MEMORANDUM FOR RECORD


This decision document constitutes the Environmental Assessment, 404(b)(1) Guidelines Evaluation, Public Interest Review, and Statement of Findings that informed the Corps decision on the permit application described below.

1.0 Application as described in public notice, dated 12/14/2016

1.1 Applicant:
Ms. Deborah Heebner
Hilcorp Alaska LLC
3800 Centerpoint Dr., Suite 1400
Anchorage, AK 99503
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(907) 670-3382

1.2 Location and waterway: The project site is located at the Milne Point Unit Mine Site on the west side of East Creek, within Sections 20 and 29, T. 13 N., R. 11 E., Umiat Meridian; USGS Quad Map Beechey Point B-4; Latitude 70.457219° N., Longitude -149.358822° W.; North Slope Borough, Alaska.

1.2.1 Latitude: 70.457219° North Longitude: -149.358822° West

1.3 Existing conditions: The mine site is located west of East Creek, a shallow, tidally-influenced creek flowing into Simpson Lagoon. The mine site is located within sections 20 and 29 of Township 13 North, Range 11 East, Umiat Meridian (see Figure 1), approximately 1.5 miles southeast of MPU B Pad, and can be accessed all year. The current size and basic configuration of the gravel mine area are unchanged from what was approved in the 1995 Milne Point Gravel Mine Site Mining and Rehabilitation Plan. Approximately 42 acres of mine pit within the 65-acre permitted area was flooded with melt water and runoff until the mine site was dewatered in the summer of 2013. This flooded area included approximately 5.5 acres of shallow littoral habitat along the western perimeter of the reservoir that was part of the 1995 rehabilitation plan. The existing mine site has been segregated from East Creek by a 20-foot-high flood dike along the eastern boundary to avoid a potential breach between the mine and the creek during periods of high flow. Overburden material is currently stored in three areas. Overburden was used to create the 20-foot-high flood dike to the east of the mine site that was intended to prevent salt water intrusion. There is one shallow littoral habitat area created with overburden material, approximately 5.5 acres in size, located to the west of the mine site (see Figure 2). A large 1.3 million cubic yard stockpile of overburden material is located immediately...
east of the existing mine pit covering approximately 16.5 acres of wetlands. This overburden material is recognized as a source for future rehabilitation and abandonment projects on an as-needed basis. Located at the extreme south end of the stockpile are two perched, vegetated wetland areas, each encompassing approximately one half acre. The southern-most of these includes a small pond. The mine site expansion project site consists of a total of 22.37 acres, of which 1.6 acres is uplands (where the current mine site road crosses the site) and 20.77 acres is Lowland Moist Sedge Shrub Meadow (tundra wetlands). Of the 22.37 acres of wetlands present on the site, 1.3 acres of the wetlands are to be preserved from impact, so the total amount of wetlands to be impacted is 19.47 acres.

1.3.1 Project History: The original permit was issued to Conoco, Incorporated on January 13, 1982, for stockpiling overburden and constructing a road to the Milne Point mine site, and was subsequently modified on March 9, 1994; January 8, 1990; May 6, 1991; January 24, 1995; December 8, 1995; and July 23, 1996; to change the length of the road, extend the permit time period, expand the mine area, include the excavation activities at the mine site, construct an erosion-protection levee; and incorporate the “Milne Point Gravel Mine Site Mining and Rehabilitation Plan” dated December 1995. The permit and modifications were transferred to BP Exploration (Alaska) Inc. on April 19, 1994, and then transferred to Hilcorp Alaska LLC on November 18, 2014. This is the 7th modification of POA-1981-243.

1.4 Project Description from Public Notice: The Milne Point Unit Mine Site is proposed to be expanded by a total of approximately 22.37 acres - of which 15.15 acres would be mined (1.6 acres of which is currently utilized as the mine road), 1.32 acres would be utilized for a haul road along the western side of the new north pit expansion, 2.5 acres would be used for overburden storage, and 3.4 acres would provide a buffer around the overburden storage area (1.3 acres of which would be preserved from any impact). The total amount of proposed new impacts to wetlands would be 19.47 acres. The amount of overburden that would be removed and stockpiled onsite is estimated at 400,000 cubic yards, while the amount of gravel to be removed from the cell would be 915,000 cubic yards. The area to be mined is 1,170 feet long and between 490 feet to 830 feet wide. It is located directly north of the previous mine excavations in the area identified as a “future potential mine boundary expansion” in the December 1995 Milne Point Gravel Mine Site Mining and Rehabilitation Plan. Proposed expansion activities are outlined in the attached 2016 Milne Mine Site Mining and Rehabilitation Plan.

The 2016 Milne Mine Site Mining and Rehabilitation Plan outlines the following:

- Removal of organic overburden material as necessary for future use for rehabilitation;
- The disposition of water in existing mine cells;
• Excavation specifications for gravel removal;
• Location and limitations relating to stockpiling excavated gravel;
• Maximizing gravel recovery at an existing site while considering habitat in order to minimize the area disturbed;
• Salvage and re-use of organic overburden for use in creating littoral habitat during reclamation of the Mine Site; and
• Conserving stockpiled overburden for use in potential reclamation and restoration projects.

All work would be performed in accordance with the enclosed plan (Figures 1-7), dated October & November 2016.

1.5 Avoidance and minimization statement from applicant:

Hilcorp has incorporated appropriate avoidance and minimization measures into the MPU Mine Site Expansion design to avoid adverse impacts to the extent practicable, while still meeting project's purpose and need. These avoidance measures include, but are not limited to the following:

• Maximize gravel recovery at an existing Material Site, while considering habitat in order to minimize the area disturbed;
  o The project will not establish a berm between the existing pit and the new cell and instead this area will provide maximum gravel recovery.
  o Since the berm between the existing cell and the new cell has been avoided, gravel can be mined as deeply as possible in an existing material site to maximize gravel recovery from the existing Milne Point Mine Site ultimately impacting less wildlife habitat and wetlands over the lifetime of the mine site.
• Avoided impacting pristine wetlands to develop a new gravel source, by using an existing source with a Rehabilitation Plan that has been adhered to since the mine site was permitted in 1982;
• Avoided crossing or impacting as many lakes, ponds and streams as possible;
• Avoided Anadromous Water crossings to the maximum extent possible;
• Placed no permanent fill in anadromous streams;
• Avoided building new roads by using existing roads and facilities to the maximum extent possible.

Due to vast and abundant coverage of wetlands on the North Slope, complete avoidance of wetlands is not possible. The following list provides an overview of minimization measures that Hilcorp has incorporated into the Milne Mine Site Expansion:

• Remove overburden in the new expansion area in the winter months to avoid any potential disruption of nesting birds and erosion;
• Mining and overburden removal will extend from the existing mine pit into the
proposed new pit expansion area, maximizing gravel recovery from an existing site.
This will minimize impacts to pristine wetlands to provide the required gravel for new
developments and existing pad extensions in the Milne Point Unit.
• Salvage and re-use organic overburden to create littoral benches during rehabilitation
of the Mine Site and for reclamation and restoration projects across the North Slope;
• Conserve stockpiled, segregated organic overburden for use in potential reclamation
and restoration projects; and
• Execute the Milne Point Mining and Rehabilitation Plan and rehabilitate the area to
establish productive, diverse, and self-sustaining plant communities on the terrestrial
areas. For the wetland created, the plan also describes the creation of shallow littoral
habitat and optimization of shoreline length and diversity.

1.6 Compensatory mitigation proposal from applicant:

The section below documents our compensatory mitigation plan for meeting the
requirements in 33 CFR 332.4 (c) (2) through (C) (14).

Objectives. The objective of Hilcorp's plan is to provide compensatory mitigation for the
unavoidable impacts to 19.47 acres of Lowland Moist Sedge Shrub Meadow 3. In order to
accomplish this, Hilcorp proposes to perform permittee responsible mitigation in the form
of restoration. The watershed and ecoregion has been subject to historic oil and
gas exploration and production activities that involve fill placement causing disruption to
surface water connectivity between palustrine wetlands and anadromous waters. Hilcorp is
confident that our plan will meet the needs of the watershed by restoring connectivity lost
as a result of historic operations that otherwise would not be accomplished.

Site Selection. Hilcorp will perform this restoration in the immediate area of proposed
project impacts; therefore, the benefits will be realized in the immediate watershed. The
project will involve minimal maintenance and will be self-sustaining.

Site Protection Instrument. The area of impacts is located on leased land that is owned
by the State of Alaska. Hilcorp does not have the legal authority to establish a perpetual
site protection instrument required. In addition, the area of impacts is part of a North Slope
Borough district identified for resource development. Therefore, Hilcorp is proposing to
waive this site protection requirement.

