determined that your proposed development is consistent with Title 19 provided that you comply with the following conditions:

**PROJECT ADVISORY**

This permit is valid only for the Harrier 1 Exploration Program.

**PROJECT SPECIFIC STIPULATIONS**

1. Emerald House shall get a Non-Objection letter from all land owners and provide a copy to the North Slope Borough Land Management Division.

2. Emerald House shall have two trained fuel handlers on sight during all fueling/refueling activities.

**WILDLIFE STIPULATION**

The Permittee shall prepare and implement a Polar, Grizzly, & Brown Bear Interaction Plan to minimize conflicts between bears and humans, including measures to: (a) minimize attraction of bears to the operation use areas; (b) organize layout of operation use areas to minimize human/bear interactions; (c) warn personnel of bears near or in the operation use areas and the proper procedures to take; (d) if authorized, deter bears from the operation use areas; (e) provide contingencies in the event that bears do not leave the site or cannot be deterred by authorized personnel; (f) discuss proper storage and disposal of materials that may be toxic to bears; and (g) provide a systematic record of bears on the site and in the immediate area. The Polar, Grizzly & Brown Bear Interaction Plan must be submitted to the NSB Land Management Divisions before the start of any field activities.

**SPILL RESPONSE REQUIREMENTS**

1. Emerald House shall have an approved spill response and contingency plan. The approved Plan shall be attached to this file for reference. NSBMC 19.70.050 I (11)
SPILL RESPONSE TACTICS

1. Place drip pans under vehicles parked over 5 minutes.

2. Placement of adequate surface liners are required under all valves or connections to diesel fuel tanks.

3. Impermeable lining and diking is required for fuel storage facilities with a capacity greater than 660 gallons.

Pink dye is added to all diesel fuel prior to transporting to the field crews to aid in spill detection. All spills will be reported and cleaned up by Emerald House.

ICE ROADS AND PADS STIPULATIONS

1. Water may be extracted only from sources approved by the Department of Natural Resources.

2. Onshore ice road construction is not to commence until frost has penetrated the ground to a depth of one-foot. The ice road is to be maintained at a minimum thickness of six (6) inches. NSBMC 19.50.030(J); NSBMC 19.60.040(O).

3. Spills of fuels, hydrocarbons, or chemicals on ice pads shall be cleaned up thoroughly prior to break-up to prevent damage to the underlying tundra when the ice pad melts. NSBMC 19.50.030(J); NSBMC 19.60.040(O).

4. In the event that an alternate ice road route is required, all surface vehicles are to confine travel as much as possible to only those areas and times of year with sufficient (6 inches) snow cover in order to protect the underlying tundra. NSBMC 19.60.040(O).

TUNDRA STIPULATIONS

1. Vehicles shall be operated in a manner such that the vegetative mat of the tundra is not disturbed and blading or removal of tundra or vegetative cover is prohibited unless specifically approved by the Land Management Administrator or his designee. Snow ramps, snow/ice bridges or cribbing shall be used to cross frozen water bodies to preclude cutting, eroding or degrading of their banks. Snow ramps and snow/ice bridges shall be substantially free of soil and debris and of sufficient thickness to support vehicles. Snow/ice bridges must be removed or breached, and cribbing removed after final use or prior to breakup, whichever occurs first. Frozen water courses shall be crossed at shallow riffle areas, if such areas exist. Where such areas do not exist, an environmentally preferred location will be identified. Vehicles shall not be abandoned. NSBMC 19.60.040 O., NSBMC 19.70.050 L. 3.

2. Existing roads and trails shall be used wherever possible. Trail widths shall be kept to the minimum necessary. Trail surface may be cleared of timber, brush, stumps and snags NSBMC 19.70.050 L. 2. and 3.

3. Movement of equipment through willow (Salix) stands shall be avoided where possible NSBMC 19.70.050. K. 2.

4. Trails and campsites must be kept clean. All solid waste including incinerator residue shall be backhauled to an authorized solid waste disposal facility NSBMC 19.70.050 L. 4. and 5.
5. All hazardous material containers and fuel drums shall be marked with the contractor's initials and dated.

6. Fuel storage facilities shall not be placed within 100 feet of water bodies. NSBMC 19.70.050 I. 11.

7. Tundra travel shall not cross Native Allotments unless authorized by the allotment owner. Emerald House shall consult with ICAS Realty Director, at (907) 852-4227.

8. Only those vehicles approved for summer/winter travel use by the State of Alaska Department of Natural Resources, Division of Mining, Land and Water Management are permitted.

9. Vehicle maintenance, campsites, and storage or stockpiling of material on the surface ice of lakes, ponds or rivers or on sea ice within the borough is prohibited with the following exceptions: a) the use of light plants and water pumps (including refueling) on the surface ice of lakes and ponds may be allowed with consent from the North Slope Borough, b) storage or stockpiling of material on the surface ice of lakes and ponds that do not contain fish may be allowed with consent from the North Slope Borough; c) storage or stockpiling of material on grounded ice in fish bearing waters may be allowed with consent from the North Slope Borough.

10. Winter on-tundra travel may begin when six inches (6") of snow cover and twelve inches (12") of frost depth conditions exist for the activities intended as determined by an authorized field representative of the Land Management Administrator. Certain on-tundra activities may begin sooner than others depending on the impact or magnitude of the operations NSBMC 19.70.050 L. 3.

11. Crossings of rivers and streams is to be restricted to only those areas where the ice is frozen solidly to the river/stream bed to avoid impacts to potential fish over wintering areas NSBMC 19.70.050 K. 2.

12. After April 15, 2021, on-tundra travel shall be subject to termination within 72 hours of notification by the Land Management Administrator or his/her designee for protection of surface vegetation. NSBMC 19.70.050 L. 3.

13. A completion report shall be submitted within thirty (30) days upon termination of permit activities. This report shall contain the following information:

- Actual routes of travel, and, if utilized, the location of all camps depicted on a USGS topo map.
- A list of vehicles used for any off-road travel, which may have taken place.
- Statement of clean-up activities.
- Methods of disposal of garbage, and other camp debris.
- A report covering any known incidents of tundra damage and follow-up corrective actions that may have taken place while operating under this permit.
- Any tundra damages that have occurred shall be reported to the Land Management Division, Attn: Herbert Ipaook Jr., Rodney Ahtuangaruak Jr., Field Inspector at (907) 480-2028 or Allyson Atos, Leroy Oenga Jr., Ralph Kaleak Sr., Field Inspectors at (907) 852-0320.
- Report any tundra damage within 24 hours and consult with NSB Land Management Division with any questionable activity unsure of.
GENERAL STIPULATIONS

1. The permittee is reminded to conform to the provisions of NSBMC Chapters 9.08, 9.12 and 9.16 regarding solid and sanitary waste collection/disposal and potable water. The proper and lawful disposal of waste in an environmentally sound manner is a condition of this permit. If the permittee does not anticipate using facilities operated or approved by NSB, the Alaska Department of Environmental Conservation at (907) 269-7500 shall be contacted for an approved sanitary and solid waste disposal plan as well as a plan for potable water for temporary and permanent facilities described in this permit. A copy of the approved plans shall be submitted to the North Slope Borough Land Management Division to become a part of this permit file. NSBMC 19.70.050(I)(4)&(5)

2. Should any cultural, archeological or paleontological resource materials (including, but not limited to artifacts, house mounds, grave sites, ice cellsars, and fossilized animal remains) be discovered in the course of activities conducted under this permit, the site shall not be disturbed and the North Slope Borough Inupiat History, Language and Culture Commission shall be promptly notified at (907) 852-0422. NSBMC 19.70.050(E) through (G)

3. All oil and other hazardous material spills over 55 gallons shall be reported immediately to the NSB by telephoning (907) 852-0440. The follow-up written report will be faxed to the NSB Land Management Division fax (907) 852-0321 or email to: allyson.atos@north-slope.org, leroy.oenga@north-slope.org, ralph.kaleak@north-slope.org, herbert.ipalook@north-slope.org and/or rodney.ahtuangaruak@north-slope.org. A report of all spills shall be submitted to our office on a weekly basis. A sufficient amount of absorbent materials shall be on hand at all times in the event of any fuel, oil, or chemical spills. Spills shall be cleaned up as soon as possible. NSBMC 19.50.030(I)

4. The Land Management Administrator may require that his/her authorized representative be on-site during any operations conducted under this permit. NSBMC 19.30.100

5. Within the constraints of federal, state and local law, the permittee and its agents are encouraged, through a voluntary affirmative action program, to hire and train residents of the North Slope Borough. In order to comply with this stipulation the permittee and its agents shall contact the Mayor or City Manager and the village corporation of any village most affected by this permit. In this case contact the village of Nuiqsut at (907) 480-6727 and Kuukpik Corporation at (907) 480-6220 to determine if there are qualified people available or people who could be employed for on-the-job training. NSBMC 19.70.030

6. The permittee shall comply with all local, state and federal laws and permits applicable to this project. NSBMC 19.30.100

7. This permit is valid for the duration of the existence of the development and the developer's compliance with the terms and conditions herein. This permit automatically expires within twelve months of approval if no actual development has commenced. Failure to comply with the conditions of this permit could result in immediate revocation of this permit. NSBMC 19.30.070

8. The permittee shall inform and ensure compliance with these stipulations by its agents and employees. This permit shall be posted in a conspicuous place for these individuals to see. NSBMC 19.30.100

Our review of your application dated December 15, 2020, is being conducted in accordance with NSBMC, Title 19. The purpose of our review is to ensure that your project achieves the goals and objectives, and implements the policies, of the Borough Comprehensive Plan; to ensure that the future
growth and development of the Borough is in accord with the values of its residents; to identify and secure, for present and future residents, the beneficial impacts of development; to identify and avoid, mitigate, or prohibit the negative impacts of development; and to ensure that future development is of the proper type, design and location, and is served by a proper range of public services and facilities.

You are encouraged to contact this office if you wish to discuss the applicability of the above conditions to this approval. By copy of this letter, we are soliciting comments from the below-listed individuals and their respective agencies regarding the adequacy of the above stipulations to meet the purpose of our review.

Comments on the adequacy of these stipulations should be sent to Ralph Burke, Land Management Specialist at the address above or by email at: ralph.burke@north-slope.org or by telephone at (907) 852-0320 ext. 5414

Sincerely,

Gordon R. Brower,
Land Management Administrator

cc: NSB Planning Commission
    Brian Person, NSB Wildlife (caribou/fox/geese/vegetation)
    Robert Suydam, NSB Wildlife (Birds/Bowhead/Beluga)
    Sciene Tirre, Assessing Division, NSB
    Olivia Cabinboy, Nuiqsut Village Deputy Assistant, NSB
    Jeanne Proulx, AKDNR, Fairbanks
    Lee McKinley, ADF&G JPO Liaison, Anchorage
    Audra Brase, ADF&G Regional Supervisor/Division of Habitat, Fairbanks
    Jewel Bennett, Louise Smith, USDI/F&WS, Fairbanks
    Jeanne Hanson, USDI/NOAA, Anchorage
    Josephina Delgado-Pikat, DCOM, Juneau
dec_water.ohland@gov@alaska.gov
    Reese Thieme, Industrial Facility Specialist, ADEC, reese.thieme@alaska.gov
✓ Donna Wixon, USDI/BLM
✓ Shelly Jones, BLM District Manager
    Jeanne Frazier, AKDNR/DO&G, Anchorage
    Katie Farley, State Pipeline Coordinators Office/ JPO, SOA
Dop. permitting@alaska.gov
✓ Mark Major, Kuukpik Corporation, majorinor@live.com
    Willow Hetrick, Kuukpik Corporation, willow@kuukpik.com
✓ Mamie Pardué Mayor, City of Nuiqsut
    Raymond Ipalook, President, Native Village of Nuiqsut
    Tommy Nageak, Cultural Resource Specialist, NSB
    Darren W. Aiken, TLUI Technician, NSB
    Herbert Ipalook Jr., Rodney Ahtuagaruak Jr., Field Inspectors, Nuiqsut
    Allyson Aitos, Lead Field Inspector, Utqiagvik
    Leroy Oening Jr. Ralph Kaleb Sr., Field Inspectors, Utqiagvik
    Wayne Cary, Assistant Attorney, NSB
    Charmaine Hingada, Jonathan Aiken Jr., CPDGIS, NSB
    Files

N21-156/GRB/mk/pdl LMR Manager/rjb
# Land Management Regulations (LMR) Permit Application

<table>
<thead>
<tr>
<th>Permit Number:</th>
<th>21-156</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant:</td>
<td>Emerald House LLC</td>
</tr>
<tr>
<td>Address:</td>
<td>P.O. Box 112212, Anchorage, Alaska 99511-2212</td>
</tr>
<tr>
<td>Contact Person:</td>
<td>Erik Opstad, Vice President</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:erik.opstad@gmail.com">erik.opstad@gmail.com</a></td>
</tr>
<tr>
<td>Location (TRS):</td>
<td>Umiat T03N R02W, Section 34</td>
</tr>
<tr>
<td>Zoning District:</td>
<td>Conservation</td>
</tr>
<tr>
<td>Proposed Start Date:</td>
<td>2/22/2021</td>
</tr>
<tr>
<td>Completion Date:</td>
<td>4/27/2021</td>
</tr>
<tr>
<td>Proposed Development:</td>
<td>Construct ice drill pad, and then drill and test Harrier 1 exploration oil well</td>
</tr>
<tr>
<td>Purpose of Development:</td>
<td>Stratigraphic testing of Nunushak Formation to determine if commercial oil is present. See Figures in Attachment 1 for locations, and Sections 1 &amp; 2 in attached Plan of Operations for detailed information</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material</th>
<th>Fill/Dredge</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acres</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Oil &amp; Gas Wells Number of New Surface Holes:</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Temp. Water Use Sources:</td>
<td>Lake P1 (see Sec. 4 in Plan of Ops)</td>
<td></td>
</tr>
<tr>
<td>Purpose:</td>
<td>Build ice pad &amp; then use in drill/test ops</td>
<td></td>
</tr>
<tr>
<td>Access: Snow Roads</td>
<td>Maximum Amount: 1 million gallons</td>
<td></td>
</tr>
<tr>
<td>Equipment:</td>
<td>NA</td>
<td></td>
</tr>
<tr>
<td>Off Road Travel Period:</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Site Access:</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Fuel Storage Type:</td>
<td>Diesel with red dye</td>
<td></td>
</tr>
<tr>
<td>Handling:</td>
<td>Store in dbl-walled ASTs w/in lined SCA; fluid transfers by cert. oil handlers per ODPCP 52-CP-5256</td>
<td></td>
</tr>
<tr>
<td>Type: Crude oil &amp; oily water</td>
<td>Amount: &lt;428 bbls in 2 ASTs w/in bermed liner</td>
<td></td>
</tr>
<tr>
<td>Handling:</td>
<td>Store in dbl-walled ASTs w/in lined SCA; fluid transfers by cert. oil handlers per ODPCP 52-CP-5256</td>
<td></td>
</tr>
<tr>
<td>Hazardous Material Storage Treatment:</td>
<td>No treatment on site. Water-based drill waste solids (cuttings) &amp; fluids generated temporarily stored in cutting bins w/in lined SCA and then disposed offsite. See Section 5 in Plan of Ops</td>
<td></td>
</tr>
<tr>
<td>Mining Mining Habitat:</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Air Emissions Type:</td>
<td>Rig engines &amp; heavy equipment</td>
<td></td>
</tr>
<tr>
<td>Amount: Low level- all meet ADEC AQ standards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noise/Vibrations Type:</td>
<td>Rig engines &amp; heavy equipment</td>
<td></td>
</tr>
<tr>
<td>Amount: Low level-Project &gt;40 miles to closest village</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensitive Habitat Floodplain:</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Shoreline:</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Transportation Marine Tanker Facility Type:</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Seismic Work</td>
<td>Utility Development</td>
<td></td>
</tr>
<tr>
<td>Offshore Drilling</td>
<td>Residential Development</td>
<td></td>
</tr>
<tr>
<td>Airport or Helicopter Pad Oil Transportation System</td>
<td>Snow Removal</td>
<td></td>
</tr>
<tr>
<td>Maps Included</td>
<td>Recreational Development</td>
<td>CD-ROM Included</td>
</tr>
</tbody>
</table>

North Slope Borough Department of Planning and Community Services Land Management Regulations Division
ATTACH TO THIS APPLICATION THE FOLLOWING:

- General Vicinity Map
- Specific Location Map, including nearby existing development and natural features
- Site-Specific Footprint (in ESRI shape file format) on a CD-ROM.
- A digital GIS shape file or geodatabase of the permit area with no attributes.
- The projections should be NAD 1983 ALASKA ALBERS OR GEOGRAPHIC.
- Design plans (plot plan), elevations, cross sections, profiles, as appropriate.
- Supplemental information, aerial photographs, studies, etc. (as needed).

SEND TO:
NORTH SLOPE BOROUGH, LAND MANAGEMENT ADMINISTRATOR
P.O. BOX 69
BARROW, AK 99723
PHONE: (907) 852-0320 TOLL FREE (IN-STATE): (800) 476-6066 EXT. 320

I HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.
ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMIT.

Authorized Signature

12/15/2020

Date

Erik Opstad

Name

Vice President

Title

FEE PAID

☐ SPECIAL PLANNING COMMISSION MEETING $12,000

☐ DEVELOPMENT PERMIT $2,000, plus $500/well

☐ ADMINISTRATIVE APPROVALS $1,500

☐ CONDITIONAL DEVELOPMENT PERMITS $3,000

AMOUNT PAID $2,000; already paid $500 for well

DECISION

☐ ADMINISTRATIVELY APPROVED
This is a minor alteration to a previously approved development permit for commercial recreation.

☐ REZONING APPROVED
This proposed development substantially complies with the Master Plan, and a use permit is issued, conditioned on compliance with all relevant Master Plan Conditions, lease stipulations, and provisions of the state and federal law and permits served therewith.

☐ DEVELOPMENT PERMIT APPROVED
The proposed development meets all applicable regulatory policies, represents the developer's best efforts to implement all relevant best efforts and minimization policies, and as long as conditions set forth in the accompanying letter are complied with, will represent a net public benefit. (See accompanying letter.)

☐ CONDITIONAL DEVELOPMENT PERMIT APPROVED
This is a use of land that is listed as a conditional development in this zoning district or has been elevated by the NSB Land Management Administrator to the Planning Commission.

☐ PERMIT DENIED
(See accompanying letter)

NSB Land Management Administrator

Date

If you wish to appeal this decision, you must submit written notice to the Commission Clerk of the Planning Commission (PO Box 69, Barrow, Alaska, 99723) within 30 days of the issuance of this decision, stating the policy or policies in question and the reason you believe the decision is incorrect. NSMBC §19.30.130.
1 Introduction and Project Overview

Emerald House LLC (Emerald) plans on drilling exploration oil and gas exploration wells on the North Slope of Alaska. The proposed wells will be drilled from ice pads within Emerald’s Peregrine Lease Block in the National Petroleum Reserve in Alaska (NPR-A) during winter 2020/2021 (Figures 1 and 2). Access will be by the North Slope Borough Community Winter Access Trail (NSB CWAT) and then the Peregrine Snow Road (Figures 2 to 4).

The Project will require snow, water and ice chips for the construction and maintenance of about 118 miles of snow road, plus two ice drill pads (Merlin-1 and Harrier-1 Drilling Ice Pads) and an ice staging pad (PEP 2P Staging Ice Pad).

All facilities and snow roads will be temporary, and will be designed and constructed to meet federal, State and NSB regulatory requirements, industry standards and arctic oil field best practices. Additionally, the NSB Oil and Gas Technical Report (NSB 2104) was consulted along with the NSB Comprehensive Plan from 2019 to 2030 (adopted March 2019).

THIS APPLICATION FOCUSES on and IS BEING SUBMITTED for the HARRIER 1 EXPLORATION WELL and ICE DRILL PAD. All other snow roads and ice pad are being permitted separately.

Project Activities related to the Harrier 1 Exploration Well and Ice Drill Pad are highlighted within the Project schedule for quick reference. Note Emerald plans on drilling Merlin 1 first and then Harrier 1.

SEQUENCE and SCHEDULE of All PROJECT OPERATIONS

<table>
<thead>
<tr>
<th>Project Milestones and Schedule</th>
<th>Start Date</th>
<th>End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Permitting</td>
<td>10 July 2020</td>
<td>10 January 2021</td>
</tr>
<tr>
<td>2. Perform Field Studies</td>
<td>14 August 2020</td>
<td>5 September 2020</td>
</tr>
<tr>
<td>3. Stake, pre-pack and construct staging ice pad and then snow roads</td>
<td>15 December 2020</td>
<td>15 January 2021</td>
</tr>
<tr>
<td>4. Construct drill ice pads (concurrent with and as snow road advances)</td>
<td>27 December 2020</td>
<td>15 January 2021</td>
</tr>
<tr>
<td>5. Mobilize drill rig, camp, and tangibles to first well</td>
<td>5 January 2021</td>
<td>15 January 2021</td>
</tr>
<tr>
<td>6. Drill Merlin-1</td>
<td>15 January 2021</td>
<td>1 February 2021</td>
</tr>
<tr>
<td>7. Haul camp, and tangibles to Harrier-1</td>
<td>2 February 2021</td>
<td>12 February 2021</td>
</tr>
<tr>
<td>8. Mobilize test equipment to Merlin-1</td>
<td>1 February 2021</td>
<td>15 February 2021</td>
</tr>
<tr>
<td>9. Move drill rig and drill Harrier-1</td>
<td>12 February 2021</td>
<td>8 March 2021</td>
</tr>
<tr>
<td>10. Move testing spread from Merlin-1 and test Harrier-1</td>
<td>8 March 2021</td>
<td>22 March 2021</td>
</tr>
<tr>
<td>11. Demobilize drill rig and tangibles</td>
<td>22 March 2021</td>
<td>30 March 2021</td>
</tr>
<tr>
<td>12. Demobilize all equipment and camps, close snow roads and ice pads</td>
<td>30 March 2021</td>
<td>27 April 2021</td>
</tr>
<tr>
<td>13. Stick pick ice roads and pads</td>
<td>1 August 2021</td>
<td>1 September 2021</td>
</tr>
</tbody>
</table>

The focus of this application and plan of operations is the Harrier-1 ice drill pad and exploration well.

2 Harrier-1 Exploration Well

The proposed general pad layouts for drilling and testing are shown in Figures 5 and 6 in Attachment 1. Harrier 1 will be drilled to about 4,500 feet true vertical depth (TVD) to test stacked conventional objectives within the Nanushuk Formation.

Emerald will use the All American #111 modular North Slope land rig, operated by Chugach Energy Services, to drill and test Harrier 1.

The well will be designed and permitted in accordance with an Application for a Permit to Drill (APD) from the BLM and Permit to Drill (PTD) from the Alaska Oil and Gas Conservation Commission (AOGCC). Emerald intends to gather well data that includes Measuring While Drilling (MWD) Parameters, Logging While Drilling (LWD) Data, Wireline Logs, Sidewall and/or Conventional cores, Vertical Seismic Profiles (VSPs), and checkshot information or Drill Stem Test (DST) data. Conventional well development and completion, including hydraulically fracturing specific target zones, may follow. The well will either be plugged and abandoned (P&A) or suspended pursuant to AOGCC regulations prior to demobilization.

Emerald also has developed and will maintain an approved well control plan for its drilling program that
includes proactive measures during drilling to prevent blowouts, as well as primary and secondary blowout prevention systems, a well capping program, and a relief well plan designed for successful operations in winter arctic conditions. **Proactive measures to prevent blowouts are further discussed in the “Measures to Minimize Adverse Effects” Section below.**

Finally, while still on diverter when drilling from surface to the base of permafrost at up to 2,500 feet TVD, Emerald will place the end of the diverter into a 315-bbl shale bin within the ice-covered footprint of the pad and construct a 1-foot ice berm around the south half of the pad to create additional secondary containment.

The shale bin will help dissipate blowout energy and contain blow out fluids at 3 times the volume of the borehole, and along with bermed SCA, will help protect underlying tundra from damage from water-based drill fluids.

3 **Temporary Buildings and Utilities**

General layouts of the proposed drill pads are shown in Figures 5 & 6 in Attachment 1. The Harrier-1 surface hole location is shown in Figures 2 through 4.

The drilling ice pad will be 500 feet by 500 feet in plan and will cover roughly 8.6 acres while varying in thickness from 1 to 2 feet due to grade change across the pad. The drilling ice pad will be large enough to safely carry out drill support operations and will be constructed and maintained using generally accepted practices for the North Slope.