Baseline Information. The baseline information for both the impact and proposed
restoration site are included in the Final Report prepared by ABR, Inc. for BP Exploration
(Alaska), Inc., "An Ecological Land Survey in the Milne Point Area, 2008". Ground
reference plots for the ABR Ecological Land Survey were located in the Mine Site
Expansion Area. A copy of this report can be provided to the USACE upon request.

Mitigation Credits. Mitigation is the cumulative result of avoidance, minimization, and if
reasonable and practicable, compensation. Below we outline the steps we have taken to
avoid and minimize impacts to wetlands. Most all minimization and avoidance measures are considered subjective, as they are very difficult to quantify. However, we have quantified the minimization and avoidance measures where possible.

**Avoidance:** The following factors were incorporated into the project:

- Avoided crossing as many lakes, ponds, and streams as possible
- Avoided anadromous waters crossing to the maximum extent possible.
- Will mine as deeply as possible in an existing material site and maximize gravel recovery from the existing Milne Point Mine Site.
- Will use existing roads and infrastructure, avoiding construction of new roads as much as possible.
- Most of the overburden removal in the new expansion area will be conducted in the winter months to avoid any potential disruption of nesting birds.
- Mining and overburden removal will extend from the existing mine pit into the proposed new pit expansion area, avoiding a ramp or berm between the two cells and maximizing the gravel recovery from the existing material site. Gravel will be mined more deeply in an existing site.

<table>
<thead>
<tr>
<th>Watershed</th>
<th>Wetland Avoidance (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Creek</td>
<td>1.6 (mine existing road)</td>
</tr>
<tr>
<td>East Creek</td>
<td>1.3 (SE triangle that is not impacted)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2.9</strong></td>
</tr>
</tbody>
</table>

**Minimization:** The following factors were incorporated into the project:

- Maximizing gravel recovery from the existing Milne Mine Site by expanding the existing Mine Site to meet the required gravel needs, demonstrated minimization of impacts to high quality wetland habitat within the Milne Point Unit. The proposed expansion has been designed to minimize the area disturbed. The overburden will be removed in phases to maximize the conservation, segregation and stockpiling of the organic overburden for use in reclamation and restoration projects.
- The length of the new Haul Road into the Milne Mine site has been shortened and minimized. The longer existing Haul Road (1.6 acres) has been incorporated into the area of the new pit expansion that will be mined, minimizing the area impacted.
- The buffer area around the new pit expansion area and overburden storage area has been minimized. Approximately 1.3 acres in the southeast triangle of the new north pit expansion buffer area will not be impacted and will remain in its natural state.
• All gravel expansions of existing pads will be designed to be minimal in size, but provide the necessary space for the additional drilling and infrastructure required. This will minimize gravel requirements and new gravel footprint.
• The length of roads has been minimized and the pad footprint has been minimized for the Moose Pad Development subsequently reducing the mine site expansion size needed. The pad footprint was minimized by minimizing well spacing and the well row layout was optimized to minimize new gravel footprint.
• Winter removal of overburden will minimize impacts to migratory birds by avoiding the nesting season.

Compensatory Mitigation: In addition to the avoidance and minimization measures noted above, Hilcorp's Mining and Rehabilitation Plan for the Milne Point Unit Mine Site will include measures that will result in the re-establishment of productive, diverse, and self-sustaining plant communities on terrestrial areas upon final mine site abandonment. The plan also describes the creation of shallow littoral habitat and optimization of shoreline length and diversity.

The project to expand the MPU Mine Site also protects the existing surface hydrology, wetlands and anadromous waters located within the project area. The following (berm of the top edge of the entire new cell) was incorporated into the project:

• The overburden stockpile will be connected to the existing berm along the east side of the existing pit, resulting in the berming of the top edge of the entire cell to insulate the perimeter of the pit and help prevent melting of ice wedges and thermokarsting. This insulating berm will ensure ice wedges are not exposed, which would result in melting and erosion back away from the pit with the potential to drain adjacent wetlands. Overburden will be placed in the winter along the top edge of the east side of the new cell in the area closest to East Creek to prevent any erosion. The road along the west side will also serve as a berm.
• The access road leading into the gravel mine area at the northwest corner of Milne Point gravel mine will be retained as long as necessary to provide continued access to mining areas and overburden stockpiles for future reclamation and restoration projects. The access road will also serve as a berm to prevent the drainage of the adjacent wetland through thermokarst channels and erosion.
• The final grade around the mine pit relative to final water level will be no more than 3:1 out to 5 or 6 feet of water depth.

Pick-up gravel from historic "tractor tracks"

Hilcorp will remove accessible gravel from approximately 0.39 miles (0.64 acres) of the "tractor tracks", which extends east beyond where the proposed Moose Pad access road intersects the "tractor tracks". As some measure of flexibility is required due to the Nopoint Creek crossing and delineation, the plans and figures indicate that it will be the "tractor tracks" which extend east beyond where the proposed Moose Pad access road intersects
the "tractor tracks". Removal of the gravel will reestablish the approximate original contours of the tundra in this area. The area of credit calculated for the gravel removal was the acreage of uplands delineated in the ASRC Energy Services August 2016 Wetland Delineation Report and Aquatic Site Assessment along the "tractor tracks" which are proposed for gravel removal (see Figure 1). The area of hydrologic benefit was calculated as the acreage between the Nopoint Creek and the northern edge of the existing tractor tracks gravel removal.

Table 2: Gravel Removal Mitigation Acres

<table>
<thead>
<tr>
<th>Watershed</th>
<th>Gravel Removed (acres)</th>
<th>Wetland Hydrologic Benefit (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nopoint</td>
<td>0.64</td>
<td>19.47</td>
</tr>
</tbody>
</table>

The historic tractor tracks were found to have significantly altered wetland functions in the wetland report. General Habitat Suitability is expected to increase by reestablishing contours of habitat with the surrounding vegetation. This should promote a return to the succession of the natural hydrological regime. Sediment Removal is expected to also increase, by removing a source of potential sediment for erosion. Production of Organic Matter and its Export is also expected to increase, as the area changes from a gravel berm to a successional hydrologic regime. In total, gravel removal is expected to improve the natural hydraulic regime of the surrounding wetlands flowing into the anadromous Nopoint Creek.

Mitigation Work Plan.

Berming the top edge of the Entire New Cell: Hilcorp proposes to connect the newly mined overburden stockpile to the existing berm along the east side of the existing pit, resulting in the berming of the top edge of the entire cell to insulate the perimeter of the pit and help prevent melting of ice wedges and thermokarsting. This insulation will ensure ice wedges are not exposed, which would result in melting and erosion back away from the pit with the potential to drain adjacent wetlands. Overburden will be placed in the winter along the top edge of the east side of the new cell in the area closest to East Creek to prevent any erosion. The road along the west side will also serve as a berm. This will preserve the natural hydrological regime.

Gravel Removal: Hilcorp proposes to remove approximately 0.39 miles (0.64 acres) of the historic tractor tracks, and bring the area back to approximate original contour. The attached Figure 1 shows the proposed gravel removal area. Gravel removal alone will provide a means to allow native habitat to reestablish over time. Hilcorp does not propose to introduce any vegetation to this area, as the USFWS indicated allowing natural succession is the most effective restoration method that provides for the revegetation of solely native species on the North Slope.

Gravel removal is planned for winter 2017/2018, which will allow for the site to be surveyed during the prior summer season. Surveying the site will ensure equipment and personnel do not damage any adjacent tundra while removing the gravel road. The gravel will be
removed to tundra grade using a trimmer. Project personnel will make observations for any potential contamination in the recovered gravel. If no visual indication of staining or sheen is present, it will be presumed the gravel will be determined to be free of contamination and considered eligible for future use. The volume of gravel removed will vary depending on the elevation of the road bed. The recovered gravel will be stockpiled pending reuse in the existing Milne Point Unit (MPU) Mine site (Figure 2).

Overburden or organic material from the Milne Point Unit Mine site expansion may be applied on the gravel removal area, if it is available and practicable. Fertilizer application may also be utilized to promote establishment of native vegetation. In addition to USACE approval, execution of this mitigation project will be pending approval from the State of Alaska and the North Slope Borough.

**Maintenance Plan.**

**Milne Mine Site Berm:** The Milne Mine site will be monitored annually from spring breakup to fall freeze-up to ensure the stability of the slopes, until the pit has stabilized with water.

**Gravel Removal:** The gravel removal area will be allowed to settle and revegetate naturally, and as such, no maintenance work will be conducted.