Temporary facilities on the drill pad will include All American #111 drill rig, tank farms within lined SCAs for drill fluids, and two rig camps: a 30-bed trailer camp and 60-bed modular camp. Both camps will include offices, restroom, food service and recreation areas. Other temporary facilities on the drill pad used to support the winter exploration program will include storage and laydown areas, spill response connexes, and maintenance shops. Additionally, a tank farm within lined SCA for fuel will be on the ice pad.

**No utilities are planned for this project.**

4 **Water and Wastewater**

**Fresh Water and Ice Chips.** 250,000 gallons of water and 750,000 gallons equivalent of trimmed ice chips will be used to construct the Harrier-1 ice pad. Water withdrawal and ice trimming is approved pursuant to TWUA A2020-110, with water and chips coming from Lake P1 (Figure 3 & 4). Total approved withdrawals from the lakes are summarized below.

<table>
<thead>
<tr>
<th>TWUA A2020-110 Water Sources Summary</th>
<th>Total Volume</th>
<th>Max Volume/Day</th>
<th>Requested</th>
<th>Umiat M1RS (WGS84 Coordinates)</th>
<th>Access Road</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake P1</td>
<td>348,700,000</td>
<td>924,000</td>
<td>22,100,000</td>
<td>T3N R2W, Sec 4, T4N R2W, Sec 32, 33 (96.553'N152.409'W)</td>
<td>&lt;100 ft</td>
</tr>
</tbody>
</table>

Snow may be removed from portions of the lake prior to water withdrawal to help provide access for water trucks and ice chippers. Water pumped from lakes will be transported by low ground pressure vehicles or rolling stock once winter tundra travel is approved by ADNR. Rolling stock will only use trails that have been improved with a firm ice surface or packed snow to support the weight and pressure of the vehicles.

**Domestic Wastewater.** Camp and drill support operations are expected to generate less than 5,000 gallons per day of domestic wastewater (both gray and black water). Domestic wastewater may be temporarily stored in camp wastewater and sewage tank modules before being hauled to the NSB-SA-10 wastewater treatment plant for disposal. Alternately, Emerald may use a state approved & certified modular wastewater treatment plant (WWTP) to treat wastewater prior to tundra disposal. Permitting for disposal is issued to the WWTP operator.

**Potable Water.** Emerald may use a state approved & certified modular potable water treatment plant for potable water. Alternatively, potable water may be sourced from CPAI KRU Central Production Facility or the NSB SA-10.
5 Fluids Management, Storage and Spill Response

Hazardous substance storage will comply with State and federal oil pollution prevention and contingency requirements found in 18 AAC 75, 40 CFR 112 and NSBMC § 19.50 and § 19.70. Aboveground Storage Tanks (ASTs) storing flammable and combustible liquids will comply with the International Fire Code (IFC) and 13 AAC 50.025 regulations.

Water-based mud (WBM) drilling fluids and drill waste fluids will be stored in double-walled 400-barrel ASTs staged within lined secondary containment areas (SCAs) providing 110% containment (Figures 5 and 6). Ultra-low sulfur diesel (ULSD) will be stored in double-walled AST that are <9,999 gallons and spotted within SCA. Red dye will be added to ULSD and no ULSD AST will be filled greater than 90% capacity (8,999 gallons). Other chemicals, required for testing & well stimulation, also may be brought in. These various additives will be stored in 5-gallon pails, 55-gallon drums or 250-gallon iscontainers within lined SCA.

Crude oil testing tanks (typically 400-barrel capacity) will be staged on the pad for flow testing of the well. Again, these skid-mounted, double-walled steel tanks will be within lined SCA (Figure 8).

All storage tanks, containers and lined SCAs will be inspected daily by an on-site Alaska Clean Seas (ACS) spill technician, and conditions will be documented.

During fuel and fluid transfer operations, equipment storage or maintenance activities, the drill site and underlying tundra will be protected from leaking or dripping fuel and hazardous substances by using drip pans or other surface liners designed to catch and hold fluids under the equipment. Two spill technicians & fuel contractors (trained and certified oil handlers), operating under the Emerald Fluid Transfer Procedures, will attend all fluid transfer operations. Spills of hydrocarbons, or chemicals on ice pads will be cleaned up immediately to prevent damage to the underlying tundra when the ice pad or roads melt.

Finally, the All American #111 drill rig and the solids control modules will be spotted within bermed liner creating a secondary containment area (SCA).

EMERALD’s existing, Alaska Department of Environmental Conservation (ADEC)-reviewed spill plan: ADEC 20-CP-5256, covers spill response equipment to be staged at the facility; and provides spill prevention and response considerations specific to this Project. The Plan includes immediate response actions, reporting requirements, communication trees, receiving environments, spill cleanup mobilization response times, well control information and spill prevention guidance. Emerald’s Well Control Emergency Response Plan focuses on addressing steps for preventing and then mitigating impacts from a blowout. Both plans will be kept on site and easily accessible.

Additionally, the All American #111 drill rig and well testing contractors will have Spill Prevention Control and Countermeasure (SPCC) Plans specific to their operations on-site. Contractor crews will be trained in the appropriate response & prevention strategies outlined in these plans.

6 Solid Waste Management

All waste management activities will be conducted in general accordance with the Emerald Peregrine Exploration Program Solid Waste Management Plan (SWMP) and in conformance with Emerald HSE Management Policies.

Additionally, the latest versions of the Alaska Safety Handbook (ASH), the North Slope Environmental Field Handbook (NSEFH) and the Alaska Waste Disposal & Reuse (“Redbook”) Guide are adopted as guidance, reference and standard operating procedures (SOPs) and workplace “best” safety, environmental and waste management practices for Emerald operations.

RCRA-EXEMPT E&P FLUIDS and SOLIDS

E&P Fluids and Solids. One waste stream, E&P fluids and solids from drilling and testing operations, will be generated during drilling operations. These solid wastes are exempt from regulation as Resource Conservation and Recovery Act (RCRA) hazardous wastes (“RCRA-exempt wastes”) per 40 CFR 261.4 and 261.7.
Plan of Operations: Drilling Ice Pads and Exploration Wells

Up to 5,000 barrels (bbls) of drilling waste fluid and solids (drill cuttings) and another 3,000 bbls of test fluids will be temporarily stored onsite (if necessary), before being hauled and disposed by injection in either offsite Class I or Class II UIC disposal wells at the Hilcorp Alaska Prudhoe Bay Waste Disposal Facility (PB WDF), Hilcorp Alaska Milne Point Unit WDF (MPU WDF), or the ConocoPhillips Alaska Inc. Waste Injection Facility at the Kuparuk River Unit (KRU WIF). Non-oily E&P solid drill cuttings may also be hauled the NSB SA 10 landfill for beneficial reuse as sanitary cover if acceptance criteria are met. The NSB SA-10 is a Class I municipal solid waste landfill that is approved and regulated by the ADEC.

**Other RCRA-exempt Wastes.** Besides domestic wastewater, rig camps on each drill pad are expected to generate <1 gallon per day of household (camp) hazardous wastes such cleaning supplies. These wastes are exempt from regulation as Resource Conservation and Recovery Act (RCRA) hazardous wastes ("RCRA-exempt wastes") per 40 CFR 261.4 and 261.7. RCRA-exempt household hazardous wastes will be combined with domestic wastewater & temporarily stored in the camp sewage tank modules before being hauled to the NSB SA-10 WWTP for disposal.

**RCRA Non-exempt and/or Non-hazardous**

**Non-hazardous Solid Waste.** Non-hazardous solid waste will include municipal solid waste (MSW) such as kitchen waste, construction & demolition (C&D) waste such as plastic, empty aerosol cans & timbers, as well as used metal.

Each waste stream will be stored in separate dumpsters. MSW and C&D dumpsters will be managed to avoid potential wildlife interactions by covering. MSW and C&D dumpsters will be hauled offsite for disposal in the NSB SA10 landfill. Used metal will be sent offsite to Fairbanks for recycling.

**Universal Waste.** Universal wastes are hazardous wastes that are not listed nor characteristically toxic, reactive, corrosive or flammable. These include used oil and lubricants, printer cartridges and batteries.

These waste streams will be temporarily stored on site in Satellite Accumulation Areas (SAAs) in the camp area within lined SCA. Used oil will be packaged in drums for transport and recycled or disposed on approved facility. Batteries and cartridges will be hauled offsite for disposal and/or recycling at approved facilities.

### 7 Exploration Well and Ice Drill Pad Location

Location by Umiat Meridian, Townships, Ranges and Sections (MTRS) for the well pad are listed below, along with GPS Coordinates.

<table>
<thead>
<tr>
<th>Well Name</th>
<th>BLM Lease NPR-A</th>
<th>Umiat Meridian</th>
<th>WGS84 Latitude</th>
<th>NAD82 Latitude</th>
<th>ASPC Zone 4 – NAD83 X</th>
<th>Y</th>
<th>GPB-KRU-MPU Distance (miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harrier-1</td>
<td>2018-L-047</td>
<td>T3N/R2W, S8</td>
<td>69.622°</td>
<td>152.4317°</td>
<td>1330356 ft</td>
<td>5716444 ft</td>
<td>107 – 82 – 92</td>
</tr>
</tbody>
</table>

### 8 Heavy Equipment

Types and number of heavy equipment used to construct the ice drill pad and support the winter drilling and testing program are listed below along with information on operational activity. Equipment types are the same as used at other North Slope operations and will be obtained from North Slope contractors.

<table>
<thead>
<tr>
<th>Equipment Type</th>
<th>Quantity</th>
<th>Equipment Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 2000 Tucker Snow-Cats on tundra track w/ice auger drills</td>
<td>1</td>
<td>Cat 245 hard tail end dumps on LGP tires</td>
<td>6</td>
</tr>
<tr>
<td>Challenger Cat D8 on low ground pressure (LGP) tracks</td>
<td>2</td>
<td>Cat 966C loader or similar w/ice trimmers</td>
<td>3</td>
</tr>
<tr>
<td>All Terrain Tractors w/ blades</td>
<td>10</td>
<td>Volvo A25 water buffaloes on LGP tires</td>
<td>3</td>
</tr>
<tr>
<td>Skid-mounted roll-off winch and low boy trailers</td>
<td>10</td>
<td>Pumps and pump houses</td>
<td>3</td>
</tr>
<tr>
<td>5000-gal fuel &quot;spreader&quot; truck</td>
<td>1</td>
<td>Mobile Heaters</td>
<td>8</td>
</tr>
<tr>
<td>Mechanic field service truck</td>
<td>1</td>
<td>Pickup trucks</td>
<td>10</td>
</tr>
<tr>
<td>Caterpillar Motor Grader</td>
<td>2</td>
<td>Crew Bus</td>
<td>1</td>
</tr>
</tbody>
</table>
**Plan of Operations: Drilling Ice Pads and Exploration Wells**

### Snow Road and Ice Pad Construction Kit (Typical)

<table>
<thead>
<tr>
<th>Equipment Description</th>
<th>Quantity</th>
<th>Equipment Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>All terrain tractors include Steigers and Piston Bullys; all tanks and trailers are on tracks, low-ground pressure tires, skids or sleds</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As noted, drilling operations will be conducted by using the All American #111 mobile modular land drill rig (or similar) that is capable of being mobilized by all terrain tractor (ATT) tundra vehicles which have been approved for summer tundra travel by ADNR. At each well location on an ice pad, the rig will be spotted on rig mats within a lined secondary containment area (SCA). Equipment that may be used for a typical drilling spread at both wells is listed below along with equipment for development, completion and testing.

### Drilling, Completion and Equipment Spreads (Typical)

<table>
<thead>
<tr>
<th>Equipment Description</th>
<th>Quantity</th>
<th>Equipment Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drilling Equipment Spread</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conductor Auger Drill Rig (Texoma 500 or similar)</td>
<td>1</td>
<td>ATTs/168-bbl Dragon Boxes (primary storage) for cuttings</td>
<td>10</td>
</tr>
<tr>
<td>All American 111 Drill Rig or similar</td>
<td>1</td>
<td>Cat 966C loader or similar</td>
<td>2</td>
</tr>
<tr>
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<td>ATT/Hot oil truck</td>
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<td>400-bbl skid-mounted upright tanks (drill fluids/water)</td>
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<td>ATT/Winch and low boy trailers</td>
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<td>80-ton Rough Terrain crane</td>
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<tr>
<td>ATT/Cement pumping unit</td>
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<td>ATT/4-line logging unit</td>
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</tr>
<tr>
<td>Cement silos</td>
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<td>Light towers</td>
<td>8</td>
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<tr>
<td>Challenger Cat D6 on low ground pressure (LGP) tracks</td>
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<td>Mobile Heaters</td>
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</tr>
<tr>
<td>5000-gal fuel “spreader” truck</td>
<td>1</td>
<td>Geologging and mud engineering trucks</td>
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<tr>
<td>70-cy Cutting bins (contingency storage) w/ SCA</td>
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<td>Volvo A25 water buffaloes on LGP tires</td>
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<td>Well Development &amp; Completion</td>
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<td>Cat 966C loader or similar</td>
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<tr>
<td>Growler/blender</td>
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<td>Frac Pumps</td>
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<td>Chemical trailer</td>
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<td>ATT/Winch and low boy trailers</td>
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<td>Light towers</td>
<td>8</td>
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<td>Tiger tanks and skid-mounted 400 bbl tanks</td>
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<td>ADP/Blender</td>
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<td>Generators</td>
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<td>Gyroc Boiler</td>
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<td>Vertical Gas Scrubber</td>
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<tr>
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<td>Mobile Heaters</td>
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<tr>
<td>Ten 400-bbl tank farm &amp; tangibles w/ SCA</td>
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<td>3-phase Separater</td>
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</tbody>
</table>

### 9 Permit Requirements

The following permits are required for the successful drilling and testing of the proposed Merlin-1 and Harrier-1 exploration wells.

<table>
<thead>
<tr>
<th>Permit Information</th>
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</thead>
<tbody>
<tr>
<td><strong>Agency</strong></td>
</tr>
<tr>
<td>NSB Department of Planning &amp; Community Services</td>
</tr>
<tr>
<td>NSB Development Permit for Harrier 1 exploration well and drill pad</td>
</tr>
<tr>
<td>Permit Information</td>
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10  **Subsistence Plan**

The proposed operations are within Nuiqsut Subsistence Use Area. Emerald understands subsistence is a way of life for Nuiqsut residents and it is important to protect subsistence resources, uses and access. Emerald also understands that due to the high costs of goods, fuel and transportation, subsistence harvests reduce food costs and, more important, provides cultural identity and spirit. Emerald has completed consultation and a review of recent subsistence field surveys and inventories of prehistoric, historic, and archaeological sites.

The goal of Emerald is to provide measures to mitigate subsistence impacts and to ensure Project security and safety procedures do not unduly restrict or reduce access to wildlife by subsistence hunters during operations. This will be achieved by implementing the following.

**MEASURES to MITIGATE SUBSISTENCE IMPACTS**

Account for Subsistence Harvests When Scheduling Project Activities. This Project will take place in the area where there are active subsistence harvests by Nuiqsut. Therefore, Emerald has opted to delay the start of this Project until the colder and darker part of winter 2020/2021 when limited subsistence activities takes place and is generally limited to trapping and hunting moose and/or caribou further south in the Umiat area. This can help reduce adverse impacts to subsistence use from this Project.

Community and Agency Communication. Emerald also has already established a dialog with the NSB, local villages, and affected public on its exploration programs. Additional Project meetings, consultations and updates will be held, as necessary, with the NSB Planning and Community Services Department and with stakeholders in Nuiqsut as well. These discussions will help with the development of a plan of cooperation regarding Emerald operations on the North Slope.

The purpose of this dialog will help identify and implement measures that will be taken to minimize adverse effects on the availability of fish and wildlife for commercial and subsistence uses, and to ensure that
operations have no negative effect on the quality of life for Alaskans. Emerald will work with all concerned stakeholders to maintain efficient and effective communications with the affected communities for the duration of the project.

Subsistence Representatives and Access. Emerald is negotiating with Umiaq Environmental LLC, Ukpeagvik Inupiat Corporation (UIC) and ASRC Energy Services (AES) for Subsistence Representatives during the winter drilling program to ensure that activities are conducted to minimize potential impact to local subsistence activities. Emerald has worked with representatives from both companies in the past.

Emerald also will construct the ice pads and snow road approaches and shoulders to allow for smooth and easy transition for snow machines traffic when crossing through the Project area and safety buffer zone along the ice road. With respect to access, Emerald will not restrict traditional and customary subsistence access to and harvesting in the Project area, except for a 100-foot safety zone around each ice pad. Note that although public access to the ice pads must be restricted due to safety concerns, Emerald will provide shelter and assistance to all subsistence users in emergency situations.

Documentation and Compliance. If potential subsistence issues are identified, subsistence representatives will be contacted and updated during drilling and testing operations to minimize impacts. The permitting actions associated with the exploration well will be public noticed as part of the permitting processes. If there are concerns with regards to the Project, Emerald will be receptive and pro-active, and records of all concerns expressed by subsistence hunters during operations will be maintained.

Responsibilities. The Emerald Field Environmental Coordinator will be responsible implementing this plan and overseeing Subsistence Representatives during operation. The Emerald HSE Manager will be responsible for submitting required reports to State and local agencies; and for updating this plan.

11 Rehabilitation Plan

Upon completion of drilling and testing operations, the well will either be plugged and abandoned (P&A) or suspended in accordance with AOGCC regulations, and equipment and structures will be removed from the Project area by 27 April 2021.

If the well is P&A, then the well location will be surveyed, and surface and intermediate casing cemented back as directed by AOGCC. Surface casing will be cut off about 10 feet below ground surface, and the well cellar will be removed. The open excavation will then be backfilled and mounded with gravel to account for soil subsidence, and then capped with a lift of organic-rich lift.

The Harrier 1 ice pad also will be “tight bladed” by grader to remove dark-colored drips missed by the ACS spill technician and the snow spills will be thawed with resulting oily water disposed of at a permitted disposal facility. Trash and debris will be removed and transported for disposal at NSB SA-10. Emerald will conduct an inspection and “stick picking” operation via helicopter in Summer 2021 to ensure that NSB and State cleanup requirements have been met.

Although activities will be conducted only on the ice pad, impacts to vegetation and habitat may occur. Therefore, Emerald will inspect the Project area following snowmelt in 2021 during stick picking to confirm that tundra damage did not occur. If tundra damage is discovered, Emerald will consult with the State and the NSB to determine the appropriate methods for restoration and incorporate them into a Tundra Damage Rehabilitation/Remediation Plan that meets requirements found in NSBMC § 19.30, 19.500 and § 19.60, ADL 397201 lease conditions, and specific State requirements. The Plan will address the area, type, and extent of damage and will be developed in accordance with the Alaska Fish and Game Streambank Revegetation Control Guide (developed by the ADNR Plant Materials Center), the Streambank Revegetation and Protection Guide (developed by the Alaska Department of Fish and Game), and other relevant guidance documents. NSB and...
State personnel will be invited to verify that rehabilitation operations are complete and that any issues identified are addressed.

12 Measures to Minimize Adverse Effects

PREHISTORIC, HISTORIC and ARCHEOLOGICAL SITES

Emerald has completed consultation and a field survey to inventory prehistoric, historic, and archeological sites on and around the proposed snow road alignment. This included consultation with the NSB Iñupiat History, Language & Culture (IHLC) Commission who supplied Emerald with Traditional Land Use Inventory (TLUI) Data under NSB 21-001. Emerald has received concurrence from the ADNR/OHA State Historic Preservation Office ("SHPO") that "no historical properties are affected," especially when PEP 2P Staging Pad activities are limited to winter with snow-covered tundra & frozen ground." The same recommendation was made by the field archaeologist in survey reports provided to the BLM.

Based on the review recommendations and to further prevent impacts, Emerald located its snow road alignment and ice pad within a 500-foot buffer zone within which all Project activities will be conducted. Emerald’s intention is that historic, cultural or archeological resources (or suspected resources) discovered during Project activities are not to be disturbed under any circumstance.

This will include providing training to all field personnel on what to do as part of required Project orientation. If archeological sites are discovered during Project activities, the following steps will be taken.

a. Project personnel discovering suspected critical sites during operations will not disturb nor enter the site, and mark the area with flagging tape or some other means;

b. Project personnel will stop all activities and inform their job supervisor who will contact Emerald onsite representatives;

c. Emerald will immediately report these properties to SHPO and NSB ILHC for identification and assessment;

d. Emerald will then use identification and assessment consultations to guide further planned activities in the site area.

FISH & WILDLIFE HABITAT

Wildlife avoidance & interaction plans have been prepared and are under review by the ADF&G and USFWS. These plans are adopted by reference and will be covered extensively in the site orientation training for all Project personnel.

Pads constructed of ice will only be used in winter months during the open winter tundra travel season. Emerald identified willow habitats and then moved the ice pad to avoid them. Emerald also focused on avoiding areas (especially south- southwest facing stream embankments, pingo’s and drained lakes) that appeared to be prime bear den habitat, keeping in mind required buffer zones.

Wildlife that also may be in the area during the winter season are owls, ravens, arctic fox, wolverine, musk ox, and possibly, over-wintering caribou. Grizzly bears are known to inhabit the general area of where the project will occur but are likely to be inactive during the winter season. Polar bear range and habitat is not within this program and they probably will not be encountered.

Emerald and its contractors will exercise caution during the project. Should a grizzly bear or polar bear be encountered, Emerald will follow the procedures as outlined in our Bear Avoidance Interaction Plan. Any sightings will be reported immediately to the Company Man and Emerald Lead Field Environmental Coordinator to warn personnel of the bear. Agency reporting would follow within 24 hours as indicated below. Reporting contacts are listed in all plans.

In summary, all Emerald activities will be conducted to minimize impacts. This includes mitigation measures outlined in the ADL lease stipulations and adherence to State and NSB land
management regulations and permit requirements.

SHALLOW HAZARDS (GAS) DURING DRILLING

Emerald is aware of a recent shallow gas blowout that occurred close to Nuiqsut and made this a focus to address these concerns during the drill planning process.

Emerald has conducted extensive 2D and 3D seismic surveys within the Emerald lease block project area. This data will be evaluated as part of the Shallow Geophysical Hazard Study, required for the AOGCC Permit to Drill (PTD) application, review and approval process. This study will identify shallow gas hazards (if any) and allow for the refinement of the exploration well design to plan for and include the appropriate structural, mechanical or drilling process related mitigation measures. AOGCC regulations require that the surface casing be terminated below the base of the permafrost and cemented in competent rock. For a typical North Slope exploration well this depth usually ranges up 2,500 feet. A review of the project area adjacent wells showed that no shallow gas hazards were encountered during exploration drilling operations.

Nonetheless, this area is considered to pose a low shallow hazard risk. Therefore, to further mitigate the risk, Emerald will drill to about 2,500 feet TVD, trip out, install a surface casing to depth, cement it back and install a 5,000-psi blowout preventer (BOP) and conduct a formation integrity test (FIT) before re-entering and resuming drilling. This means any potential gas that could cause a blowout will not be open to atmosphere.

Additionally, while still on diverter when drilling from surface to approximately 2,500 feet TVD, Emerald will place the end of the diverter into a 315-bbl shale bin within the ice-covered footprint of the drill pad and construct 1-foot ice berms around the perimeter to create SCA. The shale bin will help dissipate blowout energy and contain blowout fluids at 3 times the volume of the borehole, and along with the ice SCA, also will help protect underlying tundra from damage from water-based drill fluids.

TRAINING PROGRAM

Exploration Wells. Personnel involved in drilling operations have additional training requirements. The primary well control prevention training program for drilling personnel is a comprehensive 32-hour minimum well control course which is required by all drilling supervisors, tool pushers, drillers, floormen, motormen, and derrickmen. This 4-day basic course is required once every two years. The well control program includes classroom and simulator instruction on all types of blowout preventer equipment, causes of kicks and blowouts, kick killing procedures, warning signs of kicks, kick detection, shutting in procedures, and above all, personnel safety.

All Operations. The Emerald training program has been designed to inform everyone assigned to the Project of the environmental, social, and cultural concerns that relate to their job functions. Training components include a review of permit stipulations and requirements, cultural awareness, spill prevention and reporting, wildlife interaction, site specific safety, waste management practices, etc.