**Performance Standards.**

**Milne Mine Site Berm:** No performance standards for revegetation of the Milne Mine Site Berm will be established, as the site is being allowed to naturally revegetate to a natural, diverse and self-sustaining plant community to ensure stability of the slopes to prevent melting of ice wedges and erosion of the berm. Successful construction will result in no drainage of adjacent wetlands.

**Gravel Removal:** No performance standards for revegetation will be established as the site is being allowed to naturally revegetate.

**Monitoring Requirements.**

**Milne Mine Site Berm:** Monitoring for the Mine Site Berm will occur immediately after construction and then again in the summer of years 1, 2, 6, and 10. However, monitoring frequencies will occur as part of regularly scheduled road and mine site inspections. A short letter report documenting the findings of the Milne Mine Site Berm inspections will be forwarded to the USACE and other interested agencies.

**Gravel Removal:** Monitoring for the gravel removal area will occur immediately after construction and then again in the summer of years 1, 5, and 10. Although no vegetation will be planted, Hilcorp will document site conditions and percent cover and provide this information in a report at the end of the monitoring year.
**Long Term Management Plan.** A long term management plan will be negotiated with the State of Alaska, in accordance with unit agreement and lease terms.

**Adaptive Management Plan.** Adaptive management for the Milne Mine Site Berm will involve observations of surface stability and maintenance if required. For the gravel removal area, if site conditions warrant additional rehabilitation efforts, adaptive management will be implemented in consultation with the USACE.

**Financial Assurance.** Financial assurances, if required, will be accommodated through a performance bond held with the state of Alaska and as a requirement of the lease.

1.7 Project Changes Subsequent to Public Notice:

- The Mining and Rehabilitation Plan has been updated to reflect the following;
  - In the event that severe flooding occurs, the goal is to construct a downstream connection that would allow flow through the mine-site created lake.
  - The majority of the overburden placed in the original pit will be used for the construction of littoral benches on the accessible (west) side.
  - The overburden stockpile along the north and east sides of the new cell was reconfigured to create a berm along the north and east sides of the pit that will be connected to the existing berm, resulting in the berming of the top edge of the entire cell (see Figures 2 & 3). Since the overburden pile was stretched, there was no change in the acres of the overburden pile or the 1.3 acres to be preserved, just the shape of the area has changed.

- Figures 2, 3, 4, 5 and 6 were updated to reflect the following:
  - The connection of the overburden stockpile along the north and east sides of the new cell with the existing berm.
  - The majority of the overburden placed in the original pit will be used for the construction of littoral benches on the accessible (west) side.

- A compensatory mitigation plan was submitted to the Corps on 02/15/2017. The plan consists of the removal of 0.64 acres of gravel from historic “tractor tracks” off of the Moose Pad Road to return the area to its original contours and reconnect the wetland complexes currently bisected by the “tractor tracks”.

1.8 Purpose and need

1.8.1 Project purpose and need as described by applicant: The applicant’s stated purpose is to expand Milne Point Unit (MPU) Mine Site by 22.37 acres to obtain 915,000 cubic yards of additional gravel material to meet the need of planned MPU development projects.

1.8.2 Basic project purpose: To obtain 915,000 cubic yards of gravel material.

1.8.3 Water dependency determination: The Proposed project is not water dependent
1.8.4 Overall project purpose: To expand the MPU Mine Site to obtain 915,000 cubic yards of gravel to support the construction of several upcoming projects in the MPU.

2.0 Authority

2.1 Section 404 of the Clean Water Act (33 U.S.C. Section 1344)

2.2 Does the project also require authorization under Section 14 of the Rivers and Harbors Act (33 U.S.C. 408)? No

2.3 Jurisdictional determination information: The proposed project footprint is 22.37 acres – of which 1.6 acres of which are uplands (currently utilized as the mine road) and 20.77 acres are tundra wetlands (1.3 acres of which would be preserved from any impact). The total amount of proposed new impacts to wetlands would be 19.47 acres.

3.0 Scope of Analysis

The scope identified in sections 3.1 – 3.3 to ensure compliance with NEPA, ESA and NHPA Section 106 is based on the final proposed project.

3.1 National Environmental Policy Act (NEPA):

Scope of determination for NEPA review is found at 33 CFR 325, Appendix B, Paragraph 7.b. The following factors are considered in determining whether sufficient federal “control and responsibility” exists:

(1) Whether or not the regulated activity comprises “merely a link” in a corridor type project.

(2) Whether there are aspects of the upland facility in the immediate vicinity of the regulated activity which affect the location and configuration of the regulated activity.

(3) The extent to which the entire project will be within the Corp’s jurisdiction.

(4) The extent of the cumulative federal control and responsibility.

3.1.2 Determination of scope. Based on an examination of NEPA (33 CFR Part 325, Appendix B) and applicable program guidance (e.g. Council on Environmental Quality’s (CEQ) Considering Cumulative Effects Under National Environmental Policy Act and the Standard Operating Procedures for the U.S. Army Corps of Engineers Regulatory Program, July 2009), we have determined that the appropriate scope for this project is: Only within the footprint of the regulated activity within the delineated water.

Explanation: The scope was determined by reviewing the above factors: (1) The proposed activity is not a corridor type project, so Factor 1 would not be applicable. (2) There is no upland facility in the immediate vicinity of the regulated activity, therefore Factor 2 would not apply. (3) The entire project is within the Corps jurisdiction, therefore Factor 3 would apply. (4) There is extensive federal involvement in the project; including Corps permitting, and coordination with other federal agencies, therefore Factor 4 would apply.
Based on Factors 3 & 4 applying, there would be sufficient federal “control and responsibility” for the project, and the project would be only within the footprint of the regulated activity within the delineated water.

3.2 National Historic Preservation Act (NHPA) “Permit Area”:
*The NHPA Scope is defined as “permit area”. The permit area for an undertaking is defined in 33 CFR 325, Appendix C. The following three (3) tests must all be satisfied for an activity undertaken outside of waters of the United States to be included within the “permit area”.*

3.2.1 Tests (check all that apply):

☐ a. The activity outside of waters of the United States would not occur but for the authorization of the work or structures within waters of the United States.

☐ b. The activity outside waters of the United States is integrally related to the proposed work or structures within waters of the United States (or conversely, the proposed work or structures within waters of the United States must be essential to the completeness of the overall project or program).

☐ c. The activity outside the waters of the United States is directly associated (first order impact) with the proposed work or structures within waters of the United States.

3.2.2 Scope Determination: Activities outside waters of the United States are not included because no activities outside waters of the United States are proposed. None of the above tests applied.

3.2.3 NHPA Scope Summary and Description: The entire project is within the NHPA Scope, however there were no sites within the project area, and therefore no historic properties affected.

3.3 Endangered Species Act (ESA) “Action Area”:
*The ESA scope is defined as “action area”. The action area means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action; and, is an undertaking as defined in 50 CFR 402.02, Definitions.*

3.3.1 Determined Scope: The action area for the proposed project is the entirety of the project area, and including areas within ½ mile of the project site. These areas would be potentially affected by the noise, dust and human activity from the mine.

4.0 Public Involvement (Public Notice required by 33 CFR 325.3):

4.1 Public Notice Information
Application Received: 10/20/2016
Application Complete: 12/13/2016
Date of Public Notice Issued: 12/14/2016
End Date for Public Notice Comment Period: 1/23/2017
Additional Information: Originally PN comment period ended on 1/16/2017

4.2 Public Meeting(s): No
Discussion/Explanation: N/A

4.3 Public Notice Comments:

a. Comments Received From: U.S. Fish and Wildlife Service (USFWS)

Date Received: 1/20/2017

Comment/Issue: 1.) The Service suggested developing the mine with 3:1 or 2.5:1 side slopes if possible because of potential for thermokarst and erosion. 2.) They also recommended the placement of overburden along the top edge of the entire cell to insulate the perimeter of the pit. 3.) The Service also does not recommend the placement of organic overburden within the cell to create littoral areas. Mine Site rehabilitation, to include the creation of wetland and/or littoral areas on the North Slope is a long-term and expensive endeavor and in many situations has not been successful. 4.) The site should be monitored annually from spring breakup to fall freeze-up to ensure the stability of the slopes until the pit has stabilized with water. 5.) They also argued that the applicant should try to find an opportunity to mitigate the project.

4.4 Corps acknowledgment of comments: We acknowledged the comments we received from the USFWS, and we forwarded their concerns and comments on to the applicant. The Corps believed that these comments were substantive.

4.5 Issues Identified by the Corps: The Corps requested that the applicant further research and identify mitigation opportunities within Milne Point Unit.