All personnel will participate in a specific training program module for bear safety and a briefing of the Bear Avoidance, Interaction, and Mitigation Plan. In addition, Emerald employees and contractors are required to complete an 8-hour training program provided by the North Slope Training Cooperative (NSTC). The North Slope Field Environmental Handbook, Alaska Safety Handbook, and a North Slope Visitor’s Guide are used for the training. The latest versions of these handbooks are adopted by reference, and copies will be readily available to personnel in the field. The training program includes classes on the Alaska Safety Handbook, personal protective equipment, camp and safety orientation, hazard communication, HAZWOPER Level I, and Environmental Awareness.

Finally, Emerald also requires that all company personnel and contractors attend rig and location safety meetings (pre-tour, SIMOPS, and weekly), as well as participate in the contractor’s behavioral safety practice program (“RA/JSEA, PTW, STOP,” etc.) and on-site training orientation.

INTERACTING with LOCAL COMMUNITIES and COMMUNITY GROUPS

As part of the permitting process, Emerald has published public notices detailing planned winter drilling
program operations in Utqiagvik, Fairbanks and Anchorage, and has been responding to requests for additional information (RFAl) from individuals and government as well as non-government organizations interested in the Project.

13 **Emerald Project Contacts**

In mid-November, Emerald will finalize a personnel contact list for drilling operations. In the interim, the following are available to answer questions and address concerns.

- **Erik Opstad** – Vice President  
  907-244-5210  
  erik.opstad@gmail.com
- **Steve Rog** – HSE Manager  
  907-345-0022  
  stevorgan@gi.com
- **Rob Crotty** – Lead Field Coordinator  
  907-952-6803  
  crottyrob@gmail.com
- **Sonny Kula** – Lead Field Coordinator  
  907-315-4423  
  sonny.kula66@gmail.com

14 **Plans, Studies and References**

The following completed studies, reference documents and consultations were utilized by Emerald in the planning and permitting efforts for the Peregrine Exploration Program:


f. **NSB TLUI 18-005 Clearance Certificate noting no TLUI data in immediate area** (October 2020)

g. **National Petroleum Reserve in Alaska Integrated Activity Plan and Final Environmental Impact Statement** (BLM. August 2020)

h. Telephonic Conversation and Personal Communication with McKenzie Johnson/USF&WS-Marine Mammals Division regarding the Project area, polar bear dens, low probability of encountering polar bears within the Project alignment and LOA consultation. (17 November 2020).

i. **Emerald Peregrine Exploration Program: Solid Waste Management Plan** (October 2020)


k. **Emerald Peregrine Exploration Program Oil Discharge Prevention and Contingency Plan (ADEC 20-CP-5256), Revision 0**

l. **Emerald Well Control and Emergency Response Plan** (ELKO International LLC, 2020)
Attachment 1

Maps

MAP SUMMARY

Figure 1: General Vicinity Map
Figures 2: General Land Status Map
Figure 3: Overall Project - Aerial
Figure 4: Overall Project - Topographic
Figure 5: Typical Drill Operations Layout - Ice Drill Pad
Figure 6: Frac and Testing Operations Spreads - Ice Drill Pad
Figure 3
November 24, 2020

Great Bear Pantheon LLC
Patrick S. Galvin, Chief Commercial Officer
3705 Arctic Blvd, Suite 2324
Phone: 907-575-8914
Fax: n/a
E-mail: pat@greatbearpetro.com

Re: Certificate of TLUI Clearance
NSB Permit Application No. 21-009
Talitha A Well
Conservation, Transportation Corridor, Township: 5-6N; Range: 12-13E; Section: Various; UM

Dear Mr. Galvin:

The North Slope Borough (NSB) Department of Planning and Community Services – Land Management Regulations Division has received your November 16, 2020 application for a Certificate of Traditional Land Use Inventory (TLUI) Clearance. Your application was assigned a NSB Permit Application No. 21-009. Please refer to this NSB Permit Application number in all correspondence with us.

The purpose of this project is to construct an ice road and pads for drilling and testing of the Talitha A well.

This Certificate of TLUI Clearance is effective November 24, 2020.

This authorization is only valid for the scope of activities described in your November 16, 2020 application.

IHLC PRESERVATION POLICY & AUTHORITY:
1. The Iluupiat History, Language & Culture (IHLC) Commission has responsibility for developing and maintaining a complete historical record of the land, people, and villages of NSB. NSBMC §2.16.110.

2. Development must not disturb traditional activities or values at historic or cultural sites identified in published studies or by the Commission on IHLC. NSBMC §19.50.030(F) and §19.60.040(K).

3. Development which is likely to disturb cultural or historic sites listed on the National Register of Historic Places; sites eligible for inclusion in the National Register, or sites identified as important to the study, understanding or illustration of national, state or local history or prehistory shall be required to avoid the sites; or be required to consult with appropriate local, state and federal agencies and survey and excavate the site prior to disturbance. NSBMC §19.70.050(E).

4. Development shall not significantly interfere with traditional activities at cultural or historic sites identified in the Coastal Management Program. NSBMC §19.70.050(F).

5. Development shall not cause surface disturbance of newly discovered historic or cultural sites prior to archaeological investigation. NSBMC §19.70.050(G), NSBMC §19.70.060(J).

6. NSB has the power to preserve, maintain and protect historic sites, buildings and monuments outside of incorporated cities. NSBMC §1.20.010(U).

7. Access to geographic coordinates of possible archeological, historic, cultural, and paleontological significance, and any other information pertains to such sites (hereafter, collectively referred to as “Restricted Information”) is limited to representatives of federal, state or local governments on official business; researchers engaged in legitimate scientific research; individuals or representatives of entities conducting archeological, historical, and cultural surveys in order to obtain a NSB development permit; or persons who have a legitimate need for access as determined by IHLC. Restricted Information includes but is not limited to information received from the NSB Traditional Land Use Inventories; information regarding unregistered cultural and historic sites; any information you discover while pursuing an archeological, historical, and/or cultural survey; and any information designated by IHLC as Restricted Information. NSBMC §2.42.040(K), AS 40.25.120(a)(4), 16 U.S.C. 470w-3(a), 16 U.S.C. 470hh(a), and 36 C.F.R. 800.2(d)(2) provide authority for restricting access to information pertaining to historical/cultural sites.

**TLUI STIPULATIONS:**

1. Permittee must maintain all TLUI data in a secure place for internal use only. Permittee must not distribute this data to anyone outside of those entities acting pursuant to this Permit and must abide by the applicable IHLC Information Use Policy, listed below.

2. TLUI points provided in the form of geographic coordinates may be imprecise. The Permittee is nevertheless responsible for ensuring that its operations do not cause any adverse impacts to sites with potential historic, prehistoric, archeological, cultural, paleontological resources or significance, including sites where traditional activities take place (hereafter referred to as “Critical Sites”) and for reporting to the NSB Cultural Resource Specialist the proper coordinates of any such site you discover. Permittee releases NSB from any liability associated with its use of these data points.

3. Permittee must maintain a minimum 500-foot buffer zone from all Critical Sites (including all Traditional Land Use Inventory and Alaska Heritage Resources Survey sites), Native Allotments, or
cabins used for subsistence purposes within the vicinity of the proposed development. Permittee must train its staff and contractors to observe this buffer and ensure that sites are not disturbed. No development or use shall take place within 500 feet of a Critical Site, or within 500 feet of a Native Allotment, or cabin used for subsistence purposes without the owner’s permission.

4. Permittee must document caribou migration routes on a map and must avoid these routes during periods of migration. [NSBMC § 19.70.050(1)(1)].

5. Should any additional human remains or Critical Site materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered, that were not already identified by NSB or SHPO, the Permittee must stop all work within 1500 feet of the discovery until Permittee has made contact with NSB Cultural Resource Specialist at (907) 852-0320, the State Historic Preservation Office (SHPO) and (in the case of human remains) the Alaska State Troopers (AST), and has obtained these agencies’ approval to continue work. Permittee must submit information on any discovery that may be of historic, prehistoric, cultural, traditional, archeological, and paleontological significance to the NSB (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains). This information must be submitted to the NSB Cultural Resource Specialist no later than 30 days from discovery. Permittee must not distribute this information to anyone outside of those entities acting pursuant to this permit.

6. Permittee must follow state and federal law regarding the discovery of human remains.

7. Permittee must not remove or disturb any items that may be of historic, prehistoric, cultural, traditional archeological, and paleontological significance except to the extent needed to document their existence and to comply with state and federal law.

8. Any further investigation, surveys, or studies required pursuant to this Permit must be conducted by or under the supervision of a professional Archeologist, Anthropologist, Historic Architect and/or Architectural Historian (as needed to assess a given area for the possible existence of sites or artifacts of historic, cultural, archeological, pre-historic, or paleontological significance) that meets the professional qualifications of the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61, Appendix A). All reports and maps produced pursuant to this permit must include evidence that the professional meets these standards and is qualified to draw the report’s conclusions.

9. The NSB or authorized representative must be allowed to inspect the authorized activity at any time deemed necessary to ensure that the activity is being or has been accomplished in accordance with the terms and conditions of this permit. Permittee must provide NSB representatives with transportation to site, if not on a road system or accessible by government airport. Permittee may be required to reimburse the NSB for the expense of conducting an inspection if a violation is found. NSBMC § 19.50.010(B).

IHLC INFORMATION USE POLICY FOR TLUI DATA:

1. STATEMENT OF POLICY: Access to certain archeological, historic, and paleontological information (hereafter, “Restricted Information”) is limited to representatives of federal, state or local governments on official business; researchers engaged in legitimate scientific research; individuals or representatives of entities conducting archeological, historical, and cultural surveys in order to obtain clearance for any NSB permit; or persons who have a legitimate need for access as determined by the NSB. Restricted Information includes, but is not limited to, information received from the NSB Traditional Land Use Inventories (TLUI): information regarding unregistered cultural and historic sites; any information you discover while pursuing an archeological, historical, and/or cultural survey; and any information designated by DPCS as Restricted Information.
2. **AUTHORITY:** Under NSBMC 19.50.030(F) and 19.60.040(K) development must not disturb traditional activities or values at historic or cultural sites (hereafter collectively referred to as "critical sites") identified in published studies or by the Commission on IHLC. Under NSBMC 2.16.110, the Commission on IHLC has responsibility for developing and maintaining a complete historical record of the land, people and villages of NSB. Unrestricted access to this record increases the threat of site and resource destruction, and may prompt land management agencies or owners to withhold critical site information from DPCS. In order to receive and maintain the most comprehensive critical site record possible, DPCS limits the dissemination of Restricted Information to legitimate and authorized Applicants. NSBMC 2.42.040(K), AS 40.25.120 (a)(4), 16 U.S.C. 470w-3(a), 16 U.S.C. 470hh(a), and 36 C.F.R. 800.2(d)(2) provide authority for this restriction.

3. **AGREEMENT:** Your use of Restricted Information will comply with this Agreement. You shall maintain any Restricted Information received in a secure place for internal use only. You shall not distribute Restricted Information to anyone, and you are to destroy the Restricted Information and any reproductions following use. You shall submit to DPCS any information that you discover in the course of your project that may be of historic, prehistoric, cultural, and paleontological significance to the NSB Cultural Resource Specialist, and to treat such information as Restricted Information. Prior to publication of any production that results from the use of the Restricted Information, you shall submit a copy to the NSB DPCS for approval. Publication of any production without express written approval from DPCS is a violation of this policy. Copies of any resulting publications shall be provided to the NSB DPCS.

4. You release and forever discharge the NSB and its subsidiaries, officers, directors, employees, agents and representatives of and from all manner of actions, causes of action, suits, debts, dues, sums of money, contracts, agreements, judgments, claims and demands caused by any use of the Restricted Information by You. You may be subject to prosecution under municipal, state, and federal law for violation of this Policy.

You must remain in compliance with the terms and conditions herein. Failure to comply with the conditions of this certificate could result in immediate revocation of this authorization.

If you wish to appeal this decision, including the developer, you must submit written notice to the secretary of the appropriate Commission (P.O. Box 69, Barrow Alaska 99723) and the developer within 30 days of the receipt of this decision, stating the reasons you believe the decision is incorrect. NSBMC §19.30.130.

NSB Cultural Resource Specialist, Tommy G. Nageak has been assigned to your permit, and can be reached by e-mail at tommy.nageak@north-slope.org, or by phone at (907) 852-0333.

Sincerely,

[Signature]

Gordon Brower,
Land Management Administrator

Cc: NSB Permit Application No. 21-009 File
Cultural Resource Specialist
LMR Manager
Colleen Akipik-Lemen, Director of IHLC

21-009/tn
Drilling and testing of Talitha A well, including ice roads and ice pads. This well was previously permitted for the 2014/2015 winter drilling season (Talitha #2, in a slightly different location). The ice road was completed in 2015, but the well was not drilled due to delays at Atkaid #1.

The area was also the subject of a 3D Seismic survey in 2012, and an archaeological survey and report was completed of the general area, attached.
Attach the Following Information to Application:

1. Maps: Two hard copies and two CD copies of each map must be submitted. A digital GIS shape file of the proposed permit area, in GIS Mapping Format (projected in Alaska Albers Equal Area Conic using either a NAD 1927 or a NAD 1983 horizontal datum) is preferred. (a) General Vicinity Map. This map must show distances from nearby villages (b) Site Specific Location Map, showing the area requested for TLUI clearance, including nearby existing development, natural features, and zoning boundaries, and known traditional subsistence activities or values at historic, archaeological and cultural sites including all Alaska Heritage Resource Survey (AHRS) sites, TLUI sites currently known by the NSB and any additional sites located during your field work (hereafter referred to as Critical Sites). (c) Map, drawn to an appropriate map scale, showing existing and planned development and a minimum 500' buffer zone from the Critical Sites.

2. Studies: Two hard copies and two CD copies of each study relevant to this application (e.g. historic, prehistoric, archaeological resources, traditional subsistence activities, and cultural site studies) completed by trained professionals in that respective field. If there was a prior field study for this area, you must submit a copy of that study. If you did not conduct the field study, you must obtain permission from the person/company that conducted the field study and include that in your application or provide evidence that the study is publicly available to support your application. Please describe how you have included traditional and local knowledge into these studies.

A study of the proposed development site by a professional trained to identify and document any possible Critical Sites within the vicinity of the proposed development site. This study must include: (a) field survey, (b) literature review, and (c) record of consultation with the nearest affected Village Tribal President(s) and City Mayor(s) to ensure all sites are included in the study.

For all new sites identified during study work, please submit the Global Positioning System (GPS) coordinates and GIS data in an electronic format that can be readily loaded into the NSB GIS database.

3. GPS and Mapping Data Quality: A written summary describing the type of GPS and other mapping data used, along with an explanation of data quality and accuracy.

4. Scope of Work: A written description of the nature and purpose of your proposed industrial development. Include development plans, engineering and architectural designs.

5. Existing Permits: List any permits and approvals received for this site. Attach a copy of the Form 400 Study Permit you obtained from the NSB. Attach a copy of any SHPO clearance obtained for this area. List any additional permits and approvals that are forthcoming for this site.

6. Plan to Protect Critical Sites: A written Critical Sites protection plan.

7. Affiliation: If you are not the land owner or lessee you must submit evidence of your affiliation with the owner/lessee (e.g., letter from owner/lessee authorizing you to do work, or copy of contract).

8. Fee: A check made payable to the North Slope Borough for the application fee of $100.

Mail Application To:

NORTH SLOPE BOROUGH DEPARTMENT OF PLANNING AND COMMUNITY SERVICES
LRM MANAGER
P.O. BOX 69, BARROW, AK 99723
PHONE: 907-852-0320

I, THE APPLICANT, HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMANENT NSB RECORDS FOR THIS PROJECT. I HEREBY AGREE TO DEFEND, INDEMNIFY AND HOLD THE NORTH SLOPE BOROUGH HARMLESS FROM ANY AND ALL CLAIMS, DAMAGES, SUITS, LOSSES, LIABILITIES AND EXPENSES RELATED TO THE INJURY TO OR DEATH OF PERSONS AND DAMAGE TO OR LOSS OF PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE ENTRY ON AND USE OF PROPERTY WITHIN THE NORTH SLOPE BOROUGH BOUNDARIES BY ME, THE COMPANY I REPRESENT, AND ANY AND ALL OF MY CONTRACTORS, SUBCONTRACTORS AND THEIR EMPLOYEES INVOLVED.

Authorized Signature of Applicant

Patrick S. Galvin
Name

[Stamp] APPROVED (See accompanying letter)

Cultural Resource Specialist

[Stamp] DENIED (See accompanying letter)

Date

Director, NSB IHLC Department

Date

Land Management Administrator

Date

Page 2 of 2

Form 500 Certificate of TLUI Clearance Application

December 2017 (Rev-3)
Sent by E-mail and U.S. Mail

December 8, 2020

ConocoPhillips Alaska, Inc.
Jennifer Collins, Senior Environmental Coordinator
P.O. Box 100360
Anchorage, AK. 99510-0360
Phone: 907-265-6509
Fax: 907-265-6216
E-mail: Jennifer.Collins@ConocoPhillips.com

Re: Certificate of TLUI Clearance
NSB Permit Application No. 21-010
GMT2/MT7 Ice Road System
Resource Development, Township: 10-12N; Range: 2-5E; Section: Various; UM

Dear Ms. Collins:

The North Slope Borough (NSB) Department of Planning and Community Services – Land Management Regulations Division has received your November 30, 2020 application for a Certificate of Traditional Land Use Inventory (TLUI) Clearance. Your application was assigned a NSB Permit Application No. 21-010. Please refer to this NSB Permit Application number in all correspondence with us.

The purpose of this project is for new ice features (Corridor 8, Spur 6-9, Pads G17-G19) will support GMT2/MT7 construction and Western North Slope oil and gas activities.

This Certificate of TLUI Clearance is effective December 8, 2020.

This authorization is only valid for the scope of activities described in your November 30, 2020 application.

**IHLC PRESERVATION POLICY & AUTHORITY:**
1. The Inupiat History, Language & Culture (IHLC) Commission has responsibility for developing and maintaining a complete historical record of the land, people, and villages of NSB. NSBMC §2.16.110.

2. Development must not disturb traditional activities or values at historic or cultural sites identified in published studies or by the Commission on IHLC. NSBMC §19.50.030(F) and §19.60.040(K).

3. Development which is likely to disturb cultural or historic sites listed on the National Register of Historic Places; sites eligible for inclusion in the National Register, or sites identified as important to the study, understanding or illustration of national, state or local history or prehistory shall be required to avoid the sites; or be required to consult with appropriate local, state and federal agencies and survey and excavate the site prior to disturbance. NSBMC §19.70.050 (E).

4. Development shall not significantly interfere with traditional activities at cultural or historic sites identified in the Coastal Management Program. NSBMC §19.70.050 (F).

5. Development shall not cause surface disturbance of newly discovered historic or cultural sites prior to archaeological investigation. NSBMC §19.70.050(G), NSBMC §19.70.060(J).

6. NSB has the power to preserve, maintain and protect historic sites, buildings and monuments outside of incorporated cities. NSBMC §1.20.010(U).

7. Access to geographic coordinates of possible archeological, historic, cultural, and paleontological significance, and any other information pertains to such sites (hereafter, collectively referred to as “Restricted Information”) is limited to representatives of federal, state or local governments on official business; researchers engaged in legitimate scientific research; individuals or representatives of entities conducting archeological, historical, and cultural surveys in order to obtain a NSB development permit; or persons who have a legitimate need for access as determined by IHLC. Restricted Information includes but is not limited to information received from the NSB Traditional Land Use Inventories; information regarding unregistered cultural and historic sites; any information you discover while pursuing an archeological, historical, and/or cultural survey; and any information designated by IHLC as Restricted Information. NSBMC §2.47.040(K), AS 40.25.120 (a)(4), 16 U.S.C. 470w-3(a), 16 U.S.C. 470hh(a), and 36 C.F.R. 800.2(d)(2) provide authority for restricting access to information pertaining to historical/cultural sites.

**TLUI STIPULATIONS:**

1. Permittee must maintain all TLUI data in a secure place for internal use only. Permittee must not distribute this data to anyone outside of those entities acting pursuant to this Permit and must abide by the applicable IHLC Information Use Policy, listed below.

2. TLUI points provided in the form of geographic coordinates may be imprecise. The Permittee is nevertheless responsible for ensuring that its operations do not cause any adverse impacts to sites with potential historic, prehistoric, archeological, cultural, paleontological resources or significance, including sites where traditional activities take place (hereafter referred to as “Critical Sites”) and for reporting to the NSB Cultural Resource Specialist the proper coordinates of any such site you discover. Permittee releases NSB from any liability associated with its use of these data points.

3. Permittee must maintain a minimum 500-foot buffer zone from all Critical Sites (including all Traditional Land Use Inventory and Alaska Heritage Resources Survey sites), Native Allotments, or
cabin used for subsistence purposes within the vicinity of the proposed development. Permittee must train its staff and contractors to observe this buffer and ensure that sites are not disturbed. No development or use shall take place within 500 feet of a Critical Site, or within 500 feet of a Native Allotment, or cabin used for subsistence purposes without the owner’s permission.

4. Permittee must document caribou migration routes on a map and must avoid these routes during periods of migration. [NSBMC § 19.70.050(I)(1)].

5. Should any additional human remains or Critical Site materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered, that were not already identified by NSB or SHPO, the Permittee must stop all work within 1500 feet of the discovery until Permittee has made contact with NSB Cultural Resource Specialist at (907) 852-0320, the State Historic Preservation Office (SHPO) and (in the case of human remains) the Alaska State Troopers (AST), and has obtained these agencies’ approval to continue work. Permittee must submit information on any discovery that may be of historic, prehistoric, cultural, traditional, archeological, and paleontological significance to the NSB (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains). This information must be submitted to the NSB Cultural Resource Specialist no later than 30 days from discovery. Permittee must not distribute this information to anyone outside of those entities acting pursuant to this permit.

6. Permittee must follow state and federal law regarding the discovery of human remains.

7. Permittee must not remove or disturb any items that may be of historic, prehistoric, cultural, traditional archeological, and paleontological significance except to the extent needed to document their existence and to comply with state and federal law.

8. Any further investigation, surveys, or studies required pursuant to this Permit must be conducted by or under the supervision of a professional Archeologist, Anthropologist, Historic Architect and/or Architectural Historian (as needed to assess a given area for the possible existence of sites or artifacts of historic, cultural, archeological, pre-historic, or paleontological significance) that meets the professional qualifications of the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61, Appendix A). All reports and maps produced pursuant to this permit must include evidence that the professional meets these standards and is qualified to draw the report’s conclusions.

9. The NSB or authorized representative must be allowed to inspect the authorized activity at any time deemed necessary to ensure that the activity is being or has been accomplished in accordance with the terms and conditions of this permit. Permittee must provide NSB representatives with transportation to site, if not on a road system or accessible by government airport. Permittee may be required to reimburse the NSB for the expense of conducting an inspection if a violation is found. NSBMC § 19.50.010(B).

**IHLC INFORMATION USE POLICY FOR TLUI DATA:**

1. **STATEMENT OF POLICY:** Access to certain archeological, historic, and paleontological information (hereafter, “Restricted Information”) is limited to representatives of federal, state or local governments on official business; researchers engaged in legitimate scientific research; individuals or representatives of entities conducting archeological, historical, and cultural surveys in order to obtain clearance for any NSB permit; or persons who have a legitimate need for access as determined by the NSB. Restricted Information includes, but is not limited to, information received from the NSB Traditional Land Use Inventories (TLUI); information regarding unregistered cultural and historic sites; any information you discover while pursuing an archeological, historical, and/or cultural survey; and any information designated by DPCS as Restricted Information.
2. **AUTHORITY:** Under NSBMC 19.50.030(F) and 19.60.040(K) development must not disturb traditional activities or values at historic or cultural sites (hereafter collectively referred to as "critical sites") identified in published studies or by the Commission on IHLC. Under NSBMC 2.16.110, the Commission on IHLC has responsibility for developing and maintaining a complete historical record of the land, people and villages of NSB. Unrestricted access to this record increases the threat of site and resource destruction, and may prompt land management agencies or owners to withhold critical site information from DPCS. In order to receive and maintain the most comprehensive critical site record possible, DPCS limits the dissemination of Restricted Information to legitimate and authorized Applicants. NSBMC 2.42.040(K), AS 40.25.120 (a)(4), 16 U.S.C. 470w-3(a), 16 U.S.C. 470hh(a), and 36 C.F.R. 800.2(d)(2) provide authority for this restriction.

3. **AGREEMENT:** Your use of Restricted Information will comply with this Agreement. You shall maintain any Restricted Information received in a secure place for internal use only. You shall not distribute Restricted Information to anyone, and you are to destroy the Restricted Information and any reproductions following use. You shall submit to DPCS any information that you discover in the course of your project that may be of historic, prehistoric, cultural, and paleontological significance to the NSB Cultural Resource Specialist, and to treat such information as Restricted Information. Prior to publication of any production that results from the use of the Restricted Information, you shall submit a copy to the NSB DPCS for approval. Publication of any production without express written approval from DPCS is a violation of this policy. Copies of any resulting publications shall be provided to the NSB DPCS.

4. You release and forever discharge the NSB and its subsidiaries, officers, directors, employees, agents and representatives of and from all manner of actions, causes of action, suits, debts, dues, sums of money, contracts, agreements, judgments, claims and demands caused by any use of the Restricted Information by You. You may be subject to prosecution under municipal, state, and federal law for violation of this Policy.

You must remain in compliance with the terms and conditions herein. Failure to comply with the conditions of this certificate could result in immediate revocation of this authorization.

If you wish to appeal this decision, including the developer, you must submit written notice to the secretary of the appropriate Commission (P.O. Box 69, Barrow Alaska 99723) and the developer within 30 days of the receipt of this decision, stating the reasons you believe the decision is incorrect. NSBMC §19.30.130.

NSB Cultural Resource Specialist, Tommy G. Nageak has been assigned to your permit, and can be reached by e-mail at tommy.nageak@north-slope.org, or by phone at (907) 852-0333.

Sincerely,

[Signature]

Gordon Brower,
Land Management Administrator

Cc: NSB Permit Application No. 21-010 File
Cultural Resource Specialist
LMR Manager
Colleen Akpik-Lemen, Director of IHLC

21-010/tn
Form 500 - Certificate of TLUI Clearance Application

Date: November 30, 2020

Application is: ☒ New ☐ Amendment

Applicant is: ☐ Property Owner ☒ Lessee

Applicant Name: ConocoPhillips Alaska, Inc.

Applicant Address: P.O. Box 100360

Anchorage, AK 99510-0360

Telephone: (907) 265-6309

Fax Number: (907) 265-6216

Email Address: Jennifer.Collins@ConocoPhillips.com

Contractor Name: 

Address: 

Telephone: 

Fax Number: 

Email Address: 

Project type: Provide a brief summary of the purpose and nature of your project in the box below:

ConocoPhillips Alaska, Inc. (CPA1) requests authorization to prepack, construct, maintain and utilize new features in the 2020-2021 Greater Mooses Tooth 2, also known as Mooses Tooth 7 (GMT2/MT7) Ice Road System. The ice features will support GMT2/MT7 construction and Western North Slope oil and gas activities. Minor site-specific variations will occur due to field conditions.

Township: 
Range: 
Section: Various 
Meridian: Umiat

☒ Resource Development ☐ Scientific Research ☐ Conservation: ☐ Transportation Corridor

Was a Pre-Application meeting held with NSB Staff? ☒ Yes ☐ No Date Held: 10/14/2020 (Strongly Recommended)

Was Village Leader consultation completed? ☒ Yes ☐ No Date Held: 11/23/2020 (Strongly Recommended)

If not, attach explanation of why consultation was not necessary.

Was there a previous Certificate for this site issued to another person/company? ☐ Yes ☒ No Date Issued: Certificate No. 

Name of Applicant Certificate was issued to:
Attach the Following Information to Application:

1. Maps: Two hard copies and two CD copies of each map must be submitted. A digital GIS shape file of the proposed permit area, in GIS Mapping Format (projected in Alaska Albers Equal Area Conic using either a NAD 1927 or a NAD 1983 horizontal datum) is preferred. (a) General Vicinity Map. This map must show distances from nearby villages (b) Site Specific Location Map, showing the area requested for TLUI clearance, including nearby existing development, natural features, and zoning boundaries, and known traditional subsistence activities or values at historic, archaeological and cultural sites including all Alaska Heritage Resource Survey (AHRS) sites, TLUI sites currently known by the NSB and any additional sites located during your field work (hereafter referred to as Critical Sites). (c) Map, drawn to an appropriate map scale, showing existing and planned development and a minimum 500’ buffer zone from the Critical Sites.

2. Studies: Two hard copies and two CD copies of each study relevant to this application (e.g. historic, prehistoric, archaeological resources, traditional subsistence activities, and cultural site studies) completed by trained professionals in that respective field. If there was a prior field study for this area, you must submit a copy of that study. If you did not conduct the field study, you must obtain permission from the person/company that conducted the field study and include that in your application or provide evidence that the study is publicly available to support your application. Please describe how you have included traditional and local knowledge into these studies.

A study of the proposed development site by a professional trained to identify and document any possible Critical Sites within the vicinity of the proposed development site. This study must include: (a) field survey, (b) literature review, and (c) record of consultation with the nearest affected Village Tribal President(s) and City Mayor(s) to ensure all sites are included in the study.

For all new sites identified during study work, please submit the Global Positioning System (GPS) coordinates and GIS data in an electronic format that can be readily loaded into the NSB GIS database.

3. GPS and Mapping Data Quality: A written summary describing the type of GPS and other mapping data used, along with an explanation of data quality and accuracy.

4. Scope of Work: A written description of the nature and purpose of your proposed industrial development. Include development plans, engineering and architectural designs.

5. Existing Permits: List any permits and approvals received for this site. Attach a copy of the Form 400 Study Permit you obtained from the NSB. Attach a copy of any SHPO clearance obtained for this area. List any additional permits and approvals that are forthcoming for this site.

6. Plan to Protect Critical Sites: A written Critical Sites protection plan.

7. Affiliation: If you are not the land owner or lessee you must submit evidence of your affiliation with the owner/lessee (e.g., letter from owner/lessee authorizing you to do work, or copy of contract).

8. Fee: A check made payable to the North Slope Borough for the application fee of $100.

Mail Application To:
NORTH SLOPE BOROUGH DEPARTMENT OF PLANNING AND COMMUNITY SERVICES LMR MANAGER
P.O. BOX 69, BARROW, AK 99723
PHONE: 907-852-0200

I, THE APPLICANT, HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMANENT NSB RECORDS FOR THIS PROJECT. I HEREBY AGREE TO DEFEND, INDEMNIFY AND HOLD THE NORTH SLOPE BOROUGH HARMLESS FROM ANY AND ALL CLAIMS, DAMAGES, SUITS, LOSSES, LIABILITIES AND EXPENSES RELATED TO THE INJURY TO OR DEATH OF PERSONS AND DAMAGE TO OR LOSS OF PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE ENTRY ON AND USE OF PROPERTY WITHIN THE NORTH SLOPE BOROUGH BOUNDARIES BY ME, THE COMPANY I REPRESENT, AND ANY AND ALL OF MY CONTRACTORS, SUBCONTRACTORS AND THEIR EMPLOYEES INVOLVED.

Authorized Signature of Applicant
Jennifer Collins
Name

DECISION ☑ APPROVED (See accompanying letter) □ DENIED (See accompanying letter)

Cultural Resource Specialist
Director, NSB, HLC Department
Land Management Administrator

Date: 12-8-20

Date: 1/12/21

Fee to be paid monthly by Electronic Funds Transfer.
Sent by E-mail and U.S. Mail

December 15, 2020

Emerald Hill LLC (Emerald)
Erik Opstad, Vice President
P.O. Box 112212
Anchorage, AK. 99511-2212
Phone: 907-244-5210
Fax: 907-345-5821
E-mail: erik.opstad@gmail.com

Re: Certificate of TLUI Clearance
NSB Permit Application No. 21-011
Peregrine Exploration Program
Conservation, Township: 1S-7N; Range: 7E-2W; Section: Various; UM

Dear Mr. Opstad:

The North Slope Borough (NSB) Department of Planning and Community Services – Land Management Regulations Division has received your November 24, 2020 application for a Certificate of Traditional Land Use Inventory (TLUI) Clearance. Your application was assigned a NSB Permit Application No. 21-011. Please refer to this NSB Permit Application number in all correspondence with us.

The purpose of this project is for the drilling of two exploration oil and gas wells from ice pads within Emerald’s Peregrine Lease Block in the NPR-A.

This Certificate of TLUI Clearance is effective December 15, 2020.

This authorization is only valid for the scope of activities described in your November 24, 2020 application.

IHLC PRESERVATION POLICY & AUTHORITY:
1. The Inupiat History, Language & Culture (IHLC) Commission has responsibility for developing and maintaining a complete historical record of the land, people, and villages of NSB. NSBMC §2.16.110.

2. Development must not disturb traditional activities or values at historic or cultural sites identified in published studies or by the Commission on IHLC. NSBMC §19.50.030(F) and §19.60.040(K).

3. Development which is likely to disturb cultural or historic sites listed on the National Register of Historic Places; sites eligible for inclusion in the National Register, or sites identified as important to the study, understanding or illustration of national, state or local history or prehistory shall be required to avoid the sites; or be required to consult with appropriate local, state and federal agencies and survey and excavate the site prior to disturbance. NSBMC §19.70.050 (E).

4. Development shall not significantly interfere with traditional activities at cultural or historic sites identified in the Coastal Management Program. NSBMC §19.70.050 (F).

5. Development shall not cause surface disturbance of newly discovered historic or cultural sites prior to archaeological investigation. NSBMC §19.70.050(G), NSBMC §19.70.060(J).

6. NSB has the power to preserve, maintain and protect historic sites, buildings and monuments outside of incorporated cities. NSBMC §1.20.010(U).

7. Access to geographic coordinates of possible archeological, historic, cultural, and paleontological significance, and any other information pertains to such sites (hereafter, collectively referred to as “Restricted Information”) is limited to representatives of federal, state or local governments on official business; researchers engaged in legitimate scientific research; individuals or representatives of entities conducting archeological, historical, and cultural surveys in order to obtain a NSB development permit; or persons who have a legitimate need for access as determined by IHLC. Restricted Information includes but is not limited to information received from the NSB Traditional Land Use Inventories; information regarding unregistered cultural and historic sites; any information you discover while pursuing an archeological, historical, and/or cultural survey; and any information designated by IHLC as Restricted Information. NSBMC §2.42.040(K), AS 40.25.120 (a)(4), 16 U.S.C. 470w-3(a), 16 U.S.C. 470hh(a), and 36 C.F.R. 800.2(d)(2) provide authority for restricting access to information pertaining to historical/cultural sites.

**TLUI STIPULATIONS:**

1. Permittee must maintain all TLUI data in a secure place for internal use only. Permittee must not distribute this data to anyone outside of those entities acting pursuant to this Permit and must abide by the applicable IHLC Information Use Policy, listed below.

2. TLUI points provided in the form of geographic coordinates may be imprecise. The Permittee is nevertheless responsible for ensuring that its operations do not cause any adverse impacts to sites with potential historic, prehistoric, archeological, cultural, paleontological resources or significance, including sites where traditional activities take place (hereafter referred to as “Critical Sites”) and for reporting to the NSB Cultural Resource Specialist the proper coordinates of any such site you discover. Permittee releases NSB from any liability associated with its use of these data points.

3. Permittee must maintain a minimum 500-foot buffer zone from all Critical Sites (including all Traditional Land Use Inventory and Alaska Heritage Resources Survey sites), Native Allotments, or
cabins used for subsistence purposes within the vicinity of the proposed development. Permittee must train its staff and contractors to observe this buffer and ensure that sites are not disturbed. No development or use shall take place within 500 feet of a Critical Site, or within 500 feet of a Native Allotment, or cabin used for subsistence purposes without the owner’s permission.

4. Permittee must document caribou migration routes on a map and must avoid these routes during periods of migration. [NSBMC § 19.70.050(I)(1)].

5. Should any additional human remains or Critical Site materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered, that were not already identified by NSB or SHPO, the Permittee must stop all work within 1500 feet of the discovery until Permittee has made contact with NSB Cultural Resource Specialist at (907) 852-0320, the State Historic Preservation Office (SHPO) and (in the case of human remains) the Alaska State Troopers (AST), and has obtained these agencies’ approval to continue work. Permittee must submit information on any discovery that may be of historic, prehistoric, cultural, traditional, archeological, and paleontological significance to the NSB (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains). This information must be submitted to the NSB Cultural Resource Specialist no later than 30 days from discovery. Permittee must not distribute this information to anyone outside of those entities acting pursuant to this permit.

6. Permittee must follow state and federal law regarding the discovery of human remains.

7. Permittee must not remove or disturb any items that may be of historic, prehistoric, cultural, traditional archeological, and paleontological significance except to the extent needed to document their existence and to comply with state and federal law.

8. Any further investigation, surveys, or studies required pursuant to this Permit must be conducted by or under the supervision of a professional Archeologist, Anthropologist, Historic Architect and/or Architectural Historian (as needed to assess a given area for the possible existence of sites or artifacts of historic, cultural, archeological, pre-historic, or paleontological significance) that meets the professional qualifications of the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61, Appendix A). All reports and maps produced pursuant to this permit must include evidence that the professional meets these standards and is qualified to draw the report’s conclusions.

9. The NSB or authorized representative must be allowed to inspect the authorized activity at any time deemed necessary to ensure that the activity is being or has been accomplished in accordance with the terms and conditions of this permit. Permittee must provide NSB representatives with transportation to site, if not on a road system or accessible by government airport. Permittee may be required to reimburse the NSB for the expense of conducting an inspection if a violation is found. NSBMC § 19.50.010(B).

**IHLC INFORMATION USE POLICY FOR TLUI DATA:**

1. STATEMENT OF POLICY: Access to certain archeological, historic, and paleontological information (hereafter, “Restricted Information”) is limited to representatives of federal, state or local governments on official business; researchers engaged in legitimate scientific research; individuals or representatives of entities conducting archeological, historical, and cultural surveys in order to obtain clearance for any NSB permit; or persons who have a legitimate need for access as determined by the NSB. Restricted Information includes, but is not limited to, information received from the NSB Traditional Land Use Inventories (TLUI); information regarding unregistered cultural and historic sites; any information you discover while pursuing an archeological, historical, and/or cultural survey; and any information designated by DPCS as Restricted Information.
2. AUTHORITY: Under NSBMC 19.50.030(F) and 19.60.040(K) development must not disturb traditional activities or values at historic or cultural sites (hereafter collectively referred to as “critical sites”) identified in published studies or by the Commission on IHL. Under NSBMC 2.16.110, the Commission on IHL has responsibility for developing and maintaining a complete historical record of the land, people and villages of NSB. Unrestricted access to this record increases the threat of site and resource destruction, and may prompt land management agencies or owners to withhold critical site information from DPCS. In order to receive and maintain the most comprehensive critical site record possible, DPCS limits the dissemination of Restricted Information to legitimate and authorized Applicants. NSBMC 2.42.040(K), AS 40.25.120 (a)(4), 16 U.S.C. 470w-3(a), 16 U.S.C. 470hh(a), and 36 C.F.R. 800.2(d)(2) provide authority for this restriction.

3. AGREEMENT: Your use of Restricted Information will comply with this Agreement. You shall maintain any Restricted Information received in a secure place for internal use only. You shall not distribute Restricted Information to anyone, and you are to destroy the Restricted Information and any reproductions following use. You shall submit to DPCS any information that you discover in the course of your project that may be of historic, prehistoric, cultural, and paleontological significance to the NSB Cultural Resource Specialist, and to treat such information as Restricted Information. Prior to publication of any production that results from the use of the Restricted Information, you shall submit a copy to the NSB DPCS for approval. Publication of any production without express written approval from DPCS is a violation of this policy. Copies of any resulting publications shall be provided to the NSB DPCS.

4. You release and forever discharge the NSB and its subsidiaries, officers, directors, employees, agents and representatives of and from all manner of actions, causes of action, suits, debts, dues, sums of money, contracts, agreements, judgments, claims and demands caused by any use of the Restricted Information by You. You may be subject to prosecution under municipal, state, and federal law for violation of this Policy.

You must remain in compliance with the terms and conditions herein. Failure to comply with the conditions of this certificate could result in immediate revocation of this authorization.

If you wish to appeal this decision, including the developer, you must submit written notice to the secretary of the appropriate Commission (P.O. Box 69, Barrow Alaska 99723) and the developer within 30 days of the receipt of this decision, stating the reasons you believe the decision is incorrect. NSBMC §19.30.130.

NSB Cultural Resource Specialist, Tommy G. Nageak has been assigned to your permit, and can be reached by e-mail at tommy.nageak@north-slope.org, or by phone at (907) 852-0333.

Sincerely,

[Signature]

Gordon Bowes,
Land Management Administrator

Cc: NSB Permit Application No. 21-011 File
Cultural Resource Specialist
LMR Manager
Colleen Akpik-Lemen, Director of IHL
**Form 500 - Certificate of TLUI Clearance Application**

**Date:** 11/24/2020

**Application Number:** 21-011

**Application is:**
- [ ] New
- [x] Amendment

**Applicant is:**
- [ ] Property Owner
- [x] Lessee

**Applicant Name:** Emerald Hill LLC (Emerald)

**Applicant Address:**
- P.O. Box 112212
- Anchorage, AK 99511-2212

**Telephone:** 907-244-5210

**Fax Number:** 907-345-5821

**Email Address:** erik.optstad@gmail.com

**Architect Name:** Erik Optstad, Vice President

**Architect Address:**
- P.O. Box 112212
- Anchorage, AK 99511-2212

**Telephone:** 907-244-5210

**Fax Number:** 907-345-5821

**Email Address:** erik.optstad@gmail.com

**Application is:**
- [ ] Contractor
- [x] Architect

**Agent Represents:**
- [x] Lessee

**Agent/Subcontractor:**
- [ ] Consultant

**Contractor Name:** N/A

**Address:** N/A

**Telephone:** N/A

**Fax Number:** N/A

**Email Address:** N/A

**Project type:** Provide a brief summary of the purpose and nature of your project in the box below:

Emerald plans on drilling 2 exploration oil and gas exploration wells from ice pads within Emerald’s Peregrine Lease Block in the NPR-A this winter. Access will be by the NSB CWAT starting near the CPAI Drillsite 2P Pad and then by the Peregrine Snow Road pioneering south from the NSB CWAT (see attached figures). Emerald planned winter operations include constructing/maintaining an ice staging pad (“PEP 2P Ice Staging Pad”) at the start of the NSB CWAT, constructing/maintaining 42 miles of the shared NSB CWAT snow road, constructing/maintaining another 76 miles of the Peregrine Snow Road, constructing/maintaining the Merlin-1 & Harrier-1 Ice drilling pads, plus drilling and testing the Merlin-1 & Harrier-1 exploration wells.

**Township:** 0015-007N

**Range:** 007E-002W

**Section:** VARIES

**Meridian:** Umiat

**SEE ATTACHED PROJECT MAPS**

- [x] Resource Development
- [x] Scientific Research
- [ ] Conservation
- [ ] Transportation Corridor

**Was a Pre-Application meeting held with NSB Staff?**
- [x] Yes
- [ ] No

**Date Held:** 8/5/2020 (Strongly Recommended) and again on 11/19/2020

**Was Village Leader consultation completed?**
- [x] Yes
- [ ] No

**Date Held:** (Strongly Recommended)

**If not, attach explanation of why consultation was not necessary.**

**Was there a previous Certificate for this site issued to another person/company?**
- [x] Yes
- [ ] No

**Date Issued:** See Attachment 5

**Certificate No.:** See Attachment 5

**Name of Applicant Certificate was issued to:**
- [x] Yes
- [ ] No

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North Slope Borough
Department of Planning and Community Services
Land Management Regulation Division

Form 500 Certificate of TLUI Clearance Application
December 2014 (Rev. 3)
Attach the Following Information to Application:

1. **Maps**: Two hard copies and two CD copies of each map must be submitted. A digital GIS shape file of the proposed permit area in GIS Mapping Format (projected in Alaska Albers Equal Area Conic using either a NAD 1927 or a NAD 1983 horizontal datum) is preferred. (a) General Vicinity Map. This map must show distances from nearby villages (b) Site Specific Location Map, showing the area requested for TLUI clearance, including nearby existing development, natural features, and zoning boundaries, and known traditional subsistence activities or values at historic, archaeological and cultural sites including all Alaska Heritage Resource Survey (AHRS) sites. TLUI sites currently known by the NSB and any additional sites located during your field work (hereafter referred to as Critical Sites). (c) Map, drawn to an appropriate map scale, showing existing and planned development and a minimum 300’ buffer zone from the Critical Sites. See Attachment 1. Note no known critical sites within 3 miles of alignment or pads.

2. **Studies**: Two hard copies and two CD copies of each study relevant to this application (e.g., historic, prehistoric, archaeological resources, traditional subsistence activities, and cultural site studies) completed by trained professionals in that respective field. If there was a prior field study for this area, you must submit a copy of that study. If you did not conduct the field study, you must obtain permission from the person/company that conducted the field study and include that in your application or provide evidence that the study is publically available to support your application. Please describe how you have included traditional and local knowledge into these studies.

   A study of the proposed development site by a professional trained to identify and document any possible Critical Sites within the vicinity of the proposed development site. This study must include: (a) field survey, (b) literature review, and (c) record of consultation with the nearest affected Village Tribal President(s) and City Mayor(s) to ensure all sites are included in the study.

   For all new sites identified during study work, please submit the Global Positioning System (GPS) coordinates and GIS data in an electronic format that can be readily loaded into the NSB GIS database. Attachment 2 contains 3 studies prepared by trained professionals to identify/document Critical Sites. Note 1st page of each report and abstract only included in electronic application copy to reduce size. Full reports in hard copies.

3. **GPS and Mapping Data Quality**: A written summary describing the type of GPS and other mapping data used, along with an explanation of data quality and accuracy. See Attachment 3 for summary. Shape files previously submitted to NSB IHLC.

4. **Scope of Work**: A written description of the nature and purpose of your proposed industrial development. Include development plans, engineering, architectural design, and any other detail or information that will be necessary for the completion of the Work. See Attachment 4 for Project Overview. Additional details in NSB LMR Applications for staging and ice pads and snow road.

5. **Existing Permits**: List any permits and approvals received for this site. Attach a copy of the Form 400 Study Permit you obtained from the NSB. Attach a copy of any SHPO clearance obtained for this area. List any additional permits and approvals that are forthcoming for this site. Attachment includes a list of Project permits. 3 past SHPO clearances (first page of each to reduce size), 4 past TLUI clearances, plus NSB 21-024 (Form 400 permit).

6. **Plan to Protect Critical Sites**: A written Critical Sites protection plan. Plan is based on mitigation measures outlined in NSB Plan of Operations submitted with NSB LMR Applications.

7. **Affiliation**: If you are not the land owner or lessee you must submit evidence of your affiliation with the owner/lessee (e.g., letter from owner/lessee authorizing you to do work, or copy of contract). Not required.

8. **Fee**: A check made payable to the North Slope Borough for the application fee of $100. Scanned check w/this electronic copy. Original check mailed to LMR Application.

   NORTH SLOPE BOROUGH
   DEPARTMENT OF PLANNING AND COMMUNITY SERVICES
   LMR MANAGER
   P.O. BOX 69, BARROW, AK 99723
   PHONE: 907-852-0320

   I, the Applicant, hereby certify that the foregoing is true and correct to the best of my knowledge. All application material is considered part of the permanent NSB records for this project. I hereby agree to defend, indemnify and hold the North Slope Borough harmless from any and all claims, damages, suits, losses, liabilities and expenses related to the injury to or death of persons and damage to or loss of property arising out of or in connection with the entry on and use of property within the North Slope Borough boundaries by me, the company I represent, and any and all of my contractors, subcontractors and their employees involved.

   Authorized Signature of Applicant

   Erik Opstad
   Name

   DECISION □ APPROVED (See accompanying letter) □ DENIED (See accompanying letter)

   Director, NSB IHLC Department
   Land Management Administrator

   Date
   Date
   Date

   11/24/2020
   Vice President
   Title

   12/15/20
   Date
   Date
   Date

   North Slope Borough
   Department of Planning and Community Services
   Land Management Regulation Division

   Form 500 Certificate of TLUI Clearance Application
   December 2017 (Rev.)
Sent by E-mail and U.S. Mail

December 9, 2020

ConocoPhillips Alaska, Inc.
Jennifer Collins, Senior Environmental Coordinator
P.O. Box 100360
Anchorage, AK 99510-0360
Phone: 907-265-6509
Fax: 907-265-6216
E-mail: Jennifer.Collins@ConocoPhillips.com

Re: Certificate of TLUI Clearance
NSB Permit Application No. 21-012
Alpine Resupply Ice Road System
Resource Development, Township: 10-12N; Range: 3-7E; Section: Various; UM

Dear Ms. Collins:

The North Slope Borough (NSB) Department of Planning and Community Services – Land Management Regulations Division has received your October 9, 2020 application for a Certificate of Traditional Land Use Inventory (TLUI) Clearance. Your application was assigned a NSB Permit Application No. 21-012. Please refer to this NSB Permit Application number in all correspondence with us.