4.6 Comments/Issues Forwarded to Applicant: Yes
Date Comments Forwarded: 1/20/2017

4.7 Applicant provided response to comments: Yes
Summary of response: The applicant responded on 01/23/2017. Hilcorp’s response to USFWS’s comments: 1.) Hilcorp argued that they have a long history in this location with the existing pit and 1:1.5 side slopes, and that no degradation of the mine site sidewalls have been identified to date, including when the Milne Mine Site was flooded for 12 years from 2001 to 2013. No thermokarsting is visible in the berms or wetland around the mine site. Adhering to a 3:1 side slope would greatly reduce the amount of recoverable material requiring a significantly larger footprint to be mind to achieve the desired gravel volume. The pit expansion is already marginal from a stripping ratio perspective, and narrowing the pit due to the 3:1 slopes would make material extraction in an already marginal site, no longer economical. 2.) Hilcorp says they are willing to connect the existing berm along the
east side of the existing pit to the overburden pile to the east of the expansion by placing overburden along the top edge of the east side of the new cell. This placement of overburden would result in the berming of the top edge of the entire cell. This additional buffer between the Mine Site and East Creek would make a potential breach in this area a much lower probability than it already is. The road on the west side of the mine would act as a berm on that side of the mine. The purpose of the berm is to prevent surface waters from draining into Milne Mine Site. An examination of the annual summer aerial photography since 1995 indicates that the adjacent wetlands have not been drained. The integrity of the sides of the existing pit has been maintained and the adjacent wetlands have not changed. 3.) Hilcorp says that the ADF&G’s comments and recommendation for littoral zones for flooded mine sites is between 20 and 25% coverage. If ADF&G agrees to less littoral zone creation, Hilcorp could instead place the majority of overburden to buttress the lower slopes of the mine pit. The final grade around the mine pit relative to the final water level will be no more than 3:1 out of 5 or 6 feet of water depth. The stockpile will be graded 3:1 or flatter. Hilcorp could also blast in a small littoral bench in the road area on abandonment. 4.) Hilcorp agrees to monitor the site annually from spring breakup to fall freeze-up to ensure the stability of the slopes, until the pit has stabilized with water. 5.) Hilcorp argues that they are already picking up gravel for the Moose Pad project and that it should also satisfy the need for mitigation for this project.

4.8 Corps Purview – The following comments are not discussed further in this document as they are outside the Corp’s purview: N/A

4.9 Additional information (optional): To ensure the reclamation required by USACE does not conflict with reclamation required by DMLW, a multi-agency meeting was held on Jan 30, 2017. Attendees included Hilcorp (Deb Heebner, Walton Crowell), Recon LLC (Isaac Rowland), USACE (Heather Markway, by phone), U.S. Fish and Wildlife Service (Bob Henzsy, Charleen Buncic), Alaska Department of Fish and Game (Jack Winters, Marie Wessel), and DMLW (Melissa Head, Kimberley Maher). The focus of the discussion was how to utilize the overburden in site reclamation to stabilize the permafrost, buffer the site from the East River, and create littoral habitat. Consensus was reached, and results of the discussion were incorporated into the Mining and Reclamation Plan submitted by Hilcorp on February 2, 2017. DMLW NRO has approved this plan, which adequately addresses the land management considerations identified in the Preliminary Finding and Decision. It was determined that Hilcorp would continue with side slopes as proposed (1:1.5). They would also build a berm (reconfiguring the overburden pile into a berm to connect to the original mine’s berm on the east side, see Figures 2 & 3) around the entire mine site to help prevent against thermokarsting and prevent adjacent wetlands from draining in the mine site. For the mine site rehabilitation, they will use the overburden to create 3:1 side slopes in the pit, and they will blast out the road to create a littoral bench when the mine site is mined out.
Public Hearing Request – (33 CFR 327) Requests for a public hearing shall be granted unless the district engineer determines that the issues raised within the request(s) for a public hearing are insubstantial or there is otherwise no valid interest to be served by the hearing. The district engineer will make such a determination in writing, and communicate his reasons to all requesting parties.

Public Hearing: No public hearing was requested or held for this project.

Discussion/Explanation (if necessary): N/A

5.0 Alternatives Analysis – (40 CFR 230.10, HQ Regulatory SOP July 2009, RGL 95-1, RGL 84-09) If the project is sited in a special aquatic site (such as a wetland), and if the project does not need to be in or near the special aquatic site to fulfill its basic purpose (i.e., the project is not “water-dependent”), it is presumed that there are practicable alternatives that do not involve special aquatic sites. To overcome this presumption, the applicant must clearly demonstrate to the Corps that practicable alternatives are not available. If the presumption is not overcome, the Corps must deny the permit application. If the project is not sited in a special aquatic site and/or is water-dependent, the applicant is not required to overcome the presumption that upland alternatives are available. However, the Corps must still address whether there are any upland alternatives (or alternatives with less impact), and if any are identified, the applicant must clearly demonstrate that they are not feasible. If such a demonstration cannot be made, the Corps must deny the permit application. The Corps performed an evaluation of alternatives, as described below:

5.1 Overall Project Purpose (as independently defined by Corps): The overall project purpose is the same as the Corps determined overall project purpose (reference Section 1.8.4).

5.2 No Action Alternative (No action is defined as permit denial or alternative without impacts to waters of the Unites States): In the no action alternative, the mine would not be expanded, forcing the applicant to find gravel for their projects from another source – either requiring the gravel to be driven from a much greater distance from an established mine outside of Milne Point Unit (provided the mine would have even have enough gravel available) or opening a new mine site within Milne Point Unit, which would result in increased impacts.

5.3 Off-site locations and configurations: Since the overall project propose is to expand the current mine site, off-site locations were not pursued. Any off-site alternative would result in increased impacts, as almost 100% of all unoccupied space in the Milne Point Unit is tundra wetlands, and they would have to establish a new access road, and would be unable to utilize a shared side with a current development.

5.4 On-site configurations: Since the project involves the expansion of a current mine site, on-site configurations are limited. On-site configurations were limited to the minimum expansion needed to accomplish the project purpose. The applicant limited the expansion
as much as possible while still expanding the mine to obtain 915,000 cubic yards of additional gravel material to meet the need of planned MPU development projects.

- **West side expansion**: The richest gravel reserves are located next to the creek, so expanding the mine to the west (across the current mine site road) away from the creek would likely require a larger footprint to mine the same amount of gravel, so this on-site configuration was not considered further.

- **East and south side expansions**: The mine is hemmed in by East Creek on the south and east sides making an expansion to the south or east impossible without rerouting East Creek, which would result in a much larger impact to the environment, so these on-site configurations were not considered further.

- **North side expansion (applicant’s preferred alternative)**: Expanding the mine to the north side is consistent with the Mining and Rehabilitation Plan (dated December, 1995) in that this area was identified as a “future potential mine boundary expansion” if gravel reserves ran low in the existing permitted material site, as such this is the preferred alternative. In the preferred alternative, the applicant has configured the expansion to reduce impacts as much as possible while still meeting their objective. The mine expansion would directly abut the established mine, allowing the applicant to remove the current north side berm and mine the area underneath, lessening their need for a larger footprint. With the preferred alternative, the applicant straightened (and shortened) the mine site road to act as the berm along the expansion’s east side, which reduced the impact of the mine site road by 0.28 acres, and the area where the current mine is will be mined. After conversations with the agencies, the applicant reconfigured the overburden pile on the east side of the mine to stretch along the entire east side of the mine expansion to connect to the original mine’s eastern berm and create a berm encircling the entire mine site. On the east side of the berm, the applicant is preserving 1.3 acres from impacts to act as a buffer between the overburden berm and East Creek.

5.5 Practicable Alternatives carried forward: The north side expansion is the applicant’s preferred alternative/the proposed project and is the least environmentally damaging practicable alternative.

6.0 **Evaluation of the 404(b)(1) Guidelines (40 CFR 230)**:

(40 CFR 230) For each of the below listed evaluation criterion, this section describes the potential impact, any minimization measures that would be used to reduce the level of impact, and the resultant impact level. For the purpose of this evaluation, the fill associated with this project is: overburden removal and gravel excavation and placement of overburden along the east and north side of the mine site.
6.1 Potential effects on physical and chemical characteristics of the aquatic ecosystem (Subpart C):

6.1.1 Substrate: Minor Effect (Long Term) – 15.15 acres of wetland substrate (overburden - 16 to 20 feet deep) will be removed to mine the gravel underneath, and this overburden will be placed on 2.5 acres of wetlands until the mine is expended, at which time the overburden will be utilized in the creation of littoral zones and stabilizing the sides of the pit while it fills. The mine site plan also conserves stockpiled, segregated organic overburden for use in potential site reclamation and restoration projects.