The purpose of this project is to prepack, construct and maintain the yearly Alpine Resupply ice roads, pads and spurs.

This Certificate of TLUI Clearance is effective December 9, 2020.

This authorization is only valid for the scope of activities described in your October 9, 2020 application.

IHL/C PRESERVATION POLICY & AUTHORITY:
1. The Inupiat History, Language & Culture (IHLC) Commission has responsibility for developing and maintaining a complete historical record of the land, people, and villages of NSB. NSBMC §2.16.110.

2. Development must not disturb traditional activities or values at historic or cultural sites identified in published studies or by the Commission on IHLC. NSBMC §19.50.030(F) and §19.60.040(K).

3. Development which is likely to disturb cultural or historic sites listed on the National Register of Historic Places; sites eligible for inclusion in the National Register, or sites identified as important to the study, understanding or illustration of national, state or local history or prehistory shall be required to avoid the sites; or be required to consult with appropriate local, state and federal agencies and survey and excavate the site prior to disturbance. NSBMC §19.70.050(E).

4. Development shall not significantly interfere with traditional activities at cultural or historic sites identified in the Coastal Management Program. NSBMC §19.70.050(F).

5. Development shall not cause surface disturbance of newly discovered historic or cultural sites prior to archaeological investigation. NSBMC §19.70.050(G), NSBMC §19.70.060(J).

6. NSB has the power to preserve, maintain and protect historic sites, buildings and monuments outside of incorporated cities. NSBMC §1.20.010(U).

7. Access to geographic coordinates of possible archeological, historic, cultural, and paleontological significance, and any other information pertains to such sites (hereafter, collectively referred to as “Restricted Information”) is limited to representatives of federal, state or local governments on official business; researchers engaged in legitimate scientific research; individuals or representatives of entities conducting archeological, historical, and cultural surveys in order to obtain a NSB development permit; or persons who have a legitimate need for access as determined by IHLC. Restricted Information includes but is not limited to information received from the NSB Traditional Land Use Inventories; information regarding unregistered cultural and historic sites; any information you discover while pursuing an archeological, historical, and/or cultural survey; and any information designated by IHLC as Restricted Information. NSBMC §2.42.040(K), AS 40.25.120 (a)(4), 16 U.S.C. 470w-3(a), 16 U.S.C. 470hh(a), and 36 C.F.R. 800.2(d)(2) provide authority for restricting access to information pertaining to historical/cultural sites.

**TLUI STIPULATIONS:**

1. Permittee must maintain all TLUI data in a secure place for internal use only. Permittee must not distribute this data to anyone outside of those entities acting pursuant to this Permit and must abide by the applicable IHLC Information Use Policy, listed below.

2. TLUI points provided in the form of geographic coordinates may be imprecise. The Permittee is nevertheless responsible for ensuring that its operations do not cause any adverse impacts to sites with potential historic, prehistoric, archeological, cultural, paleontological resources or significance, including sites where traditional activities take place (hereafter referred to as “Critical Sites”) and for reporting to the NSB Cultural Resource Specialist the proper coordinates of any such site you discover. Permittee releases NSB from any liability associated with its use of these data points.

3. Permittee must maintain a minimum 500-foot buffer zone from all Critical Sites (including all Traditional Land Use Inventory and Alaska Heritage Resources Survey sites), Native Allotments, or
cabins used for subsistence purposes within the vicinity of the proposed development. Permittee must train its staff and contractors to observe this buffer and ensure that sites are not disturbed. No development or use shall take place within 500 feet of a Critical Site, or within 500 feet of a Native Allotment, or cabin used for subsistence purposes without the owner’s permission.

4. Permittee must document caribou migration routes on a map and must avoid these routes during periods of migration. [NSBMC § 19.70.050(I)(1)].

5. Should any additional human remains or Critical Site materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered, that were not already identified by NSB or SHPO, the Permittee must stop all work within 1500 feet of the discovery until Permittee has made contact with NSB Cultural Resource Specialist at (907) 852-0320, the State Historic Preservation Office (SHPO) and (in the case of human remains) the Alaska State Troopers (AST), and has obtained these agencies’ approval to continue work. Permittee must submit information on any discovery that may be of historic, prehistoric, cultural, traditional, archeological, and paleontological significance to the NSB (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains). This information must be submitted to the NSB Cultural Resource Specialist no later than 30 days from discovery. Permittee must not distribute this information to anyone outside of those entities acting pursuant to this permit.

6. Permittee must follow state and federal law regarding the discovery of human remains.

7. Permittee must not remove or disturb any items that may be of historic, prehistoric, cultural, traditional archeological, and paleontological significance except to the extent needed to document their existence and to comply with state and federal law.

8. Any further investigation, surveys, or studies required pursuant to this Permit must be conducted by or under the supervision of a professional Archeologist, Anthropologist, Historic Architect and/or Architectural Historian (as needed to assess a given area for the possible existence of sites or artifacts of historic, cultural, archeological, pre-historic, or paleontological significance) that meets the professional qualifications of the Secretary of the Interior’s Professional Qualification Standards (36 CFR Part 61, Appendix A). All reports and maps produced pursuant to this permit must include evidence that the professional meets these standards and is qualified to draw the report’s conclusions.

9. The NSB or authorized representative must be allowed to inspect the authorized activity at any time deemed necessary to ensure that the activity is being or has been accomplished in accordance with the terms and conditions of this permit. Permittee must provide NSB representatives with transportation to site, if not on a road system or accessible by government airport. Permittee may be required to reimburse the NSB for the expense of conducting an inspection if a violation is found. NSBMC § 19.50.010(B).

**IHLC INFORMATION USE POLICY FOR TLUI DATA:**

1. **STATEMENT OF POLICY:** Access to certain archeological, historic, and paleontological information (hereafter, “Restricted Information”) is limited to representatives of federal, state or local governments on official business; researchers engaged in legitimate scientific research; individuals or representatives of entities conducting archeological, historical, and cultural surveys in order to obtain clearance for any NSB permit; or persons who have a legitimate need for access as determined by the NSB. Restricted Information includes, but is not limited to, information received from the NSB Traditional Land Use Inventories (TLUI); information regarding unregistered cultural and historic sites; any information you discover while pursuing an archeological, historical, and/or cultural survey; and any information designated by DPCS as Restricted Information.
2. **AUTHORITY:** Under NSBMC 19.50.030(F) and 19.60.040(K) development must not disturb traditional activities or values at historic or cultural sites (hereafter collectively referred to as "critical sites") identified in published studies or by the Commission on IHLC. Under NSBMC 2.16.110, the Commission on IHLC has responsibility for developing and maintaining a complete historical record of the land, people and villages of NSB. Unrestricted access to this record increases the threat of site and resource destruction, and may prompt land management agencies or owners to withhold critical site information from DPCS. In order to receive and maintain the most comprehensive critical site record possible, DPCS limits the dissemination of Restricted Information to legitimate and authorized Applicants. NSBMC 2.42.040(K), AS 40.25.120 (a)(4), 16 U.S.C. 470w-3(a), 16 U.S.C. 470hh(a), and 36 C.F.R. 800.2(d)(2) provide authority for this restriction.

3. **AGREEMENT:** Your use of Restricted Information will comply with this Agreement. You shall maintain any Restricted Information received in a secure place for internal use only. You shall not distribute Restricted Information to anyone, and you are to destroy the Restricted Information and any reproductions following use. You shall submit to DPCS any information that you discover in the course of your project that may be of historic, prehistoric, cultural, and paleontological significance to the NSB Cultural Resource Specialist, and to treat such information as Restricted Information. Prior to publication of any production that results from the use of the Restricted Information, you shall submit a copy to the NSB DPCS for approval. Publication of any production without express written approval from DPCS is a violation of this policy. Copies of any resulting publications shall be provided to the NSB DPCS.

4. You release and forever discharge the NSB and its subsidiaries, officers, directors, employees, agents and representatives of and from all manner of actions, causes of action, suits, debts, dues, sums of money, contracts, agreements, judgments, claims and demands caused by any use of the Restricted Information by You. You may be subject to prosecution under municipal, state, and federal law for violation of this Policy.

You must remain in compliance with the terms and conditions herein. Failure to comply with the conditions of this certificate could result in immediate revocation of this authorization.

If you wish to appeal this decision, including the developer, you must submit written notice to the secretary of the appropriate Commission (P.O. Box 69, Barrow Alaska 99723) and the developer within 30 days of the receipt of this decision, stating the reasons you believe the decision is incorrect. NSBMC §19.30.130.

NSB Cultural Resource Specialist, Tommy G. Nageak has been assigned to your permit, and can be reached by e-mail at tommy.nageak@north-slope.org, or by phone at (907) 852-0333.

Sincerely,

[Signature]

Gordon Brower,
Land Management Administrator

Cc: NSB Permit Application No. 21-012 File
Cultural Resource Specialist
LMR Manager
Colleen Akpik-Lemen, Director of IHLC

21-012/tn
Form 500 - Certificate of TLUI Clearance Application

Date: October 9, 2020

Application is: ☑ New ☐ Amendment

Applicant is: ☐ Property Owner ☑ Lessee

Applicant Name: ConocoPhillips Alaska, Inc.

Applicant Address: P.O. Box 100360
Anchorage, AK 99510-0360

Telephone: (907) 265-6509
Fax Number: (907) 265-6216
Email Address: Jennifer.Collins@ConocoPhillips.com

Application is: ☐ Contractor ☐ Architect

Agent Represents: ☐ Property Owner ☑ Lessee

Contractor Name: ____________________________

Address: ____________________________
Telephone: ____________________________
Fax Number: ____________________________
Email Address: ____________________________

Agent/Subcontractor: ____________________________

Address: ____________________________
Telephone: ____________________________
Fax Number: ____________________________
Email Address: ____________________________

Project type: Provide a brief summary of the purpose and nature of your project in the box below:

ConocoPhillips Alaska, Inc. (CPAI) requests authorization to prepack, construct, maintain and utilize the 2020-2021 Alpine Resupply ice pads and ice spurs. The ice features will support Western North Slope oil and gas activities.

Township: __________________ Range: __________________ Section: __________________ Meridian: ________________ Ummat: ________________

☒ Resource Development ☐ Scientific Research ☐ Conservation: ☐ Transportation Corridor

Was a Pre-Application meeting held with NSB Staff? ☐ Yes ☑ No Date Held: N/A (Strongly Recommended)

Was Village Leader consultation completed? ☑ Yes ☐ No Date Held: 9/29/2020 (Strongly Recommended)

If not, attach explanation of why consultation was not necessary.

Was there a previous Certificate for this site issued to another person/company? ☐ Yes ☑ No Date Issued: Certificate No.

Name of Applicant Certificate was issued to:
Attach the Following Information to Application:

1. **Maps:** Two hard copies and two CD copies of each map must be submitted. A digital GIS shapefile of the proposed permit area, in GIS Mapping Format (projected in Alaska Albers Equal Area Conic using either a NAD 1927 or a NAD 1983 horizontal datum) is preferred. (a) General Vicinity Map, This map must show distances from nearby villages (b) Site Specific Location Map, showing the area requested for TLUI clearance, including nearby existing development, natural features, and zoning boundaries, and known traditional subsistence activities or values at historic, archaeological and cultural sites including all Alaska Heritage Resource Survey (AHRS) sites; TLUI sites currently known by the NSB and any additional sites located during your field work (hereafter referred to as Critical Sites). (c) Map, drawn to an appropriate map scale, showing existing and planned development and a minimum 500' buffer zone from the Critical Sites.

2. **Studies:** Two hard copies and two CD copies of each study relevant to this application (e.g. historic, prehistoric, archaeological resources, traditional subsistence activities, and cultural site studies) completed by trained professionals in that respective field. If there was a prior field study for this area, you must submit a copy of that study. If you did not conduct the field study, you must obtain permission from the person/company that conducted the field study and include that in your application or provide evidence that the study is publically available to support your application. Please describe how you have included traditional and local knowledge into these studies.

A study of the proposed development site by a professional trained to identify and document any possible Critical Sites within the vicinity of the proposed development site. This study must include: (a) field survey, (b) literature review, and (c) record of consultation with the nearest affected Village Tribal President(s) and City Mayor(s) to ensure all sites are included in the study.

For all new sites identified during study work, please submit the Global Positioning System (GPS) coordinates and GIS data in an electronic format that can be readily loaded into the NSB GIS database.

3. **GPS and Mapping Data Quality:** A written summary describing the type of GPS and other mapping data used, along with an explanation of data quality and accuracy.

4. **Scope of Works:** A written description of the nature and purpose of your proposed industrial development. Include development plans, engineering and architectural designs.

5. **Existing Permits:** List any permits and approvals received for this site. Attach a copy of the Form 400 Study Permit you obtained from the NSB. Attach a copy of any SHPO clearance obtained for this area. List any additional permits and approvals that are forthcoming for this site.

6. **Plan to Protect Critical Sites:** A written Critical Sites protection plan.

7. **Affiliation:** If you are not the land owner or lessee you must submit evidence of your affiliation with the owner/lessee (e.g., letter from owner/lessee authorizing you to do work, or copy of contract).

8. **Fee:** A check made payable to the North Slope Borough for the application fee of $100.

---

**Mail Application To:**
NORTH SLOPE BOROUGH DEPARTMENT OF PLANNING AND COMMUNITY SERVICES LMR MANAGER
P.O. BOX 69, BARROW, AK 99723
PHONE: 907-852-0320

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I, THE APPLICANT, HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMANENT NSB RECORDS FOR THIS PROJECT. I HEREBY AGREE TO DEFEND, INDEMNIFY AND HOLD THE NORTH SLOPE BOROUGH HARMLESS FROM ANY AND ALL CLAIMS, DAMAGES, SUITS, LOSSES, LIABILITIES AND EXPENSES RELATED TO THE INJURY TO OR DEATH OF PERSONS AND DAMAGE TO OR LOSS OF PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE ENTRY ON AND USE OF PROPERTY WITHIN THE NORTH SLOPE BOROUGH BOUNDARIES BY ME, THE COMPANY I REPRESENT, AND ANY AND ALL OF MY CONTRACTORS, SUBCONTRACTORS AND THEIR EMPLOYEES INVOLVED.

(Signature)
Authorized Signature of Applicant

Date: 10/9/2020

Jennifer Collins
Name

Decision ☐ APPROVED (See accompanying letter) ☐ DENIED (See accompanying letter)

(Signature)
Cultural Resource Specialist

Date: 12-9-20

(Signature)
Director, NSB IHEC Department

Date: 01/14/2020

(Signature)
Land Management Administrator

Date: 12/15/20

Fee to be paid monthly by Electronic Funds Transfer.
Sent by E-mail and U.S. Mail

December 17, 2020

Olgoonik Construction Services
James Nunley, Senior Project Manager
3201 C Street, Suite 700
Anchorage, AK., 99503
Phone: 907-232-9952
Fax: 907-562-8751
E-mail: jnunley@olgoonik.com

Re: Certificate of TLUI Clearance
NSB Permit Application No. 21-013
Fish Creek and Inigok Wells Remediation
Conservation, Township: 8-13N; Range: 1-5W, 1-8E; Section: Various; UM

Dear Mr. Nunley:

The North Slope Borough (NSB) Department of Planning and Community Services – Land Management Regulations Division has received your November 30, 2020 application for a Certificate of Traditional Land Use Inventory (TLUI) Clearance. Your application was assigned a NSB Permit Application No. 21-013. Please refer to this NSB Permit Application number in all correspondence with us.

The purpose of this project is for the remediation and permanent plugging and abandonment of two Legacy wells: Fish Creek #1 and Inigok #1.

This Certificate of TLUI Clearance is effective December 17, 2020.

This authorization is only valid for the scope of activities described in your November 30, 2020 application.

IHLC PRESERVATION POLICY & AUTHORITY:
1. The Iñupiat History, Language & Culture (IHLC) Commission has responsibility for developing and maintaining a complete historical record of the land, people, and villages of NSB. NSBMC §2.16.110.

2. Development must not disturb traditional activities or values at historic or cultural sites identified in published studies or by the Commission on IHLC. NSBMC §19.50.030(F) and §19.60.040(K).

3. Development which is likely to disturb cultural or historic sites listed on the National Register of Historic Places; sites eligible for inclusion in the National Register, or sites identified as important to the study, understanding or illustration of national, state or local history or prehistory shall be required to avoid the sites; or be required to consult with appropriate local, state and federal agencies and survey and excavate the site prior to disturbance. NSBMC §19.70.050 (E).

4. Development shall not significantly interfere with traditional activities at cultural or historic sites identified in the Coastal Management Program. NSBMC §19.70.050 (F).

5. Development shall not cause surface disturbance of newly discovered historic or cultural sites prior to archaeological investigation. NSBMC §19.70.050(G), NSBMC §19.70.060(J).

6. NSB has the power to preserve, maintain and protect historic sites, buildings and monuments outside of incorporated cities. NSBMC §1.20.010(U).

7. Access to geographic coordinates of possible archeological, historic, cultural, and paleontological significance, and any other information pertains to such sites (hereafter, collectively referred to as “Restricted Information”) is limited to representatives of federal, state or local governments on official business; researchers engaged in legitimate scientific research; individuals or representatives of entities conducting archeological, historical, and cultural surveys in order to obtain a NSB development permit; or persons who have a legitimate need for access as determined by IHLC. Restricted Information includes but is not limited to information received from the NSB Traditional Land Use Inventories; information regarding unregistered cultural and historic sites; any information you discover while pursuing an archeological, historical, and/or cultural survey; and any information designated by IHLC as Restricted Information. NSBMC §2.42.040(K), AS 40.25.120 (a)(4), 16 U.S.C. 470w-3(a), 16 U.S.C. 470hh(a), and 36 C.F.R. 800.2(d)(2) provide authority for restricting access to information pertaining to historical/cultural sites.

**TLUI STIPULATIONS:**

1. Permittee must maintain all TLUI data in a secure place for internal use only. Permittee must not distribute this data to anyone outside of those entities acting pursuant to this Permit and must abide by the applicable IHLC Information Use Policy, listed below.

2. TLUI points provided in the form of geographic coordinates may be imprecise. The Permittee is nevertheless responsible for ensuring that its operations do not cause any adverse impacts to sites with potential historic, prehistoric, archeological, cultural, paleontological resources or significance, including sites where traditional activities take place (hereafter referred to as “Critical Sites”) and for reporting to the NSB Cultural Resource Specialist the proper coordinates of any such site you discover. Permittee releases NSB from any liability associated with its use of these data points.

3. Permittee must maintain a minimum 500-foot buffer zone from all Critical Sites (including all Traditional Land Use Inventory and Alaska Heritage Resources Survey sites), Native Allotments, or
cabinets used for subsistence purposes within the vicinity of the proposed development. Permittee must train its staff and contractors to observe this buffer and ensure that sites are not disturbed. No development or use shall take place within 500 feet of a Critical Site, or within 500 feet of a Native Allotment, or cabin used for subsistence purposes without the owner’s permission.

4. Permittee must document caribou migration routes on a map and must avoid these routes during periods of migration. [NSBMC §19.70.050(I)(1)].

5. Should any additional human remains or Critical Site materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered, that were not already identified by NSB or SHPO, the Permittee must stop all work within 1500 feet of the discovery until Permittee has made contact with NSB Cultural Resource Specialist at (907) 852-0320, the State Historic Preservation Office (SHPO) and (in the case of human remains) the Alaska State Troopers (AST), and has obtained these agencies’ approval to continue work. Permittee must submit information on any discovery that may be of historic, prehistoric, cultural, traditional, archaeological, and paleontological significance to the NSB (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains). This information must be submitted to the NSB Cultural Resource Specialist no later than 30 days from discovery. Permittee must not distribute this information to anyone outside of those entities acting pursuant to this permit.

6. Permittee must follow state and federal law regarding the discovery of human remains.

7. Permittee must not remove or disturb any items that may be of historic, prehistoric, cultural, traditional archeological, and paleontological significance except to the extent needed to document their existence and to comply with state and federal law.

8. Any further investigation, surveys, or studies required pursuant to this Permit must be conducted by or under the supervision of a professional Archeologist, Anthropologist, Historic Architect and/or Architectural Historian (as needed to assess a given area for the possible existence of sites or artifacts of historic, cultural, archeological, pre-historic, or paleontological significance) that meets the professional qualifications of the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61, Appendix A). All reports and maps produced pursuant to this permit must include evidence that the professional meets these standards and is qualified to draw the report’s conclusions.

9. The NSB or authorized representative must be allowed to inspect the authorized activity at any time deemed necessary to ensure that the activity is being or has been accomplished in accordance with the terms and conditions of this permit. Permittee must provide NSB representatives with transportation to site, if not on a road system or accessible by government airport. Permittee may be required to reimburse the NSB for the expense of conducting an inspection if a violation is found. NSBMC §19.50.010(B).

IHLC INFORMATION USE POLICY FOR TLUI DATA:

1. STATEMENT OF POLICY: Access to certain archeological, historic, and paleontological information (hereafter, “Restricted Information”) is limited to representatives of federal, state or local governments on official business; researchers engaged in legitimate scientific research; individuals or representatives of entities conducting archeological, historical, and cultural surveys in order to obtain clearance for any NSB permit; or persons who have a legitimate need for access as determined by the NSB. Restricted Information includes, but is not limited to, information received from the NSB Traditional Land Use Inventories (TLUI); information regarding unregistered cultural and historic sites; any information you discover while pursuing an archeological, historical, and/or cultural survey; and any information designated by DPCS as Restricted Information.
2. AUTHORITY: Under NSBMC 19.50.030(F) and 19.60.040(K) development must not disturb traditional activities or values at historic or cultural sites (hereafter collectively referred to as "critical sites") identified in published studies or by the Commission on IHLC. Under NSBMC 2.16.110, the Commission on IHLC has responsibility for developing and maintaining a complete historical record of the land, people and villages of NSB. Unrestricted access to this record increases the threat of site and resource destruction, and may prompt land management agencies or owners to withhold critical site information from DPCS. In order to receive and maintain the most comprehensive critical site record possible, DPCS limits the dissemination of Restricted Information to legitimate and authorized Applicants. NSBMC 2.42.040(K), AS 40.25.120 (a)(4), 16 U.S.C. 470w-3(a), 16 U.S.C. 470hh(a), and 36 C.F.R. 800.2(d)(2) provide authority for this restriction.

3. AGREEMENT: Your use of Restricted Information will comply with this Agreement. You shall maintain any Restricted Information received in a secure place for internal use only. You shall not distribute Restricted Information to anyone, and you are to destroy the Restricted Information and any reproductions following use. You shall submit to DPCS any information that you discover in the course of your project that may be of historic, prehistoric, cultural, and palaeontological significance to the NSB Cultural Resource Specialist, and to treat such information as Restricted Information. Prior to publication of any production that results from the use of the Restricted Information, you shall submit a copy to the NSB DPCS for approval. Publication of any production without express written approval from DPCS is a violation of this policy. Copies of any resulting publications shall be provided to the NSB DPCS.

4. You release and forever discharge the NSB and its subsidiaries, officers, directors, employees, agents and representatives of and from all manner of actions, causes of action, suits, debts, dues, sums of money, contracts, agreements, judgments, claims and demands caused by any use of the Restricted Information by You. You may be subject to prosecution under municipal, state, and federal law for violation of this Policy.

You must remain in compliance with the terms and conditions herein. Failure to comply with the conditions of this certificate could result in immediate revocation of this authorization.

If you wish to appeal this decision, including the developer, you must submit written notice to the secretary of the appropriate Commission (P.O. Box 69, Barrow Alaska 99723) and the developer within 30 days of the receipt of this decision, stating the reasons you believe the decision is incorrect. NSBMC §19.30.130.

NSB Cultural Resource Specialist, Tommy G. Nageak has been assigned to your permit, and can be reached by e-mail at tommy.nageak@north-slope.org, or by phone at (907) 852-0333.