6.1.2 Suspended Particulates / Turbidity: Minor Effect (Short Term) – During construction of the expansion site, a short term effect of suspended particulates/turbidity in surrounding wetlands and potentially East Creek is anticipated. This effect would be reduced by standard BMPs and erosion control measures and should dissipate after the berms are in place, so therefore it is expected to be minor and short term.

6.1.3 Water: Minor Effect (Short Term) – Once the mine is stabilized, the mine is not anticipated to have an effect on water.

6.1.4 Current Patterns & Water Circulation: Minor Effect (Long Term) – The area of the expansion is currently hemmed in by the mine site road (acting as a berm) on the west, the established mine (and berm) to the south, and East Creek to the east and north of the project (which is about 8 feet below the project site). With these barriers already in place, and the creek being disconnected to the floodplain, it is unlikely that much water moves through the area except in extreme flood events, so the project should only have a minor effect on current patterns & water circulation. The expansion area will follow approximately the 8 foot contour along its eastern boundary. Preserving this topography along the eastern boundary will provide a natural flood-prevention barrier. An overburden stockpile along the eastern boundary will also provide additional protection between the mine and East Creek. The berms will eliminate the potential of flooding the mine site during high flow of East Creek.

6.1.5 Normal Water Fluctuations: Minor Effect (Long Term) – The area of the expansion is currently hemmed in by the mine site road (acting as a berm) on the west, the established mine (and berm) to the south, and East Creek to the east and north of the project (which is about 8 feet below the project site). With these barriers already in place, and the creek being disconnected to the floodplain, it is unlikely that much water moves through the area except in extreme flood events, so the project should only have a minor effect on normal water fluctuations. The expansion area will follow approximately the 8 foot contour along its eastern boundary. Preserving this topography along the eastern boundary will provide a natural flood-prevention barrier. An overburden stockpile along the eastern boundary will also provide additional protection between the mine and East Creek. The berms will eliminate the potential of flooding the mine site during high flow of East Creek.
6.1.6 Salinity Gradients: No Effect – The proposed project would not impact salinity gradients.

6.2 Potential effects on biological characteristics of the aquatic ecosystem (Subpart D):

6.2.1 Threatened or Endangered Species (also see section 10.1): May Affect but Not Likely to Adversely Affect – The following Minimization Measures are required under the Programmatic BO:

- Ground disturbing activity will not occur from June 1 through July 31;
- Projects will not involve construction of overhead wires or guyed towers;
- Design features will be incorporated into facility lighting (shielding to reduce outward-radiating light) to decrease the potential for bird strikes;
- Applicants will be required to develop and have in place, appropriate spill prevention and response plans; and
- A project-specific wildlife interaction plan, including polar bear avoidance and interaction guidelines, would be developed; or the applicant would agree to adopt the Service's Polar Bear Interaction Guidelines prior to conducting field activities.

Given, 1) the applicant would adhere to the Minimization Measures described above, including the timing restriction intended to minimize take of nesting eiders, 2) effects to Steller’s eiders are not anticipated, 3) appreciable effects to spectacled eiders are not expected, and 4) destruction or adverse modification of polar bear critical habitat is not expected; the Service concluded the proposed action is not likely to adversely affect listed species.

6.2.2 Fish, Crustaceans, Mollusks, and Other Aquatic Organisms: Minor Effect (Long Term) – During construction of the expansion site, a short term effect on aquatic organisms in East Creek is anticipated. This effect would be reduced by standard BMPs and erosion control measures and should dissipate after the berms are in place, so therefore it is expected to be minor and relatively short term. However, if there are aquatic organisms present in the wetlands on the mine site, they would be excavated and likely buried in the overburden berms – this is expected to be a minor effect, but it would be long term (the life of the mine).

6.2.3 Other Wildlife: No Effect – No other wildlife issues were identified, therefore there is no effect anticipated.

6.3 Potential Effects on Special Aquatic Sites (Subpart E):

6.3.1 Sanctuaries and Refuges: Not Applicable – There are none in the project area.

6.3.2 Wetlands: Minor Effect (Long Term) – 19.47 acres of wetlands to be physically impacted – 15.15 acres of wetland substrate (overburden) will be removed to mine the gravel underneath, and this overburden will be placed on 2.5 acres of wetlands. The losses are minimized by reduction of the project footprint to the greatest extent practicable while accomplishing the project purpose, along with other minimization and avoidance measures.
as discussed in section 1.5 and 9.2, the chosen on-site configuration (as discussed in section 5), and the mitigation proposed (see section 9). All of the above coupled with the fact that wetlands are abundant in this watershed, the loss is considered to be neutralized.

6.3.3 Mud Flats: Not Applicable – There are none in the project area.

6.3.4 Vegetated Shallows: Not Applicable – There are none in the project area.

6.3.5 Coral Reefs: Not Applicable – There are none in the project area.

6.3.6 Riffle and Pool Complexes: Not Applicable – There are none in the project area.

6.4 Potential effects on human use characteristics (Subpart F):

6.4.1 Municipal and Private Water Supplies: Not Applicable – There are none in the project area.

6.4.2 Recreational and Commercial Fisheries: Not Applicable – MPU is closed to the public, so there aren’t any recreational and commercial fisheries in the project area.

6.4.3 Water-related Recreation: Not Applicable – MPU is closed to the public, so there isn’t any water-related recreation in the project area.

6.4.4 Aesthetics: Negligible Effect – Aesthetics is subjective. Because the original mine site is already in place, the effect to aesthetics is anticipated to be negligible

6.5 Evaluation and testing (Subpart G):

6.5.1 General Evaluation of Dredged or Fill Material:

The fill material is stockpiled, segregated organic overburden removed from the mined area and placed along the east and north side of the mine site.

This evaluation indicates that the proposed discharge material meets the testing exclusion criteria for the reason cited below.

Exclusion: Based on the above information, the material is not a carrier of contaminants.

6.5.2 Chemical, Biological, and Physical Evaluation and Testing:

N/A

6.6 Actions to minimize adverse effects (Subpart H):

Actions to be undertaken in response to 40 CFR Section 230.10(d) to minimize the adverse effects of discharges of dredged or fill material are incorporated into the discussion in sections 5.1 through 5.5 above. If applicable, additional actions to minimize adverse effects are discussed below, including actions concerning the location of the discharge, actions concerning the material to be discharged, actions controlling the
material after discharge, actions affecting the method of dispersion, actions related to technology, actions affecting plant and animal populations, actions affecting human use, and other actions. See Sections 1.5 and 9.2 for additional discussion of minimization efforts.

6.7 Factual Determinations – (Subpart B, section 230.11) The determinations below are based on the determination of effects described in detail in sections 6.1 – 6.6 above:

6.7.1 Physical substrate: Minor Effect (Long Term)
6.7.2 Water circulation, fluctuation and salinity: Negligible Effect
6.7.3 Suspended particulates/turbidity: Negligible Effect
6.7.4 Contaminants: Not Applicable
6.7.5 Aquatic ecosystem and organisms: Negligible Effect
6.7.6 Proposed disposal site: Not Applicable
6.7.7 Cumulative effects on the aquatic ecosystem: Minor Effect (Long Term) – Cumulative effects are discussed in section 8 of this document.
6.7.8 Secondary effects on the aquatic ecosystem: Minor Effect (Long Term) Secondary effects are discussed in section 8 of this document.

6.8 Restrictions on Discharges (Subpart B, section 230.10) (an answer marked with an asterisk indicates noncompliance with the Guidelines):

<table>
<thead>
<tr>
<th>Answer</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Based on the discussion in Section 5, are there available, practicable alternatives having less adverse impact on the aquatic ecosystem and without other significant adverse environmental consequences that not involve discharges into “waters of the US” or at other locations within these waters?</td>
</tr>
<tr>
<td>Yes</td>
<td>Based on the discussion in section 5, if the project is in a special aquatic site and is not water-dependent, has the applicant clearly demonstrated that there are no practicable alternative sites that do not involve SAS?</td>
</tr>
<tr>
<td></td>
<td>Will the discharge:</td>
</tr>
<tr>
<td>No</td>
<td>Violate state water quality standards?</td>
</tr>
<tr>
<td>No</td>
<td>Violate toxic effluent standards (under Section 307 of the Act)?</td>
</tr>
<tr>
<td>No</td>
<td>Jeopardize endangered or threatened species or their critical habitat?</td>
</tr>
<tr>
<td>No</td>
<td>Violate standards set by the Department of Commerce to protect marine sanctuaries?</td>
</tr>
<tr>
<td>No</td>
<td>Will the discharge contribute to significant degradation of “waters of the US” through adverse impacts to:</td>
</tr>
<tr>
<td>No</td>
<td>Human health or welfare, through pollution of municipal water supplies, fish, shellfish, wildlife and special aquatic sites?</td>
</tr>
<tr>
<td>No</td>
<td>Life stages of aquatic life and other wildlife?</td>
</tr>
<tr>
<td>No</td>
<td>Diversity, productivity, and stability of the aquatic ecosystem, such as the loss of fish or wildlife habitat, or loss of the capacity of wetland to assimilate nutrients, purify water or reduce wave energy?</td>
</tr>
<tr>
<td>Yes</td>
<td>Recreational, aesthetic, and economic values?</td>
</tr>
<tr>
<td>Yes</td>
<td>Will all appropriate and practicable steps (40 CFR 23.70-77) be taken to minimize the potential adverse impacts of the discharge on the aquatic ecosystem?</td>
</tr>
</tbody>
</table>

### 7.0 General Public Interest Review

(33 CFR 320.4 and RGL 84-09) All public interest factors have been reviewed and summarized in the table below. Both cumulative and secondary impact on the public interest have been considered.