Sincerely,

[Signature]

Gordon Brower,
Land Management Administrator

Cc: NSB Permit Application No. 21-013 File
Cultural Resource Specialist
LMR Manager
Colleen Akpik-Lemen, Director of IHLC

21-013/tn
Form 500 - Certificate of TLUI Clearance Application

Date: 11/30/2020  
Application Number: 21-018

Application is:  
- [✓] New  
- [ ] Amendment

Applicant is:  
- [ ] Property Owner  
- [ ] Lessee

Applicant Name:  
Olgoonik Construction Services

Applicant Address:  
3201 C Street, Suite 700  
Anchorage, Alaska 99503

Telephone:  
907-232-9952

Fax Number:  
907-562-8751

Email Address:  
jnunley@olgoonik.com

Architect  
Name: N/A

Architect Address: N/A

Telephone: N/A

Fax Number: N/A

Email Address: N/A

Consultant  
- [ ]

Lessee  
- [ ]

Contractor:  
- [✓]

Property Owner  
- [ ]

Agent Represents:  
- [✓] Contractor  
- [ ] Architect

Agent/Subcontractor:  
- [ ]

Resource Development  
- [ ]

Scientific Research  
- [ ]

Conservation  
- [✓]

Transportation Corridor  
- [ ]

Was a Pre-Application meeting held with NSB Staff?  
- [ ] Yes  
- [✓] No  
Date Held:  
(Strongly Recommended)

Was Village Leader consultation completed?  
- [ ] Yes  
- [✓] No  
Date Held:  
(Strongly Recommended)

If not, attach explanation of why consultation was not necessary.

Was there a previous Certificate for this site issued to another person/company?  
- [ ] Yes  
- [✓] No  
Date Issued:  
Certificate No.  
(Strongly Recommended)

Name of Applicant Certificate was issued to:  
N/A

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Olgoonik construction Services is requesting TLUI clearance for the remediation and permanent plugging and abandonment of two Legacy wells: Fish Creek #1 and Inigok #1. All of the wells are located outside NPR-A on Alaska's North Slope. OCS will transport all equipment, supplies materials, temporary facilities, and personnel to perform the field work at each well site via approved tundra travel. Staging of equipment will occur at Franklin Bluffs. See attached project description for more details. Also attached is a Memorandum of Understanding between the BLM and SHPO regarding the lack of cultural resources at legacy well sites. A project description was sent via email to the TLUI Coordinator.
1. **Maps:** Two hard copies and two CD copies of each map must be submitted. A digital GIS shape file of the proposed permit area, in GIS Mapping Format (projected in Alaska Albers Equal Area Conic using either a NAD 1927 or a NAD 1983 horizontal datum) is preferred. (a) General Vicinity Map. This map must show distances from nearby villages (b) Site Specific Location Map, showing the area requested for TLUI clearance, including nearby existing development, natural features, and zoning boundaries, and known traditional subsistence activities or values at historic, archaeological and cultural sites including all Alaska Heritage Resource Survey (AHRS) sites, TLUI sites currently known by the NSB and any additional sites located during your field work (hereafter referred to as Critical Sites). (c) Map, drawn to an appropriate map scale, showing existing and planned development and a minimum 500' buffer zone from the Critical Sites.

2. **Studies:** Two hard copies and two CD copies of each study relevant to this application (e.g., historic, prehistoric, archaeological resources, traditional subsistence activities, and cultural site studies) completed by trained professionals in that respective field. If there was a prior field study for this area, you must submit a copy of that study. If you did not conduct the field study, you must obtain permission from the person/company that conducted the field study and include that in your application or provide evidence that the study is publicly available to support your application. Please describe how you have used traditional and local knowledge into these studies.

A study of the proposed development site by a professional trained to identify and document any possible Critical Sites within the vicinity of the proposed development site. This study must include (a) field survey, (b) literature review, and (c) record of consultation with the nearest affected Village Tribal President(s) and City Mayor(s) to ensure all sites are included in the study.

For all new sites identified during study work, please submit the Global Positioning System (GPS) coordinates and GIS data in an electronic format that can be readily loaded into the NSB GIS database.

3. **GPS and Mapping Data Quality:** A written summary describing the type of GPS and other mapping data used, along with an explanation of data quality and accuracy.

4. **Scope of Work:** A written description of the purpose and of your proposed industrial development. Include development plans, engineering and architectural designs.

5. **Existing Permits:** List any permits and approvals received for this site. Attach a copy of the Form 400 Study Permit you obtained from the NSB. Attach a copy of any SHPO clearance obtained for this area. List any additional permits and approvals that are forthcoming for this site.

6. **Plan to Protect Critical Sites:** A written Critical Sites protection plan.

7. **Affiliation:** If you are not the land owner or lessee you must submit evidence of your affiliation with the owner/lessee (e.g., letter from owner/lessee authorizing you to do work or copy of contract).

8. **Fee:** A check made payable to the North Slope Borough for the application fee of $100.

Mail Application To:
NORTH SLOPE BOROUGH DEPARTMENT OF PLANNING AND COMMUNITY SERVICES
LMR MANAGER
P.O. BOX 69, BARROW, AK 99723
PHONE: 907-852-0520