<table>
<thead>
<tr>
<th>NE</th>
<th>No Effect</th>
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<tbody>
<tr>
<td></td>
<td>Detrimental</td>
</tr>
<tr>
<td>M</td>
<td>Neutral (mitigated)</td>
</tr>
<tr>
<td>0</td>
<td>Negligible</td>
</tr>
<tr>
<td>+</td>
<td>Beneficial</td>
</tr>
<tr>
<td>NA</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

| ☒  | Conservation |
| ☐  | Economics |
| ☐  | Aesthetics |
7.1 Discussion of the public interest factor(s) relevant to the decision:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economics</td>
<td><strong>Beneficial</strong> – The project would economically benefit the applicant, providing them with a close, cost-effective gravel source for use on their planned construction sites.</td>
</tr>
<tr>
<td>General environmental concerns</td>
<td><strong>Neutral (mitigated)</strong> – General environmental concerns include factors discussed in section 6 such as suspended particulates/turbidity and biological impacts. Suspended particulates/turbidity is anticipated to be minor and would be neutralized with standard BMPs and erosion control measures. Biological impacts would be very minor and unlikely due to the low density of ESA species in the area, and the use of the recommended minimization measures suggested by USFWS.</td>
</tr>
<tr>
<td>Wetlands</td>
<td><strong>Neutral (mitigated)</strong> – 19.47 acres of wetlands to be physically impacted – 15.15 acres of wetland substrate (overburden) will be removed to mine the gravel underneath, and this overburden will be placed on 2.5 acres of wetlands. The losses are minimized by reduction of the project footprint to the greatest extent practicable.</td>
</tr>
</tbody>
</table>
while accomplishing the project purpose, along with other minimization and avoidance measures as discussed in section 1.5 and 9.2, the chosen on-site configuration (as discussed in section 5 and the mitigation proposed (see section 9). All of the above coupled with the fact that wetlands are abundant in this watershed, the loss is considered to be neutralized.

**Energy Needs**  
**Beneficial** – Since the project would provide the applicant the gravel needed to construct more oil and gas projects within the MPU, the project would be beneficial to energy needs.

**Mineral Needs**  
**Beneficial** – The applicant needs gravel for the construction of projects within Milne Point Unit, so the project would benefit their mineral needs.

**Needs and welfare of the people**  
**Beneficial** – Since the project would provide the applicant the gravel needed to construct more oil and gas projects that would benefit the people, the project would be beneficial to needs and welfare of the people.

<table>
<thead>
<tr>
<th>7.2 The relative extent of the public and private need for the proposed structure or work:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The proposed MPU mine site expansion is needed by Hilcorp to construct their planned projects (several pad expansions) within MPU. The current mine site is out of material, and it would be prohibitively expense to buy and ship gravel over from other mine sites on the North Slope. If the mine were not expanded, the applicant would be forced to find gravel for their projects from another source – either requiring the gravel to be driven from a much greater distance from an established mine outside of Milne Point Unit (provided the mine would have even have enough gravel available) or opening a new mine site within Milne Point Unit, which would result in increased impacts.</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>7.3 Are there unresolved conflicts as to resource use? No</th>
</tr>
</thead>
<tbody>
<tr>
<td>If so, are there reasonable and practicable alternative locations and/or methods to accomplish the objectives of the proposed action? N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7.4 The extent and permanence of the beneficial and/or detrimental effects, which the proposed work is likely to have on the public and private use to which the area is suited:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The mine will temporarily (long-term) convert 19.47 acres of wetlands into uplands, and then upon rehabilitation will permanently convert the wetlands into open water and littoral zones. As long as the mine is open, it will provide the beneficial effects related to economics, energy needs, mineral needs, and needs and welfare of the people.</td>
</tr>
</tbody>
</table>
8.0 Cumulative and Secondary Impacts – (40 CFR 230.11(g) and 40 CFR 1508.7, RGL 84-9) Cumulative impacts result from the incremental environmental impact of an action when added to all other past, present, and reasonably foreseeable future actions. They can result from individually minor but collectively significant actions taking place over a period of time. A cumulative effects assessment should consider both direct and indirect, or secondary, impacts. Indirect impacts result from actions that occur later in time or farther removed in distance from the original action, but still reasonably foreseeable.

8.1 Geographic scope:

The geographic scope for this project is the HUC 10 “Simpson Lagoon-Frontal Beaufort Sea” HUC # 1906040116. The watershed is approximately 195,738.22 acres. This HUC was chosen because the area within the watershed is very environmentally similar (largely homogenous tundra wetland complexes) and the use of the land is very similar (oil and gas field).

8.3 Historical conditions of the area subject to this analysis:

According to the 2001 National Land Cover Dataset the Simpson Lagoon-Frontal Beaufort Sea watershed contained 702.11 acres of developed land, and between 165.26 and 365.24 acres of impervious surfaces. According to the dataset, the watershed also contains 127,955.96 acres of wetlands. Milne Point Unit has been in use as an oil and gas field since the 1960s. The MPU Mine Site was originally permitted in 1982. The mine site is located west of East Creek, a shallow, tidally-influenced creek flowing into Simpson Lagoon. The mine site is located within sections 20 and 29 of Township 13 North, Range 11 East, Umiat Meridian (see Figure 1), approximately 1.5 miles southeast of MPU B Pad, and can be accessed all year. The current size and basic configuration of the gravel mine area are unchanged from what was approved in the 1995 Milne Point Gravel Mine Site Mining and Rehabilitation Plan. Approximately 42 acres of mine pit within the 65-acre permitted area was flooded with melt water and runoff until the mine site was dewatered in the summer of 2013. This flooded area included approximately 5.5 acres of shallow littoral habitat along the western perimeter of the reservoir that was part of the 1995 rehabilitation plan. The existing mine site has been segregated from East Creek by a 20-foot-high flood dike along the eastern boundary to avoid a potential breach between the mine and the creek during periods of high flow. Overburden material is currently stored in three areas. Overburden was used to create the 20-foot-high flood dike to the east of the mine site that was intended to prevent salt water intrusion. There is one shallow littoral habitat area created with overburden material, approximately 5.5 acres in size, located to the west of the mine site (see Figure 2). A large 1.3 million cubic yard stockpile of overburden material is located immediately east of the existing mine pit covering approximately 16.5 acres of wetlands. This overburden material is recognized as a
source for future rehabilitation and abandonment projects on an as-needed basis. Located at the extreme south end of the stockpile are two perched, vegetated wetland areas, each encompassing approximately one half acre. The southern-most of these includes a small pond.

8.2 Temporal scope: 25 years.

Explain the selected timeframe:
The National Land Cover Dataset is available in 2011 and 2001. The analysis will be determining the cumulative effects based on the National Land Cover Dataset, and Regulatory Module Data. The mine is expected to provide many years’ worth of material. The established mine provided 35 years’ worth of material and was about twice the size of this expansion.

8.4 Major changes to the area and description of current condition:
According to the 2001 and 2011 National Land Cover Dataset developed land in the Simpson Lagoon-Frontal Beaufort Sea watershed has decreased by -5.34%, and impervious surfaces has decreased by -1.47%. The watershed has been utilized as an oil field since the 1960s. The watershed is currently comprised of approximately 0.36% developed land, with between 0.08% and 0.19% of impervious surfaces. According to Regulatory Module Data, 1.382% of the watershed has been impacted and 2,705.11 acres of aquatic resources have been impacted within the watershed. According to the National Land Cover Dataset, the watershed contains approximately 65.37% wetlands (127,955.96 acres), 24.36% open water resources (47,673.52 acres), and 89.73% total aquatic resources (175,629.48 acres). According to the Regulatory Module Data and the National Land Cover Dataset, 1.540% of the watershed’s aquatic resources have been impacted. See Sections 1.3 and 8.3 for a discussion of the current conditions.