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I, THE APPLICANT, HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMANENT NSB RECORDS FOR THIS PROJECT. I HEREBY AGREE TO DEPEND, INDEMNIFY AND HOLD THE NORTH SLOPE BOROUGH HARMLESS FROM ANY AND ALL CLAIMS, DAMAGES, SUITS, LOSSES, LIABILITIES AND EXPENSES RELATED TO THE INJURY TO OR DEATH OF PERSONS AND DAMAGE TO OR LOSS OF PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE ENTRY ON AND USE OF PROPERTY WITHIN THE NORTH SLOPE BOROUGH BOUNDARIES BY ME, THE COMPANY I REPRESENT, AND ANY AND ALL OF MY CONTRACTORS, SUBCONTRACTORS AND THEIR EMPLOYEES INVOLVED.
```

**Authorized Signature of Applicant**

James Nunley  

**Date**

11/30/2020

**Senior Project Manager**

Title

**Date**

---

**DECISION**  

☐ APPROVED  

☐ DENIED

**Cultural Resource Specialist**

**Date**

12/17/20

**Director, NSB BLM Department**

**Date**

12/22/20

**Land Management Administrator**

**Date**

12/22/20
Sent by E-mail and U.S. Mail

December 28, 2020

ConocoPhillips Alaska, Inc.
Kate Dodson, Environmental Coordinator
P.O. Box 100360
Anchorage, AK 99510
Phone: 907-265-6181
Fax: n/a
E-mail: Kate.Dodson@conocophillips.com

Re: Certificate of TLUI Clearance
NSB Permit Application No. 21-015
KPL-OPL 8 VSMs Ice Pad
Resource Development, Township: 11N; Range: 13E; Section: 34; UM

Dear Ms. Dodson:

The North Slope Borough (NSB) Department of Planning and Community Services – Land Management Regulations Division has received your November 5, 2020 application for a Certificate of Traditional Land Use Inventory (TLUI) Clearance. Your application was assigned a NSB Permit Application No. 21-015. Please refer to this NSB Permit Application number in all correspondence with us.

The purpose of this project is to construct an ice pad between the spine road and the KPL-OPL pipeline.

This Certificate of TLUI Clearance is effective December 28, 2020.

This authorization is only valid for the scope of activities described in your November 5, 2020 application.

IHLC PRESERVATION POLICY & AUTHORITY:
1. The Inupiat History, Language & Culture (IHLC) Commission has responsibility for developing and maintaining a complete historical record of the land, people, and villages of NSB. NSBMC §2.16.110.

2. Development must not disturb traditional activities or values at historic or cultural sites identified in published studies or by the Commission on IHLC. NSBMC §19.50.030(F) and §19.60.040(K).

3. Development which is likely to disturb cultural or historic sites listed on the National Register of Historic Places; sites eligible for inclusion in the National Register, or sites identified as important to the study, understanding or illustration of national, state or local history or prehistory shall be required to avoid the sites; or be required to consult with appropriate local, state and federal agencies and survey and excavate the site prior to disturbance. NSBMC §19.70.050 (E).

4. Development shall not significantly interfere with traditional activities at cultural or historic sites identified in the Coastal Management Program. NSBMC §19.70.050 (F).

5. Development shall not cause surface disturbance of newly discovered historic or cultural sites prior to archaeological investigation. NSBMC §19.70.050(G), NSBMC §19.70.060(J).

6. NSB has the power to preserve, maintain and protect historic sites, buildings and monuments outside of incorporated cities. NSBMC §1.20.010(U).

7. Access to geographic coordinates of possible archeological, historic, cultural, and paleontological significance, and any other information pertains to such sites (hereafter, collectively referred to as “Restricted Information”) is limited to representatives of federal, state or local governments on official business; researchers engaged in legitimate scientific research; individuals or representatives of entities conducting archeological, historical, and cultural surveys in order to obtain a NSB development permit; or persons who have a legitimate need for access as determined by IHLC. Restricted Information includes but is not limited to information received from the NSB Traditional Land Use Inventories; information regarding unregistered cultural and historic sites; any information you discover while pursuing an archeological, historical, and/or cultural survey; and any information designated by IHLC as Restricted Information. NSBMC §2.42.040(K), AS 40.25.120 (a)(4), 16 U.S.C. 470w-3(a), 16 U.S.C. 470hh(a), and 36 C.F.R. 800.2(d)(2) provide authority for restricting access to information pertaining to historical/cultural sites.

**TLUI STIPULATIONS:**

1. Permittee must maintain all TLUI data in a secure place for internal use only. Permittee must not distribute this data to anyone outside of those entities acting pursuant to this Permit and must abide by the applicable IHLC Information Use Policy, listed below.

2. TLUI points provided in the form of geographic coordinates may be imprecise. The Permittee is nevertheless responsible for ensuring that its operations do not cause any adverse impacts to sites with potential historic, prehistoric, archeological, cultural, paleontological resources or significance, including sites where traditional activities take place (hereafter referred to as “Critical Sites”) and for reporting to the NSB Cultural Resource Specialist the proper coordinates of any such site you discover. Permittee releases NSB from any liability associated with its use of these data points.

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cabins used for subsistence purposes within the vicinity of the proposed development. Permittee must train its staff and contractors to observe this buffer and ensure that sites are not disturbed. No development or use shall take place within 500 feet of a Critical Site, or within 500 feet of a Native Allotment, or cabin used for subsistence purposes without the owner’s permission.

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5. Should any additional human remains or Critical Site materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered, that were not already identified by NSB or SHPO, the Permittee must stop all work within 1500 feet of the discovery until Permittee has made contact with NSB Cultural Resource Specialist at (907) 852-0320, the State Historic Preservation Office (SHPO) and (in the case of human remains) the Alaska State Troopers (AST), and has obtained these agencies’ approval to continue work. Permittee must submit information on any discovery that may be of historic, prehistoric, cultural, traditional, archeological, and paleontological significance to the NSB (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains). This information must be submitted to the NSB Cultural Resource Specialist no later than 30 days from discovery. Permittee must not distribute this information to anyone outside of those entities acting pursuant to this permit.

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2. AUTHORITY: Under NSBMC 19.50.030(F) and 19.60.040(K) development must not disturb traditional activities or values at historic or cultural sites (hereafter collectively referred to as “critical sites”) identified in published studies or by the Commission on IHLC. Under NSBMC 2.16.110, the Commission on IHLC has responsibility for developing and maintaining a complete historical record of the land, people and villages of NSB. Unrestricted access to this record increases the threat of site and resource destruction, and may prompt land management agencies or owners to withhold critical site information from DPCS. In order to receive and maintain the most comprehensive critical site record possible, DPCS limits the dissemination of Restricted Information to legitimate and authorized Applicants. NSBMC 2.42.040(K), AS 40.25.120 (a)(4), 16 U.S.C. 470w-3(a), 16 U.S.C. 470hh(a), and 36 C.F.R. 800.2(d)(2) provide authority for this restriction.

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NSB Cultural Resource Specialist, Tommy G. Nageak has been assigned to your permit, and can be reached by e-mail at tommy.nageak@north-slope.org, or by phone at (907) 852-0333.

Sincerely,

Gordon Brower,
Land Management Administrator

Cc: NSB Permit Application No. 21-015 File
Cultural Resource Specialist
LMR Manager
Colleen Alpik-Lemen, Director of IHLC

21-015/tn
**Form 500 - Certificate of TLUI Clearance Application**

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<td>P.O. Box 10030, Anchorage, AK 99510</td>
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<tr>
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<tr>
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<td><a href="mailto:Kate.Dodson@conocophillips.com">Kate.Dodson@conocophillips.com</a></td>
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<tr>
<td>Project type:</td>
<td>Provide a brief summary of the purpose and nature of your project in the box below.</td>
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ConocoPhillips Alaska, Inc. (CPAI) respectfully requests a TLUI Clearance to construct an ice pad near the existing Kuparuk and Oliktok Pipelines (KPL and OPL, respectively) in the Prudhoe Bay Resource Development District. The ice pad will be constructed between the spine road and the pipeline to provide support for the installation of the KPL-OPL B VSMs, which were authorized separately under NSB 21-045. The ice pad will measure no more than 80 feet by 140 feet. See the attachments for more information.

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<th>Township:</th>
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<th>Range: R13E</th>
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<td>☐ Transportation Corridor</td>
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</tbody>
</table>

Was a Pre-Application meeting held with NSB Staff?  
☐ Yes  ☑ No  Date Held:  
(Strongly Recommended)

Was Village Leader consultation completed?  
☐ Yes  ☑ No  Date Held:  
(Strongly Recommended)

If not, attach explanation of why consultation was not necessary.

Was there a previous Certificate for this site issued to another person/company?  
☐ Yes  ☑ No  Date Issued: Certificate No.  

Name of Applicant Certificate was issued to:
Attach the Following Information to Application:

1. **Maps:** Two hard copies and two CD copies of each map must be submitted. A digital GIS shape file of the proposed permit area, in GIS Mapping Format (projected in Alaska Albers Equal Area Conic using either a NAD 1927 or a NAD 1983 horizontal datum) is preferred. (a) General Vicinity Map. This map must show distances from nearby villages (b) Site Specific Location Map, showing the area requested for TLUI clearance, including nearby existing development, natural features, and zoning boundaries, and known traditional subsistence activities or values at historic, archaeological and cultural sites including all Alaska Heritage Resource Survey (AHRS) sites, TLUI sites currently known by the NSB and any additional sites located during your field work (hereafter referred to as Critical Sites). (c) Map, drawn to an appropriate map scale, showing existing and planned development and a minimum 500' buffer zone from the Critical Sites.

2. **Studies:** Two hard copies and two CD copies of each study relevant to this application (e.g. historic, prehistoric, archaeological resources, traditional subsistence activities, and cultural site studies) completed by trained professionals in that respective field. If there was a prior field study for this area, you must submit a copy of that study. If you did not conduct the field study, you must obtain permission from the person/company that conducted the field study and include that in your application or provide evidence that the study is publicly available to support your application. Please describe how you have included traditional and local knowledge into these studies.

A study of the proposed development site by a professional trained to identify and document any possible Critical Sites within the vicinity of the proposed development site. This study must include: (a) field survey, (b) literature review, and (c) record of consultation with the nearest affected Village Tribal President(s) and City Mayor(s) to ensure all sites are included in the study.

For all new sites identified during study work, please submit the Global Positioning System (GPS) coordinates and GIS data in an electronic format that can be readily loaded into the NSB GIS database.

3. **GPS and Mapping Data Quality:** A written summary describing the type of GPS and other mapping data used, along with an explanation of data quality and accuracy.

4. **Scope of Work:** A written description of the nature and purpose of your proposed industrial development. Include development plans, engineering and architectural designs.

5. **Existing Permits:** List any permits and approvals received for this site. Attach a copy of the Form 400 Study Permit you obtained from the NSB. Attach a copy of any SHPO clearance obtained for this area. List any additional permits and approvals that are forthcoming for this site.

6. **Plan to Protect Critical Sites:** A written Critical Sites protection plan.

7. **Affiliation:** If you are not the landowner or lessee you must submit evidence of your affiliation with the owner/lessee (e.g., letter from owner/lessee authorizing you to do work, or copy of contract).

8. **Fee:** A check made payable to the North Slope Borough for the application fee of $100.

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Mail Application To:

NORTH SLOPE BOROUGH DEPARTMENT OF PLANNING AND COMMUNITY SERVICES
LMR MANAGER
P. O. BOX 69, BARROW, AK 99723
PHONE: 907-852-0320

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I, THE APPLICANT, HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMANENT NSB RECORDS FOR THIS PROJECT. I HEREBY AGREE TO DEFEND, INDEMNIFY AND HOLD THE NORTH SLOPE BOROUGH HARMLESS FROM ANY AND ALL CLAIMS, DAMAGES, SUITS, LOSSES, LIABILITIES AND EXPENSES RELATED TO THE INJURY TO OR DEATH OF PERSONS AND DAMAGE TO OR LOSS OF PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE ENTRY ON AND USE OF PROPERTY WITHIN THE NORTH SLOPE BOROUGH BOUNDARIES BY ME, THE COMPANY I REPRESENT, AND ANY AND ALL OF MY CONTRACTORS, SUBCONTRACTORS AND THEIR EMPLOYEES INVOLVED.

______________________________
Authorized Signature of Applicant

______________________________
Date

______________________________
Environmental Coordinator

______________________________
Title

**DECISION** [X] APPROVED (See accompanying letter) [□] DENIED (See accompanying letter)

______________________________
Cultural Resource Specialist

______________________________
Date

______________________________
Director, NSB-THEL Department

______________________________
Date

______________________________
Land Management Administrator

______________________________
Date
Sent by E-mail and U.S. Mail

December 28, 2020

ConocoPhillips Alaska, Inc.
Matthew Kale, Associate Environmental Engineer
P.O. Box 100360
Anchorage, AK, 99510
Phone: 907-265-6462
Fax: n/a
E-mail: gkaenvpermitting@conocophillips.com

Re: Certificate of TLUI Clearance
NSB Permit Application No. 21-016
DS-2F to DS-2G Bypass Ice Road
Resource Development, Township: 10-11N; Range: 9E; Section: 5, 32-33; UM

Dear Mr. Kale:

The North Slope Borough (NSB) Department of Planning and Community Services – Land Management Regulations Division has received your December 14, 2020 application for a Certificate of Traditional Land Use Inventory (TLUI) Clearance. Your application was assigned a NSB Permit Application No. 21-016. Please refer to this NSB Permit Application number in all correspondence with us.

The purpose of this project is to construct an ice road between Drill Site 2F and Drill Site 2G.

This Certificate of TLUI Clearance is effective December 28, 2020.

This authorization is only valid for the scope of activities described in your December 14, 2020 application.

IHLC PRESERVATION POLICY & AUTHORITY:
1. The Iñupiat History, Language & Culture (IHLC) Commission has responsibility for developing and maintaining a complete historical record of the land, people, and villages of NSB. NSBMC §2.16.110.

2. Development must not disturb traditional activities or values at historic or cultural sites identified in published studies or by the Commission on IHLC. NSBMC §19.50.030(F) and §19.60.040(K).

3. Development which is likely to disturb cultural or historic sites listed on the National Register of Historic Places; sites eligible for inclusion in the National Register, or sites identified as important to the study, understanding or illustration of national, state or local history or prehistory shall be required to avoid the sites; or be required to consult with appropriate local, state and federal agencies and survey and excavate the site prior to disturbance. NSBMC §19.70.050 (E).

4. Development shall not significantly interfere with traditional activities at cultural or historic sites identified in the Coastal Management Program. NSBMC §19.70.050 (F).

5. Development shall not cause surface disturbance of newly discovered historic or cultural sites prior to archaeological investigation. NSBMC §19.70.050(G), NSBMC §19.70.060(J).

6. NSB has the power to preserve, maintain and protect historic sites, buildings and monuments outside of incorporated cities. NSBMC §1.20.010(U).

7. Access to geographic coordinates of possible archeological, historic, cultural, and paleontological significance, and any other information pertains to such sites (hereafter, collectively referred to as “Restricted Information”) is limited to representatives of federal, state or local governments on official business; researchers engaged in legitimate scientific research; individuals or representatives of entities conducting archeological, historical, and cultural surveys in order to obtain a NSB development permit; or persons who have a legitimate need for access as determined by IHLC. Restricted Information includes but is not limited to information received from the NSB Traditional Land Use Inventories; information regarding unregistered cultural and historic sites; any information you discover while pursuing an archeological, historical, and/or cultural survey; and any information designated by IHLC as Restricted Information. NSBMC §2.42.040(K), AS 40.25.120 (a)(4), 16 U.S.C. 470w-3(a), 16 U.S.C. 470hh(a), and 36 C.F.R. 800.2(d)(2) provide authority for restricting access to information pertaining to historical/cultural sites.

**TLUI STIPULATIONS:**

1. Permittee must maintain all TLUI data in a secure place for internal use only. Permittee must not distribute this data to anyone outside of those entities acting pursuant to this Permit and must abide by the applicable IHLC Information Use Policy, listed below.

2. TLUI points provided in the form of geographic coordinates may be imprecise. The Permittee is nevertheless responsible for ensuring that its operations do not cause any adverse impacts to sites with potential historic, prehistoric, archeological, cultural, paleontological resources or significance, including sites where traditional activities take place (hereafter referred to as “Critical Sites”) and for reporting to the NSB Cultural Resource Specialist the proper coordinates of any such site you discover. Permittee releases NSB from any liability associated with its use of these data points.

3. Permittee must maintain a minimum 500-foot buffer zone from all Critical Sites (including all Traditional Land Use Inventory and Alaska Heritage Resources Survey sites), Native Allotments, or
cabin used for subsistence purposes within the vicinity of the proposed development. Permittee must train its staff and contractors to observe this buffer and ensure that sites are not disturbed. No development or use shall take place within 500 feet of a Critical Site, or within 500 feet of a Native Allotment, or cabin used for subsistence purposes without the owner’s permission.

4. Permittee must document caribou migration routes on a map and must avoid these routes during periods of migration. [NSBMC § 19.70.050(l)(1)].

5. Should any additional human remains or Critical Site materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered, that were not already identified by NSB or SHPO, the Permittee must stop all work within 1500 feet of the discovery until Permittee has made contact with NSB Cultural Resource Specialist at (907) 852-0320, the State Historic Preservation Office (SHPO) and (in the case of human remains) the Alaska State Troopers (AST), and has obtained these agencies’ approval to continue work. Permittee must submit information on any discovery that may be of historic, prehistoric, cultural, traditional, archeological, and paleontological significance to the NSB (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains). This information must be submitted to the NSB Cultural Resource Specialist no later than 30 days from discovery. Permittee must not distribute this information to anyone outside of those entities acting pursuant to this permit.

6. Permittee must follow state and federal law regarding the discovery of human remains.

7. Permittee must not remove or disturb any items that may be of historic, prehistoric, cultural, traditional archeological, and paleontological significance except to the extent needed to document their existence and to comply with state and federal law.

8. Any further investigation, surveys, or studies required pursuant to this Permit must be conducted by or under the supervision of a professional Archeologist, Anthropologist, Historic Architect and/or Architectural Historian (as needed to assess a given area for the possible existence of sites or artifacts of historic, cultural, archeological, pre-historic, or paleontological significance) that meets the professional qualifications of the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61, Appendix A). All reports and maps produced pursuant to this permit must include evidence that the professional meets these standards and is qualified to draw the report’s conclusions.

9. The NSB or authorized representative must be allowed to inspect the authorized activity at any time deemed necessary to ensure that the activity is being or has been accomplished in accordance with the terms and conditions of this permit. Permittee must provide NSB representatives with transportation to site, if not on a road system or accessible by government airport. Permittee may be required to reimburse the NSB for the expense of conducting an inspection if a violation is found. NSBMC § 19.50.010(B).

IHLC INFORMATION USE POLICY FOR TLUI DATA:

1. STATEMENT OF POLICY: Access to certain archeological, historic, and paleontological information (hereafter, “Restricted Information”) is limited to representatives of federal, state or local governments on official business; researchers engaged in legitimate scientific research; individuals or representatives of entities conducting archeological, historical, and cultural surveys in order to obtain clearance for any NSB permit; or persons who have a legitimate need for access as determined by the NSB. Restricted Information includes, but is not limited to, information received from the NSB Traditional Land Use Inventories (TLUI); information regarding unregistered cultural and historic sites; any information you discover while pursuing an archeological, historical, and/or cultural survey; and any information designated by DPCS as Restricted Information.
2. AUTHORITY: Under NSBMC 19.50.030(F) and 19.60.040(K) development must not disturb traditional activities or values at historic or cultural sites (hereafter collectively referred to as "critical sites") identified in published studies or by the Commission on IHLC. Under NSBMC 2.16.110, the Commission on IHLC has responsibility for developing and maintaining a complete historical record of the land, people and villages of NSB. Unrestricted access to this record increases the threat of site and resource destruction, and may prompt land management agencies or owners to withhold critical site information from DPCS. In order to receive and maintain the most comprehensive critical site record possible, DPCS limits the dissemination of Restricted Information to legitimate and authorized Applicants. NSBMC 2.42.040(K), AS 40.25.120 (a)(4), 16 U.S.C. 470w-3(a), 16 U.S.C. 470hh(a), and 36 C.F.R. 800.2(d)(2) provide authority for this restriction.

3. AGREEMENT: Your use of Restricted Information will comply with this Agreement. You shall maintain any Restricted Information received in a secure place for internal use only. You shall not distribute Restricted Information to anyone, and you are to destroy the Restricted Information and any reproductions following use. You shall submit to DPCS any information that you discover in the course of your project that may be of historic, prehistoric, cultural, and paleontological significance to the NSB Cultural Resource Specialist, and to treat such information as Restricted Information. Prior to publication of any production that results from the use of the Restricted Information, you shall submit a copy to the NSB DPCS for approval. Publication of any production without express written approval from DPCS is a violation of this policy. Copies of any resulting publications shall be provided to the NSB DPCS.

4. You release and forever discharge the NSB and its subsidiaries, officers, directors, employees, agents and representatives of and from all manner of actions, causes of action, suits, debts, dues, sums of money, contracts, agreements, judgments, claims and demands caused by any use of the Restricted Information by You. You may be subject to prosecution under municipal, state, and federal law for violation of this Policy

You must remain in compliance with the terms and conditions herein. Failure to comply with the conditions of this certificate could result in immediate revocation of this authorization.

If you wish to appeal this decision, including the developer, you must submit written notice to the secretary of the appropriate Commission (P.O. Box 69, Barrow Alaska 99723) and the developer within 30 days of the receipt of this decision, stating the reasons you believe the decision is incorrect. NSBMC §19.30.130.

NSB Cultural Resource Specialist, Tommy G. Nageak has been assigned to your permit, and can be reached by e-mail at tommy.nageak@north-slope.org, or by phone at (907) 852-0333.

Sincerely,

Gordon Brower,
Land Management Administrator

Cc: NSB Permit Application No. 21-016 File
Cultural Resource Specialist
LMR Manager
Colleen Akpik-Lemen, Director of IHLC

21-016/tn
Form 500 - Certificate of TLUI Clearance Application

Date: 12/14/2020

Application is: ☑ New ☐ Amendment

Applicant is: ☐ Property Owner ☐ Lessee

Applicant Name: ConocoPhillips Alaska, Inc.
Applicant Address: P.O. Box 100360, Anchorage, AK 99510

Telephone: (907) 265-6462
Fax Number: N/A

Email Address: gkaenrpermitting@conocophillips.com

Applicant is: ☐ Contractor ☐ Architect
Agent Represents: ☑ Property Owner ☐ Lessee

Contractor Name: N/A
Address: N/A
Telephone: N/A
Fax Number: N/A
Email Address: N/A

Agent/Subcontractor: N/A
Address: N/A
Telephone: N/A
Fax Number: N/A
Email Address: N/A

Application Number: 21-D16

Architect Name: N/A
Architect Address: N/A
Telephone: N/A
Fax Number: N/A

Email Address: N/A

Consultant: ☐ Yes ☑ No
Lessee: ☑ Yes ☐ No

Project Type: Provide a brief summary of the purpose and nature of your project in the box below.

ConocoPhillips Alaska, Inc. (CPA1) respectfully requests a TLUI Clearance to construct an ice road between Drill Site 2F and Drill Site 2G (DS-2F and DS-2G, respectively) in the Kuparuk River Resource Development District. The ice road will provide a safe travel corridor between the two pads while excavation maintenance is performed at the pad access roads. See the attachments for more information.

Township: See Project Description
Range: See Project Description
Section: See Project Description
Meridian: ☐ Transportation Corridor

Resource Development ☑ Scientific Research ☑ Conservation: (Strongly Recommended)

Was a Pre-Application meeting held with NSB Staff? ☑ Yes ☐ No Date Held: (Strongly Recommended)

Was Village Leader consultation completed? ☑ Yes ☐ No Date Held: (Strongly Recommended)

If not, attach explanation of why consultation was not necessary.

Was there a previous Certificate for this site issued to another person/company? ☑ Yes ☐ No Date Issued: Certificate No. :

Name of Applicant Certificate was issued to:
Attach the Following Information to Application:

1. Maps: Two hard copies and two CD copies of each map must be submitted. A digital GIS shape file of the proposed permit area, in GIS Mapping Format (projected in Alaska Albers Equal Area Conic using either a NAD 1927 or a NAD 1983 horizontal datum) is preferred. (a) General Vicinity Map. This map must show distances from nearby villages (b) Site Specific Location Map, showing the area requested for TLUI clearance, including nearby existing development, natural features, and zoning boundaries, and known traditional subsistence activities or values at historic, archaeological, and cultural sites including all Alaska Heritage Resource Survey (AHRS) sites, TLUI sites currently known by the NSB and any additional sites located during your field work (hereafter referred to as Critical Sites). (c) Map, drawn to an appropriate map scale, showing existing and planned development and a minimum 500' buffer zone from the Critical Sites.

2. Studies: Two hard copies and two CD copies of each study relevant to this application (e.g., historic, prehistoric, archaeological resources, traditional subsistence activities, and cultural site studies) completed by trained professionals in that respective field. If there was a prior field study for this area, you must submit a copy of that study. If you did not conduct the field study, you must obtain permission from the person/company that conducted the field study and include that in your application or provide evidence that the study is publicly available to support your application. Please describe how you have included traditional and local knowledge into these studies.

A study of the proposed development site by a professional trained to identify and document any possible Critical Sites within the vicinity of the proposed development site. This study must include: (a) field survey, (b) literature review, and (c) record of consultation with the nearest affected Village Tribal President(s) and City Mayor(s) to ensure all sites are included in the study.

For all new sites identified during study work, please submit the Global Positioning System (GPS) coordinates and GIS data in an electronic format that can be readily loaded into the NSB GIS database.

3. GPS and Mapping Data Quality: A written summary describing the type of GPS and other mapping data used, along with an explanation of data quality and accuracy.

4. Scope of Work: A written description of the nature and purpose of your proposed industrial development. Include development plans, engineering and architectural designs.

5. Existing Permits: List any permits and approvals received for this site. Attach a copy of the Form 400 Study Permit you obtained from the NSB. Attach a copy of any SIPO clearance obtained for this area. List any additional permits and approvals that are forthcoming for this site.

6. Plan to Protect Critical Sites: A written Critical Sites protection plan.

7. Affiliation: If you are not the landowner or lessee you must submit evidence of your affiliation with the owner/lessee (e.g., letter from owner/lessee authorizing you to do work, or copy of contract).

8. Fee: A check made payable to the North Slope Borough for the application fee of $100.

Mail Application To:
NORTH SLOPE BOROUGH DEPARTMENT OF PLANNING AND COMMUNITY SERVICES
LMR MANAGER
P.O. BOX 69, BARROW, AK 99723
PHONE: 907-852-0320

I, THE APPLICANT, HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMANENT NSB RECORDS FOR THIS PROJECT. I HEREBY AGREE TO DEFEND, INDEMNIFY AND HOLD THE NORTH SLOPE BOROUGH HARMLESS FROM ANY AND ALL CLAIMS, DAMAGES, SUITS, LOSSES, LIABILITIES AND EXPENSES RELATED TO THE INJURY TO OR DEATH OF PERSONS AND DAMAGE TO OR LOSS OF PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE ENTRY ON AND USE OF PROPERTY WITHIN THE NORTH SLOPE BOROUGH BOUNDARIES BY ME, THE COMPANY I REPRESENT, AND ANY AND ALL OF MY CONTRACTORS, SUBCONTRACTORS AND THEIR EMPLOYEES INVOLVED.

Authorized Signature of Applicant
Matthew Kale
Name

Date 12/14/2020
Associate Environmental Engineer
Title

DECISION ☑ APPROVED (See accompanying letter)
☐ DENIED (See accompanying letter)

Date 12/28/20

Cultural Resource Specialist

Date 12/30/20

Director, NSB HLC Department

Date 2/10/20

Land Management Administrator

Date 2/10/20
Sent by E-mail and U.S. Mail

December 29, 2020

ConocoPhillips Alaska, Inc.
Jennifer Collins, Senior Environmental Coordinator
P.O. Box 100360
Anchorage, AK. 99510-0360
Phone: 907-265-6509
Fax: 907-265-6216
E-mail: Jennifer.Collins@conocophillips.com

Re: Certificate of TLUI Clearance
NSB Permit Application No. 21-017
Lake 9308 Ice Spur
Resource Development, Township: 11N; Range: 4E; Section: 16,17; UM

Dear Ms. Collins:

The North Slope Borough (NSB) Department of Planning and Community Services – Land Management Regulations Division has received your December 18, 2020 application for a Certificate of Traditional Land Use Inventory (TLUI) Clearance. Your application was assigned a NSB Permit Application No. 21-017. Please refer to this NSB Permit Application number in all correspondence with us.

The purpose of this project is to construct the Alpine Resupply Lake 9308 ice spur.

This Certificate of TLUI Clearance is effective December 30, 2020.

This authorization is only valid for the scope of activities described in your December 30, 2020 application.

IHLC PRESERVATION POLICY & AUTHORITY:
1. The Inupiat History, Language & Culture (IHLC) Commission has responsibility for developing and maintaining a complete historical record of the land, people, and villages of NSB. NSBMC §2.16.110.

2. Development must not disturb traditional activities or values at historic or cultural sites identified in published studies or by the Commission on IHLC. NSBMC §19.50.030(F) and §19.60.040(K).

3. Development which is likely to disturb cultural or historic sites listed on the National Register of Historic Places; sites eligible for inclusion in the National Register, or sites identified as important to the study, understanding or illustration of national, state or local history or prehistory shall be required to avoid the sites; or be required to consult with appropriate local, state and federal agencies and survey and excavate the site prior to disturbance. NSBMC §19.70.050 (E).

4. Development shall not significantly interfere with traditional activities at cultural or historic sites identified in the Coastal Management Program. NSBMC §19.70.050 (F).

5. Development shall not cause surface disturbance of newly discovered historic or cultural sites prior to archaeological investigation. NSBMC §19.70.050(G), NSBMC §19.70.060(J).

6. NSB has the power to preserve, maintain, and protect historic sites, buildings, and monuments outside of incorporated cities. NSBMC §1.20.010(U).

7. Access to geographic coordinates of possible archeological, historic, cultural, and paleontological significance, and any other information pertains to such sites (hereafter, collectively referred to as “Restricted Information”) is limited to representatives of federal, state or local governments on official business; researchers engaged in legitimate scientific research; individuals or representatives of entities conducting archeological, historical, and cultural surveys in order to obtain a NSB development permit; or persons who have a legitimate need for access as determined by IHLC. Restricted Information includes but is not limited to information received from the NSB Traditional Land Use Inventories; information regarding unregistered cultural and historic sites; any information you discover while pursuing an archeological, historical, and/or cultural survey; and any information designated by IHLC as Restricted Information. NSBMC §2.42.040(K), AS 40.25.120 (a)(4), 16 U.S.C. 470w-3(a), 16 U.S.C. 470hh(a), and 36 C.F.R. 800.2(d)(2) provide authority for restricting access to information pertaining to historical/cultural sites.

**TLUI STIPULATIONS:**

1. Permittee must maintain all TLUI data in a secure place for internal use only. Permittee must not distribute this data to anyone outside of those entities acting pursuant to this Permit and must abide by the applicable IHLC Information Use Policy, listed below.

2. TLUI points provided in the form of geographic coordinates may be imprecise. The Permittee is nevertheless responsible for ensuring that its operations do not cause any adverse impacts to sites with potential historic, prehistoric, archeological, cultural, paleontological resources or significance, including sites where traditional activities take place (hereafter referred to as “Critical Sites”) and for reporting to the NSB Cultural Resource Specialist the proper coordinates of any such site you discover. Permittee releases NSB from any liability associated with its use of these data points.

3. Permittee must maintain a minimum 500-foot buffer zone from all Critical Sites (including all Traditional Land Use Inventory and Alaska Heritage Resources Survey sites), Native Allotments, or
cabins used for subsistence purposes within the vicinity of the proposed development. Permittee must train its staff and contractors to observe this buffer and ensure that sites are not disturbed. No development or use shall take place within 500 feet of a Critical Site, or within 500 feet of a Native Allotment, or cabin used for subsistence purposes without the owner’s permission.

4. Permittee must document caribou migration routes on a map and must avoid these routes during periods of migration. [NSBMC § 19.70.050(1)(1)].

5. Should any additional human remains or Critical Site materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered, that were not already identified by NSB or SHPO, the Permittee must stop all work within 1500 feet of the discovery until Permittee has made contact with NSB Cultural Resource Specialist at (907) 852-0320, the State Historic Preservation Office (SHPO) and (in the case of human remains) the Alaska State Troopers (AST), and has obtained these agencies’ approval to continue work. Permittee must submit information on any discovery that may be of historic, prehistoric, cultural, traditional, archeological, and paleontological significance to the NSB (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains). This information must be submitted to the NSB Cultural Resource Specialist no later than 30 days from discovery. Permittee must not distribute this information to anyone outside of those entities acting pursuant to this permit.

6. Permittee must follow state and federal law regarding the discovery of human remains.

7. Permittee must not remove or disturb any items that may be of historic, prehistoric, cultural, traditional archeological, and paleontological significance except to the extent needed to document their existence and to comply with state and federal law.

8. Any further investigation, surveys, or studies required pursuant to this Permit must be conducted by or under the supervision of a professional Archeologist, Anthropologist, Historic Architect and/or Architectural Historian (as needed to assess a given area for the possible existence of sites or artifacts of historic, cultural, archeological, pre-historic, or paleontological significance) that meets the professional qualifications of the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61, Appendix A). All reports and maps produced pursuant to this permit must include evidence that the professional meets these standards and is qualified to draw the report's conclusions.

9. The NSB or authorized representative must be allowed to inspect the authorized activity at any time deemed necessary to ensure that the activity is being or has been accomplished in accordance with the terms and conditions of this permit. Permittee must provide NSB representatives with transportation to site, if not on a road system or accessible by government airport. Permittee may be required to reimburse the NSB for the expense of conducting an inspection if a violation is found. NSBMC § 19.50.010(B).

**IHLC INFORMATION USE POLICY FOR TLUI DATA:**

1. **STATEMENT OF POLICY:** Access to certain archeological, historic, and paleontological information (hereafter, “Restricted Information”) is limited to representatives of federal, state or local governments on official business; researchers engaged in legitimate scientific research; individuals or representatives of entities conducting archeological, historical, and cultural surveys in order to obtain clearance for any NSB permit; or persons who have a legitimate need for access as determined by the NSB. Restricted Information includes, but is not limited to, information received from the NSB Traditional Land Use Inventories (TLUI); information regarding unregistered cultural and historic sites; any information you discover while pursuing an archeological, historical, and/or cultural survey; and any information designated by DPCS as Restricted Information.
2. **AUTHORITY:** Under NSBMC 19.50.030(F) and 19.60.040(K) development must not disturb traditional activities or values at historic or cultural sites (hereafter collectively referred to as “critical sites”) identified in published studies or by the Commission on IHLC. Under NSBMC 2.16.110, the Commission on IHLC has responsibility for developing and maintaining a complete historical record of the land, people and villages of NSB. Unrestricted access to this record increases the threat of site and resource destruction, and may prompt land management agencies or owners to withhold critical site information from DPCS. In order to receive and maintain the most comprehensive critical site record possible, DPCS limits the dissemination of Restricted Information to legitimate and authorized Applicants. NSBMC 2.42.040(K), AS 40.25.120 (a)(4), 16 U.S.C. 470w-3(a), 16 U.S.C. 470hh(a), and 36 C.F.R. 800.2(d)(2) provide authority for this restriction.

3. **AGREEMENT:** Your use of Restricted Information will comply with this Agreement. You shall maintain any Restricted Information received in a secure place for internal use only. You shall not distribute Restricted Information to anyone, and you are to destroy the Restricted Information and any reproductions following use. You shall submit to DPCS any information that you discover in the course of your project that may be of historic, prehistoric, cultural, and paleontological significance to the NSB Cultural Resource Specialist, and to treat such information as Restricted Information. Prior to publication of any production that results from the use of the Restricted Information, you shall submit a copy to the NSB DPCS for approval. Publication of any production without express written approval from DPCS is a violation of this policy. Copies of any resulting publications shall be provided to the NSB DPCS.

4. You release and forever discharge the NSB and its subsidiaries, officers, directors, employees, agents and representatives of and from all manner of actions, causes of action, suits, debts, dues, sums of money, contracts, agreements, judgments, claims and demands caused by any use of the Restricted Information by You. You may be subject to prosecution under municipal, state, and federal law for violation of this Policy.

You must remain in compliance with the terms and conditions herein. Failure to comply with the conditions of this certificate could result in immediate revocation of this authorization.

If you wish to appeal this decision, including the developer, you must submit written notice to the secretary of the appropriate Commission (P.O. Box 69, Barrow Alaska 99723) and the developer within 30 days of the receipt of this decision, stating the reasons you believe the decision is incorrect. NSBMC §19.30.130.

NSB Cultural Resource Specialist, Tommy G. Nageak has been assigned to your permit, and can be reached by e-mail at tommy.nageak@north-slope.org, or by phone at (907) 852-0333.

Sincerely,

[Signature]

Gordon Brower,
Land Management Administrator

Cc: NSB Permit Application No. 21-017 File
Cultural Resource Specialist
LMR Manager
Colleen Apsik-Lemen, Director of IHLC

21-017/tn
**Form 500 - Certificate of TLUI Clearance Application**

**Date:** December 18, 2020  
**Application Number:** 21-017

**Application is:**  
- [X] New  
- [ ] Amendment

**Applicant is:**  
- [ ] Property Owner  
- [X] Lessee

**Applicant Name:** ConocoPhillips Alaska, Inc.  
**Applicant Address:** P.O Box 100360  
Anchorage, AK 99510-0360

**Telephone:** (907) 265-6509  
**Fax Number:** (907) 265-6216

**Email Address:** Jennifer.Collins@ConocoPhillips.com

**Applicant is:**  
- [ ] Contractor  
- [ ] Architect

**Agent Represents:**  
- [ ] Property Owner  
- [X] Lessee

**Contractor Name:**  
**Address:**

**Telephone:**  
**Fax Number:**

**Email Address:**  

**Project type:**  
Provide a brief summary of the purpose and nature of your project in the box below:

ConocoPhillips Alaska, Inc. (CPAI) requests authorization to prepack, construct, maintain and utilize the 2020-2021 Alpine Resupply Lake L9308 ice spur. The ice spur will support Western North Slope oil and gas activities, Minor site-specific variations will occur due to field conditions.

**Township:** 11N  
**Range:** 4E  
**Section:** 16, 17  
**Meridian:** Umiat

- [X] Resource Development  
- [ ] Scientific Research  
- [ ] Conservation  
- [ ] Transportation Corridor

**Was a Pre-Application meeting held with NSB Staff?**  
- [X] Yes  
- [X] No  
**Date Held:** 10/14/2020  
(Strongly Recommended)

**Was Village Leader consultation completed?**  
- [X] Yes  
- [X] No  
**Date Held:** 12/17/2020  
(Strongly Recommended)

*If not, attach explanation of why consultation was not necessary.*

**Was there a previous Certificate for this site issued to another person/company?**  
- [X] Yes  
- [X] No  
**Date Issued:**  
**Certificate No.:**

**Name of Applicant Certificate was issued to:**
1. **Maps**: Two hard copies and two CD copies of each map must be submitted. A digital GIS shape file of the proposed permit area, in GIS Mapping Format (projected in Alaska Albers Equal Area Conic using either a NAD 1927 or a NAD 1983 horizontal datum) is preferred. (a) General Vicinity Map. This map must show distances from nearby villages (b) Site Specific Location Map, showing the area requested for TLUI clearance, including nearby existing development, natural features, and zoning boundaries, and known traditional subsistence activities or values at historic, archaeological, and cultural sites including all Alaska Heritage Resource Survey (AHRS) sites, TLUI sites currently known by the NSB and any additional sites located during your field work (hereinafter referred to as Critical Sites). (c) Map, drawn to an appropriate map scale, showing existing and planned development and a minimum 500’ buffer zone from the Critical Sites.

2. **Studies**: Two hard copies and two CD copies of each study relevant to this application (e.g. historic, prehistoric, archaeological resources, traditional subsistence activities, and cultural site studies) completed by trained professionals in that respective field. If there was a prior field study for this area, you must submit a copy of that study. If you did not conduct the field study, you must obtain permission from the person/company that conducted the field study and include that in your application or provide evidence that the study is publically available to support your application. Please describe how you have included traditional and local knowledge into these studies.

A study of the proposed development site by a professional trained to identify and document any possible Critical Sites within the vicinity of the proposed development site. This study must include: (a) field survey, (b) literature review, and (c) record of consultation with the nearest affected Village Tribal President(s) and City Mayor(s) to ensure all sites are included in the study.

For all new sites identified during study work, please submit the Global Positioning System (GPS) coordinates and GIS data in an electronic format that can be readily loaded into the NSB GIS database.

3. **GPS and Mapping Data Quality**: A written summary describing the type of GPS and other mapping data used, along with an explanation of data quality and accuracy.

4. **Scope of Work**: A written description of the nature and purpose of your proposed industrial development. Include development plans, engineering and architectural designs.

5. **Existing Permits**: List any permits and approvals received for this site. Attach a copy of the Form 400 Study Permit you obtained from the NSB. Attach a copy of any SHPO clearance obtained for this area. List any additional permits and approvals that are forthcoming for this site.

6. **Plan to Protect Critical Sites**: A written Critical Sites protection plan.

7. **Affiliation**: If you are not the land owner or lessee you must submit evidence of your affiliation with the owner/lessee (e.g., letter from owner/lessee authorizing you to do work, or copy of contract).

8. **Fee**: A check made payable to the North Slope Borough for the application fee of $100.

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**Mail Application To:**

NORTH SLOPE BOROUGH DEPARTMENT OF PLANNING AND COMMUNITY SERVICES

SERVICES LMR MANAGER

P.O. BOX 69, BARROW, AK 99723

PHONE: 907-852-3230

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I, THE APPLICANT, HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMANENT NSB RECORDS FOR THIS PROJECT. I HEREBY AGREE TO DEFEND, INDEMNIFY AND HOLD THE NORTH SLOPE BOROUGH HARMLESS FROM ANY AND ALL CLAIMS, DAMAGES, SUITS, LOSSES, LIABILITIES AND EXPENSES RELATED TO THE INJURY TO OR DEATH OF PERSONS AND DAMAGE TO OR LOSS OF PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE ENTRY ON AND USE OF PROPERTY WITHIN THE NORTH SLOPE BOROUGH BOUNDARIES BY ME, THE COMPANY I REPRESENT, AND ANY AND ALL OF MY CONTRACTORS, SUBCONTRACTORS AND THEIR EMPLOYEES INVOLVED.

---

Authorized Signature of Applicant

Jennifer Collins

Name

**DECISION**

☐ APPROVED (See accompanying letter)

☐ DENIED (See accompanying letter)

---

Cultural Resource Specialist

Date

Director, NSB LHLC Department

Date

Land Management Administrator

Date

---

12/18/2020

Date

Senior Environmental Coordinator

Title

Fee to be paid monthly by Electronic Funds Transfer.
Sent by E-mail and U.S. Mail

January 7, 2021

ConocoPhillips Alaska, Inc.
Jennifer Collins, Senior Environmental Coordinator
P.O. Box 100360
Anchorage, AK. 99510-0360
Phone: 907-265-6509
Fax: 907-265-6216
E-mail: Jennifer.Collins@conocophillips.com

Re: Certificate of TLUI Clearance
NSB Permit Application No. 21-018
WNS Multi-Season Ice Pads
Resource Development, Township: 10,11N; Range: 2,4; Section: 17, 32-33; UM

Dear Ms. Collins:

The North Slope Borough (NSB) Department of Planning and Community Services – Land Management Regulations Division has received your December 21, 2020 application for a Certificate of Traditional Land Use Inventory (TLUI) Clearance. Your application was assigned a NSB Permit Application No. 21-018. Please refer to this NSB Permit Application number in all correspondence with us.

The purpose of this project is to construct two multi-season ice pads along the GMT2/MT7 and K Pad road.

This Certificate of TLUI Clearance is effective January 7, 2021.

This authorization is only valid for the scope of activities described in your December 21, 2020 application.

IHLC PRESERVATION POLICY & AUTHORITY:
1. The Ilñupiat History, Language & Culture (IHLC) Commission has responsibility for developing and maintaining a complete historical record of the land, people, and villages of NSB. NSBCM §2.16.110.

2. Development must not disturb traditional activities or values at historic or cultural sites identified in published studies or by the Commission on IHLC. NSBCM §19.50.030(F) and §19.60.040(K).

3. Development which is likely to disturb cultural or historic sites listed on the National Register of Historic Places; sites eligible for inclusion in the National Register, or sites identified as important to the study, understanding or illustration of national, state or local history or prehistory shall be required to avoid the sites; or be required to consult with appropriate local, state and federal agencies and survey and excavate the site prior to disturbance. NSBCM §19.70.050 (E).

4. Development shall not significantly interfere with traditional activities at cultural or historic sites identified in the Coastal Management Program. NSBCM §19.70.050 (F).

5. Development shall not cause surface disturbance of newly discovered historic or cultural sites prior to archaeological investigation. NSBCM §19.70.050(G), NSBCM §19.70.060(J).

6. NSB has the power to preserve, maintain and protect historic sites, buildings and monuments outside of incorporated cities. NSBCM §1.20.010(U).

7. Access to geographic coordinates of possible archeological, historic, cultural, and paleontological significance, and any other information pertains to such sites (hereafter, collectively referred to as “Restricted Information”) is limited to representatives of federal, state or local governments on official business; researchers engaged in legitimate scientific research; individuals or representatives of entities conducting archeological, historical, and cultural surveys in order to obtain a NSB development permit; or persons who have a legitimate need for access as determined by IHLC. Restricted Information includes but is not limited to information received from the NSB Traditional Land Use Inventories; information regarding unregistered cultural and historic sites; any information you discover while pursuing an archeological, historical, and/or cultural survey; and any information designated by IHLC as Restricted Information. NSBCM §2.42.040(K), AS 40.25.120 (a)(4), 16 U.S.C. 470w-3(a), 16 U.S.C. 470hh(a), and 36 C.F.R. 800.2(d)(2) provide authority for restricting access to information pertaining to historical/cultural sites.

**TLUI STIPULATIONS:**

1. Permittee must maintain all TLUI data in a secure place for internal use only. Permittee must not distribute this data to anyone outside of those entities acting pursuant to this Permit and must abide by the applicable IHLC Information Use Policy, listed below.

2. TLUI points provided in the form of geographic coordinates may be imprecise. The Permittee is nevertheless responsible for ensuring that its operations do not cause any adverse impacts to sites with potential historic, prehistoric, archeological, cultural, paleontological resources or significance, including sites where traditional activities take place (hereafter referred to as “Critical Sites”) and for reporting to the NSB Cultural Resource Specialist the proper coordinates of any such site you discover. Permittee releases NSB from any liability associated with its use of these data points.

3. Permittee must maintain a minimum 500-foot buffer zone from all Critical Sites (including all Traditional Land Use Inventory and Alaska Heritage Resources Survey sites), Native Allotments, or
cabin used for subsistence purposes within the vicinity of the proposed development. Permittee must train its staff and contractors to observe this buffer and ensure that sites are not disturbed. No development or use shall take place within 500 feet of a Critical Site, or within 500 feet of a Native Allotment, or cabin used for subsistence purposes without the owner’s permission.

4. Permittee must document caribou migration routes on a map and must avoid these routes during periods of migration. [NSBMC § 19.70.050(1)(1)].

5. Should any additional human remains or Critical Site materials (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains) be discovered, that were not already identified by NSB or SHPO, the Permittee must stop all work within 1500 feet of the discovery until Permittee has made contact with NSB Cultural Resource Specialist at (907) 852-0320, the State Historic Preservation Office (SHPO) and (in the case of human remains) the Alaska State Troopers (AST), and has obtained these agencies’ approval to continue work. Permittee must submit information on any discovery that may be of historic, prehistoric, cultural, traditional, archeological, and paleontological significance to the NSB (including, but not limited to artifacts, house mounds, grave sites, ice cellars, and fossilized animal remains). This information must be submitted to the NSB Cultural Resource Specialist no later than 30 days from discovery. Permittee must not distribute this information to anyone outside of those entities acting pursuant to this permit.

6. Permittee must follow state and federal law regarding the discovery of human remains.

7. Permittee must not remove or disturb any items that may be of historic, prehistoric, cultural, traditional archeological, and paleontological significance except to the extent needed to document their existence and to comply with state and federal law.

8. Any further investigation, surveys, or studies required pursuant to this Permit must be conducted by or under the supervision of a professional Archeologist, Anthropologist, Historic Architect and/or Architectural Historian (as needed to assess a given area for the possible existence of sites or artifacts of historic, cultural, archeological, pre-historic, or paleontological significance) that meets the professional qualifications of the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61, Appendix A). All reports and maps produced pursuant to this permit must include evidence that the professional meets these standards and is qualified to draw the report’s conclusions.

9. The NSB or authorized representative must be allowed to inspect the authorized activity at any time deemed necessary to ensure that the activity is being or has been accomplished in accordance with the terms and conditions of this permit. Permittee must provide NSB representatives with transportation to site, if not on a road system or accessible by government airport. Permittee may be required to reimburse the NSB for the expense of conducting an inspection if a violation is found. NSBMC § 19.50.010(B).

IHLC INFORMATION USE POLICY FOR TLUI DATA:

1. STATEMENT OF POLICY: Access to certain archeological, historic, and paleontological information (hereafter, “Restricted Information”) is limited to representatives of federal, state or local governments on official business; researchers engaged in legitimate scientific research; individuals or representatives of entities conducting archeological, historical, and cultural surveys in order to obtain clearance for any NSB permit; or persons who have a legitimate need for access as determined by the NSB. Restricted Information includes, but is not limited to, information received from the NSB Traditional Land Use Inventories (TLUI); information regarding unregistered cultural and historic sites; any information you discover while pursuing an archeological, historical, and/or cultural survey; and any information designated by DPCS as Restricted Information.
2. AUTHORITY: Under NSBMC 19.50.030(F) and 19.60.040(K) development must not disturb traditional activities or values at historic or cultural sites (hereafter collectively referred to as “critical sites”) identified in published studies or by the Commission on IHLC. Under NSBMC 2.16.110, the Commission on IHLC has responsibility for developing and maintaining a complete historical record of the land, people and villages of NSB. Unrestricted access to this record increases the threat of site and resource destruction, and may prompt land management agencies or owners to withhold critical site information from DPCS. In order to receive and maintain the most comprehensive critical site record possible, DPCS limits the dissemination of Restricted Information to legitimate and authorized Applicants. NSBMC 2.42.040(K), AS 40.25.120 (a)(4), 16 U.S.C. 470w-3(a), 16 U.S.C. 470hh(a), and 36 C.F.R. 800.2(d)(2) provide authority for this restriction.

3. AGREEMENT: Your use of Restricted Information will comply with this Agreement. You shall maintain any Restricted Information received in a secure place for internal use only. You shall not distribute Restricted Information to anyone, and you are to destroy the Restricted Information and any reproductions following use. You shall submit to DPCS any information that you discover in the course of your project that may be of historic, prehistoric, cultural, and paleontological significance to the NSB Cultural Resource Specialist, and to treat such information as Restricted Information. Prior to publication of any production that results from the use of the Restricted Information, you shall submit a copy to the NSB DPCS for approval. Publication of any production without express written approval from DPCS is a violation of this policy. Copies of any resulting publications shall be provided to the NSB-DPCS.

4. You release and forever discharge the NSB and its subsidiaries, officers, directors, employees, agents and representatives of and from all manner of actions, causes of action, suits, debts, dues, sums of money, contracts, agreements, judgments, claims and demands caused by any use of the Restricted Information by You. You may be subject to prosecution under municipal, state, and federal law for violation of this Policy

You must remain in compliance with the terms and conditions herein. Failure to comply with the conditions of this certificate could result in immediate revocation of this authorization.

If you wish to appeal this decision, including the developer, you must submit written notice to the secretary of the appropriate Commission (P.O. Box 69, Barrow Alaska 99723) and the developer within 30 days of the receipt of this decision, stating the reasons you believe the decision is incorrect. NSBMC §19.30.130.

NSB Cultural Resource Specialist, Tommy G. Nageak has been assigned to your permit, and can be reached by e-mail at tommy.nageak@north-slope.org, or by phone at (907) 852-0333.

Sincerely,

Gordon Brower,
Land Management Administrator

Cc: NSB Permit Application No. 21-018 File
Cultural Resource Specialist
LMR Manager
Colleen Alpik-Lemen, Director of IHLC

21-018/tn
Form 500 - Certificate of TLUI Clearance Application

Date: 12/21/2020
Application is: ☒ New ☐ Amendment
Applicant is: ☐ Property Owner ☒ Lessee

Applicant Name: ConocoPhillips Alaska, Inc.
Applicant Address: P.O Box 100360
Anchorage, AK 99510-0360
Telephone: (907) 265-6509
Fax Number: (907) 265-6216
Email Address: Jennifer.Collins@ConocoPhillips.com

Application Number: 21 -018

Project type: Provide a brief summary of the purpose and nature of your project in the box below:

ConocoPhillips Alaska, Inc. (CPAI) requests authorization to construct, maintain and utilize the Western North Slope (WNS) multi-season ice pads (MSIPs). The WNS MSIPs are shown on the attached maps. The MSIPs will support WNS oil and gas activities. Minor site-specific variations will occur due to field conditions.

Township: Range: Section: Various Meridian: Umiat
☐ Resource Development ☐ Scientific Research ☐ Conservation: ☐ Transportation Corridor

Was a Pre-Application meeting held with NSB Staff? ☒ Yes ☐ No Date Held: N/A (Strongly Recommended)

Was Village Leader consultation completed? ☒ Yes ☐ No Date Held: 12/11/2020 (Strongly Recommended)

If not, attach explanation of why consultation was not necessary.

Was there a previous Certificate for this site issued to another person/company? ☐ Yes ☒ No Date Issued: Certificate No.

Name of Applicant Certificate was issued to:
Attach the Following Information to Application:

1. **Maps:** Two hard copies and two CD copies of each map must be submitted. A digital GIS shape file of the proposed permit area, in GIS Mapping Format (projected in Alaska Albers Equal Area Conic using either a NAD 1927 or a NAD 1983 horizontal datum) is preferred. (a) General Vicinity Map. This map must show distances from nearby villages (b) Site Specific Location Map, showing the area requested for TLUI clearance, including nearby existing development, natural features, and zoning boundaries, and known traditional subsistence activities or values at historic, archaeological and cultural sites including all Alaska Heritage Resource Survey (AHRS) sites, TLUI sites currently known by the NSB and any additional sites located during your field work (hereafter referred to as Critical Sites). (c) Map, drawn to an appropriate map scale, showing existing and planned development and a minimum 500’ buffer zone from the Critical Sites.

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A study of the proposed development site by a professional trained to identify and document any possible Critical Sites within the vicinity of the proposed development site. This study must include: (a) field survey, (b) literature review, and (c) record of consultation with the nearest affected Village Tribal President(s) and City Mayor(s) to ensure all sites are included in the study.

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3. **GPS and Mapping Data Quality:** A written summary describing the type of GPS and other mapping data used, along with an explanation of data quality and accuracy.

4. **Scope of Work:** A written description of the nature and purpose of your proposed industrial development. Include development plans, engineering and architectural designs.

5. **Existing Permits:** List any permits and approvals received for this site. Attach a copy of the Form 400 Study Permit you obtained from the NSB. Attach a copy of any SHPO clearance obtained for this area. List any additional permits and approvals that are forthcoming for this site.

6. **Plan to Protect Critical Sites:** A written Critical Sites protection plan.

7. **Affiliation:** If you are not the land owner or lessee you must submit evidence of your affiliation with the owner/lessee (e.g., letter from owner/lessee authorizing you to do work, or copy of contract).

8. **Fee:** A check made payable to the North Slope Borough for the application fee of $100.

Mail Application To:

NORTH SLOPE BOROUGH DEPARTMENT OF PLANNING AND COMMUNITY SERVICES LMR MANAGER
P.O. BOX 69, BARROW, AK 99723
PHONE: 907-852-0320

I, THE APPLICANT, HEREBY CERTIFY THAT THE FOREGOING IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE. ALL APPLICATION MATERIAL IS CONSIDERED PART OF THE PERMANENT NSB RECORDS FOR THIS PROJECT. I HEREBY AGREE TO DEFEND, INDEMNIFY AND HOLD THE NORTH SLOPE BOROUGH HARMLESS FROM ANY AND ALL CLAIMS, DAMAGES, SUITS, LOSSES, LIABILITIES AND EXPENSES RELATED TO THE INJURY TO OR DEATH OF PERSONS AND DAMAGE TO OR LOSS OF PROPERTY ARISING OUT OF OR IN CONNECTION WITH THE ENTRY ON AND USE OF PROPERTY WITHIN THE NORTH SLOPE BOROUGH BOUNDARIES BY ME, THE COMPANY I REPRESENT, AND ANY AND ALL OF MY CONTRACTORS, SUBCONTRACTORS AND THEIR EMPLOYEES INVOLVED.

Authorized Signature of Applicant

Jennifer Collins
Name

DECISION

☐ APPROVED (See accompanying letter)  ☐ DENIED (See accompanying letter)

Cultural Resource Specialist

Director, NSB TLIC Department

Land Management Administrator

Date

Date

Date

Date

Fee to be paid monthly by Electronic Funds Transfer.

North Slope Borough
Department of Planning and Community Services
Land Management Regulation Division

Form 500 Certificate of TLUI Clearance Application
December 2017 (Rev.3)
To: North Slope Borough Planning Commission

From: Gordon Brower, Director of Planning & Community Services

Date: January 14, 2021

Subject: January Platting Administrator’s Report for the Planning Commission

The Planning Department has received the Mylar plat for ASLS 2016-25 (Nana Reservoir) from applicant F.R. Bell & Associates. The NSB Planning Commission has conditionally approved the preliminary plat for ASLS 2016-25 by resolution 2020-10. The Planning Department has provided Mayor Brower’s signature as applicant, Tax certificate and DNR “Platting Authority Plat Approval Status”. Final step will be presentation to the Planning Commission for approval and recordation.

The NSB Planning Department continues to work with Umiaq and Kaktovik Inupiat Corporation (KIC) attempting to clear up Land ownership and invalid subdivision issues of Lot 6, Block 1, per U.S. Survey No. 4234 in Kaktovik, Alaska. We continue to await the Quit Claim Deeds which we have asked KIC to provide. Once these are provided a subdivision Plat will be presented to the NSB Planning Commission.

This concludes the Platting Administrator’s report for the month of December. Please let us know of any questions.
MEMORANDUM

Date: January 28, 2021
To: Planning Commission
From: Gordon R. Brower, Director
Re: Land Services Report – December 2020

This report will focus on the current activities and upcoming projects of Land Services and Gravel Sales for the fiscal year beginning July 1, 2020.

REAL PROPERTY MANAGEMENT FUND

<table>
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<tr>
<th>Report date</th>
<th>Percent of year complete</th>
<th>Budgeted revenues</th>
<th>Actual received to date</th>
<th>Percent received to date</th>
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<td>12/30/20</td>
<td>50.41%</td>
<td>$4,000,000.00</td>
<td>$1,783,752.00</td>
<td>44.59%</td>
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</table>

FY 21 9039: Budget

Personnel Services 565,777
Professional Services 2,541,332
Other - to A&F 542,891 (8%)
Perm Fund Transfer 1,000,000 (+25%)

DAY-TO-DAY OPERATIONS:

Approximately, sixty percent of the land lease rents are due February through June which accounts for the lower percentage of actual budgeted revenue received than the percent of the year complete. Compilation and preparation of land inventory, land use agreements, along with mine site and material sales information will continue to be migrated to the department’s database.

LAND LEASE USE AGREEMENTS:
a. There are currently 56 Deadhorse tracts/lot areas that are leased.

b. Fair Market Value Appraisals have been completed or the six vacant NSB Deadhorse tracts (page three, map). Five of the tracts have been advertised for lease and the sixth vacant lot’s Ordinance is anticipated to be introduced to the Assembly this month.

MATERIAL SITE DEVELOPMENT

Mine Site F
Reminder letters and accounting vouchers have been sent to the contract holders for season end accounting and financial obligations. Marketing is scheduled to run throughout the fiscal year to increase awareness that the borough is selling gravel and to emphasize the gravel site locations.

Put 23
Reminder letters and accounting vouchers have been sent to the contract holders for season end accounting and financial obligations. Marketing is scheduled to run throughout the fiscal year to emphasize the gravel site locations and increase awareness that the borough is selling gravel for our side of the pit alongside the State of Alaska.

Mine Site 3
Mine site accessibility is being assessed. Meetings with potential customers are progressing. Planning has received a proposal of the cost estimates for development of the pit (pages 4-7. proposal). Opportunity outreach is moving forward for the next material extraction season. Marketing is scheduled to run throughout the fiscal year to increase awareness that the borough is selling gravel and to emphasize the gravel site locations.
December 18, 2020

Mabel Kaleak, Deputy Director  
North Slope Borough  
Planning and Community Services  
P.O. Box 69  
Utqiagvik, AK 99723  

Re: Proposal  
Minesite 3 Development / Professional and Technical Support Services

Dear Ms. Kaleak:

Per your request, UMIAQ Design, LLC (UMIAQ Design) is pleased to submit the following proposal to provide Design and Construction services for the development of the Minesite 3 material site, and as-needed technical support services for management of the North Slope Borough's regional material sites.

UMIAQ Design understands that the North Slope Borough (NSB) Department of Planning and Community Services is ready to open the Minesite 3 regional material site for material sales. To do so, access into the minesite and a staging pad must first be constructed so that potential material purchasers have access to mine. UMIAQ Design also understands that NSB would like to continue using UMIAQ Design for technical assistance in the management, and material sale contracting and contract management, pertaining to the regional minesites at Minesite F, Minesite 3, and PUT 23.

Based on our understanding of the assistance required, as stated above, UMIAQ Design proposes to provide the following Scope of Work:

**SCOPE OF WORK**

Upon receipt of a Notice to Proceed, UMIAQ Design will provide the following services:

1. **As-Needed Professional and Technical Support.** UMIAQ Design will provide operations management, marketing and contract management, and other professional and technical support on an As-Needed basis. Staffing for these services will include Joe Daniels as a Project Manager (billing Class UD 11 in the attached Schedule of Charges), and other staff as required. This work is assumed to run for 3 years, and will then be taken over by NSB.
2. Construct Minesite 3 Road Access and Staging Pad. UMIAQ Design, teamed with Qayaq Construction, will provide all design/build construction services necessary for developing Minesite 3:

   a. Provide all necessary design, survey, permitting, inspection, materials and equipment to properly layout and construct access to Phase 1 of the Minesite 3 mining area, as detailed in the approved mining plan.

   b. Provide all necessary design, survey, permitting, inspection, materials and equipment to properly layout and construct the Phase 1 staging pad, as detailed in the approved mining plan.

   c. Provide all necessary design, survey, permitting, inspection, materials and equipment to properly design and construct a gate at the Dalton Highway entrance to the Phase 1 access road.

   d. NOTE:

      i. No overburden removal is included in this scope.

      ii. Gravel for road and pad development will come from PUT 23, no gravel royalties are included in this proposal, only operator fees.

FEES

UMIAQ proposes to provide the Scope of Work identified above on a Time and Materials basis, to be billed in accordance with the UMI AQ 2021 Fee Schedule (see attached) for labor, with reimbursable and Sub-Consultants marked up 1.1 times the documented costs. A preliminary budget of $1,378,000 is recommended. This budget breaks out as follows:

1. Technical Support: $270,000
2. Minesite 3 Development:
   a. Design Support/Survey/Inspection/CA $100,000
   b. Access Road Development $384,000
   c. Operations Pad Development $464,000
   d. Gate Construction $31,000
   e. Summer Re-Work/Culverts/Closeout $129,000

SCHEDULE

UMIAQ Design understands that the services are anticipated to commence as soon as possible.

- The Minesite 3 development work will begin this winter, and finish in early summer (2021) after re-work of the road and pad, including installation of culverts.
- The duration of operations and marketing services will be determined by NSB, but is assumed to run for 3 years.
Thank you for the opportunity to continue to support NSB Planning and Community Services with the development of regional mines. Please let us know if you have any questions regarding this proposal or services offered therein.

Sincerely,

Wiley Wilhelm
General Manager

WWW:jod:70261.17

Attachments: UMIAQ Design 2021 Fee Schedule

cc: Gordon Brower, NSB
    Chastity Olemaun, NSB
    Monica Rowe, NSB
    Wiley Wilhelm, UMIAQ Design
## 2021 Fee Schedule

<table>
<thead>
<tr>
<th>Position</th>
<th>Grade</th>
<th>Hourly Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal</td>
<td>UD13</td>
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<td>Associate</td>
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<tr>
<td>Tech I</td>
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<td>$70.00</td>
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**Contract Labor:** UMIAQ Design, LLC may retain outside professional and technical labor on a temporary basis to meet peak workload demands. Contract labor will be charged at regular Schedule of Charges rates.

**Travel Time/Weather Delays:** Travel time and weather delays will be charged at regular hourly rates for actual time involved (eight-hour maximum per day).

**Special Equipment:** Specialized equipment shall be billed at published UMIAQ Design, LLC bill rates. See attached Equipment Rates if applicable.

**Outside Services:** Rental of equipment not ordinarily furnished by UMIAQ Design, LLC and other costs, such as outside printing, photographic work, travel by common carrier, subsistence, subcontractors, etc. will be billed at Cost plus 10%.

**Terms:** Bills are payable upon presentation and are past due 30 days from invoice date. A finance charge of 1.5% per month, or the maximum amount allowed by law, will be charged on past due accounts. UMIAQ Design, LLC makes no warranty, either expressed or implied, as to its findings, recommendations, specifications, or professional advice except that they are prepared and issued in accordance with generally accepted professional practice.

Effective January 1, 2021
NORTH SLOPE BOROUGH
PLANNING COMMISSION
RESOLUTION SERIAL NO. 2020-16

A RESOLUTION APPROVING A FINAL PLAT FOR NANA
RESERVOIR TO BE USED TO CREATE A NEW MAJOR
SUBDIVISION ASLS 2016-25

WHEREAS, F. Robert Bell & Associates, Inc., has submitted an application to the North Slope Borough (NSB) for approval of a final plat creating a new major subdivision; and

WHEREAS, It is the policy of the North Slope Borough that the subdivision of land into lots or parcels and the division of land to establish an easement or right-of-way are subject to control of the Borough, guided by Borough plans, policy statements and standards for the orderly, efficient, economical, environmentally sound and culturally sensitive development of the Borough. North Slope Borough Code of Ordinances (NSBMC) § 18.04.010; and

WHEREAS, F. Robert Bell & Associates, Inc., has surveyed and developed the final plat which lies within Section 20, Township 10 North, Range 15 East, Umiat Meridian, all within the Barrow Recording District, State of Alaska; and

WHEREAS, the State of Alaska, the land owner and the NSB request approval of this final plat; and

WHEREAS, the State of Alaska, the land owner has agreed to dedicate and grant any and all rights-of-way and easements for improvements for public utilities and other public purposes shown on the preliminary plat; and

WHEREAS, the total acreage to be subdivided involves 62.541 acres; and

WHEREAS, upon subdivision this will be Alaska State Land Survey No. No. 2016-25; and

WHEREAS, the North Slope Borough Planning Commission adopted Resolution 2020-10 on May 28, 2020, to approve the preliminary plat; and

WHEREAS, the final plat conforms to the preliminary plat approved by the Planning Commission on May 28, 2020.

NOW THEREFORE BE IT RESOLVED THAT:

1. The North Slope Borough’s Planning Commission approves the final plat.

2. The North Slope Borough Planning Commission approves the new major subdivision.
3. A copy of this Resolution shall be forwarded to the North Slope Borough Assembly Clerk.

Passed and approved by a duly constituted quorum of the North Slope Borough Planning Commission.

INTRODUCED: ________________________________

ADOPTED: ________________________________

Paul Bodfish Sr., Chairman
Date

Daisy Sage, Clerk
Date