8.5 Anticipated cumulative and secondary/indirect impacts (environmental consequences) of the proposed action: This project would temporarily fill 19.47 acres of permafrost-driven, tundra wetlands, and then permanently convert them to open water and littoral zones after the mine is rehabilitated. Since 19.47 acres of wetlands is 0.015% of wetlands within the watershed, and eventually would be a conversion to open waters (actually increasing the open water habitat by 0.041%), the project is anticipated to have a minor contribution to cumulative impacts. There are no projected secondary impacts.

8.6 Reasonably foreseeable future actions: There is not any additional space at the mine for future expansions, so there are no reasonably foreseeable future actions at the project site. Since the majority of MPU is encompassed by the watershed, there will be potential for future pad expansions and new pad construction.
8.7 Effect of the proposed mitigation, including avoidance and minimization, on reducing the project’s contribution to cumulative effects in the region: In order to reduce the project’s contribution to cumulative effects in the region, the applicant has designed and sited the mine with as minimal footprint as practicable to satisfy project purpose, while addressing safety and construction standards. The temporary impacts associated with construction activities in wetlands are anticipated to be negligible. In the preferred alternative, the applicant has avoided and minimized the expansion to reduce impacts as much as possible while still meeting their objective. In accordance with the “U.S. Army Corps of Engineers Approved Final Compensatory Mitigation Plan, Department of Army Permit POA-1981-243-M7 Beaufort Sea, Milne Point Unit Mine Site Expansion”, the applicant will remove 0.64 acres of a historic gravel berm within MPU (“tractor tracks”) off of the Moose Pad Road to return the area to its original contours and reconnect the wetland complexes currently bisected by the “tractor tracks”. This removal of “tractor tracks” would greatly improve the hydrology of currently bisected wetland tracts. See sections 1.5 and 1.7 for additional information.

8.8 Conclusions: When considering the overall impacts that would result from this project, in context with the overall impacts from similar past, present, and reasonably foreseeable future projects, their cumulative impacts are not considered to be adverse. Based on the overall anticipated minor cumulative and secondary impacts of the project, the avoidance and minimization measures described in the section 1.5 and the mitigation measures described in sections 1.6 and 9 are determined to be appropriate and practicable to the scope and degree of the environmental impacts of the project.


9.1 Avoidance: In evaluating a project area containing waters of the United States, consideration must be given to avoiding impacts on these sites. Avoidance measures for this project are Section 1.5 and 5.

9.2 Minimization: If waters of the United States cannot be avoided, impacts must be minimized. Minimization measures for this project are described in Section 1.5 and 5.

9.3 Compensatory mitigation

9.3.1 Is compensatory mitigation required? Yes

9.3.2 Are the impacts to the jurisdictional aquatic resources in the service area of an approved mitigation bank? No

9.3.3 Does the mitigation bank have the appropriate number and resource type or credits available? Not Applicable
9.3.4 Are the impacts to the jurisdictional aquatic resources in the service area of an approved in-lieu fee program? Yes

9.3.5 Does the in-lieu fee program have the appropriate number and resource type or credits available? No

9.3.6 Identify the selected compensatory mitigation option(s)

☐ Mitigation Bank

☐ In-Lieu fee Program Credits

☐ Permittee-responsible mitigation under a watershed

☐ Permittee-responsible mitigation, on-site

☒ Permittee-responsible mitigation, off-site

9.3.7 Does the selected compensatory mitigation option comply with the order of the options presented in §332.3(b)(2)-(6)? Yes

9.3.8 Other mitigative actions: N/A

9.3.9 Final compensatory mitigation required by the Corps: The compensatory mitigation required by the Corps is the same as described in Section 1.6 of this document (Compensatory Mitigation proposed by the applicant).

10.0 Other Laws, Policies, and Effects

10.1 Endangered Species Act (ESA):

10.1.1 Name of Species considered: spectacled eider, Steller’s eider, and polar bear

10.1.2 Effects Determination:

☒ May affect, not likely to adversely affect

For these species: All Species Considered

10.1.3 Basis for determination: The area falls under the March 2, 2016 PBO.

10.1.4 Consultation: Informal

10.1.5 Consultation response:

On 01/12/2017, the USFWS responded with concurrence that the project qualifies for use of the PBO.

The following Minimization Measures are required under the Programmatic BO:
Ground disturbing activity will not occur from June 1 through July 31;
Projects will not involve construction of overhead wires or guyed towers;
Design features will be incorporated into facility lighting (shielding to reduce outward-radiating light) to decrease the potential for bird strikes;
Applicants will be required to develop and have in place, appropriate spill prevention and response plans; and
A project-specific wildlife interaction plan, including polar bear avoidance and interaction guidelines, would be developed; or the applicant would agree to adopt the Service’s Polar Bear Interaction Guidelines prior to conducting field activities.

Given, 1) the applicant would adhere to the Minimization Measures described above, including the timing restriction intended to minimize take of nesting eiders, 2) effects to Steller’s eiders are not anticipated, 3) appreciable effects to spectacled eiders are not expected, and 4) destruction or adverse modification of polar bear critical habitat is not expected; the Service concluded the proposed action is not likely to adversely affect listed species.

10.1.6 Additional information (optional): N/A
10.1.7 Compliance with ESA: Yes
10.2 Magnuson-Steven Act – Essential Fish Habitat (EFH): There is no EFH in the project area.
10.3 National Historic Preservation Act (NHPA) – Section 106
10.3.1 Known sites present: There are no known sites in the area.
10.3.2 Survey required/conducted: No
10.3.3 Effects determination:
☒ No effect
For these historic properties eligible or listed in the National Register of Historic Places: no sites known to be present
10.3.4 Rationale for effects determination: No sites are known to be present. SHPO responded with a “No Historic Properties Affected” determination.
10.3.5 Memorandum of Agreement required: yes
10.3.6 Date consultation complete if necessary: 12/20/2017
10.3.7 Additional information (optional): N/A
10.3.8 Compliance with National Historic Preservation Act: Yes
10.4 Corps Wetland Policy: Based on the public interest review (Section 7 of this document), the beneficial effects of the project outweigh the detrimental impacts of the project.

10.5 Water Quality Certification under Section 401 of the Clean Water Act:

10.5.1 An individual water quality certification was issued.

10.5.2 Date of Water Quality Certification decision: 01/23/2017

10.5.3 Additional information (optional): The following measures are a requirement of the 401 cert:

1. Reasonable precautions and controls must be used to prevent incidental and accidental discharge of petroleum products or other hazardous substances. Fuel storage and handling activities for equipment must be sited and conducted so there is no petroleum contamination of the ground, subsurface, or surface waterbodies.

2. During construction, spill response equipment and supplies such as sorbent pads shall be available and used immediately to contain and cleanup oil, fuel, hydraulic fluid, antifreeze, or other pollutant spills. Any spill amount must be reported in accordance with Discharge Notification and Reporting Requirements (AS 46.03.755 and 18 AAC 75 Article 3). The applicant must contact by telephone the DEC Area Response Team for Northern Alaska at (907) 451-2121 during work hours or 1-800-478-9300 after hours. Also, the applicant must contact by telephone the National Response Center at 1-800-424-8802.

3. All work areas, material access routes, and surrounding wetlands involved in the construction project shall be clearly delineated and marked in such a way that equipment operators do not operate outside of the marked areas.

4. Natural drainage patterns shall be maintained, to the extent practicable, without introducing ponding or drying.

5. Excavated or fill material, including overburden, shall be placed so that it is stable, meaning after placement the material does not show signs of excessive erosion. Indicators of excess erosion include: gullying, head cutting, caving, block slippage, material sloughing, etc. The material must be contained with siltation best management practices (BMPs) to preclude reentry into any waters of the U.S., which includes wetlands.

6. Include the following BMPs to handle storm water and total storm water volume discharges as they apply to the site:

   a. Divert storm water from off-site around the site so that it does not flow onto the project site and cause erosion of exposed soils;
b. Slow down or contain storm water that may collect and concentrate within a site and cause erosion of exposed soils;

c. Place velocity dissipation devices (e.g., check dams, sediment traps, or riprap) along the length of any conveyance channel to provide a non-erosive flow velocity. Also place velocity dissipation devices where discharges from the conveyance channel or structure join a water course to prevent erosion and to protect the channel embankment, outlet, adjacent stream bank slopes, and downstream waters.

7. Fill material must be clean sand, gravel or rock, free from petroleum products and toxic contaminants in toxic amounts.

8. Any disturbed ground and exposed soil not covered with fill must be stabilized and re-vegetated with endemic species, grasses, or other suitable vegetation in an appropriate manner to minimize erosion and sedimentation, so that a durable vegetative cover is established in a timely manner.


10.7 Effects on Federal Projects (33 CFR 320.4(g)(4)): This project is not located in the vicinity of an authorized federal project.

10.8 Effects on the limits of the territorial seas (33 CFR 320.4(f)): This proposed project does not include any structure or work affecting coastal waters.

10.9 Safety of impoundment structures (33 CFR 320.4(k)): This proposed project does not include any impoundment structures.

10.10 Activities in Marine Sanctuaries (320.4(jj)): This proposed project is not located in a marine sanctuary as established by the Secretary of Commerce under authority of Section 302 of the Marine Protection, Research and Sanctuaries Act of 1972.

10.11 Other Authorizations:
Department of Natural Resources, Department of Mining, Land and Water – ADL 416092 Designated Material Site Permit, final finding and decision issued on 2/13/2017

North Slope Borough Development Permit – 17-123F issued on December 21, 2016
10.12 Significant issues of Overriding National Importance (33 CFR 320.4(j)(2)): N/A.

10.13 Discussion (if necessary): N/A

11.0 Final Project Description and Special Conditions

11.1 Final Project Description: The final project description is the same as the applicant's proposed project description which is indicated in Section 1.4 of this document.

11.2 Special Conditions:

Special Conditions for POA-1981-243-M7:

1. Wetland Avoidance: The Permittee shall avoid the remaining 1.3 acres of onsite wetlands, as detailed on Figure 3 of 6 (Attachment A). These wetland areas were avoided as part of this permit application review process; therefore, no placement of dredge or fill material, land clearing, or other construction work shall occur within this area without additional authorizations.

*Rationale: This condition is required to avoid adverse impacts to adjacent wetlands as a result of the permitted project (33 CFR 320.4(b)(1), 33 CFR 320.4(r)(1), and 40 CFR 230.41).*

2. The Permittee shall use only clean fill material for this project. The fill material shall be free from items such as trash, debris, automotive parts, asphalt, construction materials, concrete blocks with exposed reinforcement bars, and soils contaminated with any toxic substance, in toxic amounts in accordance with Section 307 of the Clean Water Act.

*Rationale: This condition is required to prevent adverse impacts to wetlands and other waters of the U.S. outside of the permitted project area (33 CFR 320.4(b) and (d), 40 CFR 230.11(c) and (d), and 40 CFR 230.60).*

3. Concurrently with project construction, the permittee shall implement the mitigation plan titled "U.S. Army Corps of Engineers Approved Final Compensatory Mitigation Plan, Department of Army Permit POA-1981-243-M7 Beaufort Sea, Milne Point Unit Mine Site Expansion" dated February 15, 2017 and attached as Attachment B. In accordance with the plan, berming of the top edge of the expansion site is to occur during project construction, while the gravel removal will occur during winter 2017/2018, after a survey is completed during summer 2017. Any changes to the mitigation plan must be approved by the USACE.
Rationale: This condition is required to compensate for resource losses important to the human and aquatic environment (33 CFR 320.4(r)(1), 33 CFR 332.1, 33 CFR 332.3(a)(1) and (b)(3), and 40 CFR 230.41).

4. The Permittee shall follow the specifications for mining activities and rehabilitation of the Milne Point Mine Site as laid out in the document titled the “Mining and Rehabilitation Plan for Milne Point Unit Mine Site”, revised by Hilcorp Alaska, LLC on February 1, 2017 (Attachment C).

Rationale: This condition is required to compensate for resource losses important to the human and aquatic environment (33 CFR 320.4(r)(1), 33 CFR 332.1, 33 CFR 332.3(a)(1) and (b)(3), and 40 CFR 230.41).

5. To minimize impacts to ESA listed species, stipulations are incorporated by attached copy of the ESA section 7 consultation letter and Biological Opinion (B.O.) for this project to ensure the project complies with the Endangered Species Act of 1973 (Attachments D & E). If you cannot/will not be able to comply with the terms and conditions or incorporate the minimization measures described in the B.O., then you must notify the Corps and we will re-initiate Section 7 Consultation with the USFWS.

Rationale: This condition is required to reduce the likelihood of the impacts prohibited by the Endangered Species Act [40 CFR PART 230.30].

6. The Permittee shall submit all reports, notifications, documentation and correspondence required by the general and special conditions of this permit to the following address:

   a. For standard mail: U.S. Army Corps of Engineers, Regulatory Division, P.O. Box 6898 JBER, Alaska 99506-0898.

   b. For electronic mail: regpagemaster@usace.army.mil (not to exceed 10 MB).

   c. The Permittee shall reference this permit number, POA-1981-243-M7, on all submittals.

   Rationale: This condition is required to give the applicant contact information for submitting the self-certification and any reports.

7. Within 60 days of completion of the work authorized by this permit, the Permittee shall complete the attached “Self-Certification Statement of Compliance” form (Attachment F) and submit it to the Corps. In the event that the completed work deviates in any manner from the authorized work, the Permittee shall describe the deviations between the work authorized by this permit and the work as constructed on the “Self-Certification Statement of Compliance” form. The description of any
deviations on the “Self-Certification Statement of Compliance” form does not constitute approval of any deviations by the Corps.

Rationale: This special condition is required to ensure compliance with the permit and in order to efficiently plan compliance inspections.

8. All contractors involved in this permitted activity shall be provided copies of this permit in its entirety. A copy shall remain on site at all times during construction.

Rationale: This special condition is required to ensure compliance with the permit, and to minimize impacts to adjacent wetlands and other waters of the U.S. as a result of the permitted project (33 CFR 320.4(b) and 40 CFR 230.41).

9. Should any other agency require and/or approve changes to the work authorized or obligated by this permit, the Permittee is advised a modification to this permit may be required prior to initiation of those changes. It is the Permittee’s responsibility to request a modification of this permit. The Corps reserves the right to fully evaluate, amend, and approve or deny the request for modification of this permit.

Rationale: This special condition is required to ensure compliance with the permit, and to minimize impacts to adjacent wetlands and other waters of the U.S. as a result of the permitted project (33 CFR 320.4(b) and 40 CFR 230.41).

12.0 Findings and Determinations

12.1 Section 176(c) of the Clean Air Act General Conformity Rule Review: The proposed permit action has been analyzed for conformity applicability pursuant to regulations implementing Section 176(c) of the Clean Air Act. It has been determined that the activities proposed under this permit would not exceed de minimis levels of direct or indirect emissions of a criteria pollutant or its precursors and are exempted by 40 CFR Part 93.153. Any later indirect emissions are generally not within the Corps’ continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons, a conformity determination is not required for this permit action.

12.2 Relevant Presidential Executive Orders:

12.2.1 EO 13175, Consultation with Indian Tribes, Alaska Natives, and Native Hawaiians: This action has no substantial effect on one or more Indian tribes, Alaska or Hawaiian natives.

12.2.2 EO 11988, Floodplain Management: Alternatives to location within the floodplain, minimization and compensatory mitigation of the effects were considered above.

12.2.3 EO 12898, Environmental Justice: The Corps has determined that this proposed project would not use methods or practices that discriminate on the basis of race, color or national origin nor would it have a disproportionate effect on minority or low-income communities.
12.2.4 EO 13112, Invasive Species: There are no invasive species issues involved in this proposed project.

12.2.5 EO 13212 and EO 13302, Energy Supply Availability: The project was not one that will increase the production, transmission, or conservation of energy, or strengthen pipeline safety.

12.2.6 EO 13547, Stewardship of the Ocean, Our Coasts, and the Great Lakes: The project would not adversely affect America’s stewardship of the ocean, coasts, or Great Lakes.

12.3 Finding regarding the need for an Environmental Impact Statement: Having reviewed the information provided by the applicant and all interested parties and an assessment of the environmental impacts, we find that this permit action will not have a significant impact on the quality of the human environment. Therefore, an Environmental Impact Statement will not be required.

12.4 Compliance with the Section 404(b)(1) Guidelines: Having completed the evaluation in Section 6, the undersigned have determined that the proposed discharge complies with the Guidelines, with the inclusion of the appropriate and practicable conditions to minimize pollution or adverse effects to the affected ecosystem.

Reason for noncompliance: N/A

12.4.1 The proposed action is the Least Environmentally Damaging Practicable Alternative (LEDPA).

12.5 Public Interest Determination: We find that issuance of the Department of the Army Permit is not contrary to the public interest.

Prepared By:

___________________________  Date: 2/23/2017
Heather Markway, Project Manager

Approved By:

___________________________  Date: 2/23/2017
FOR (DISTRICT COMMANDER)
Colonel Michael S. Brooks
Jason Berkner, Project Manager
Special Actions Branch, Regulatory Division