

# CWA 401 Water Quality Certification - Modification

version 2.11

(Submission #: HQM-ANE9-DEPZC, version 1)

Digitally signed by:  
dec.alaska.gov  
Date: 2026.04.22 12:24:15 -08:00  
Reason: Submission Data  
Location: State of Alaska

## Details

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**Site:** Pikka Development Project

**Submission ID** HQM-ANE9-DEPZC

## Form Input

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### Form Instructions

#### Form Instructions

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Instructions for filling out the 401 Water Quality Certification Request - Modification Form are located on the Alaska DEC website at the link below.

[401 Prefiling Meeting Request Form Instructions](#)

**Agents:** For Delegation of Authority to act on behalf of the applicant in processing the application, use the following form, have signed, and upload with application.

- [Delegation of Authority - 401 Application](#)

### Modification Reason

#### Permit Number

POA-2015-00025-M6

#### Are you modifying any of the following things for this permit?

NONE PROVIDED

#### Modification Description or Section Changes

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- If you have a quick description that explains your modification you can add it below.
- Please check any section boxes below if you've made any additional changes in those sections as well.

If changing contact details for anyone associated with the permit or application, please add a note in the Modification Description box below.

## Modification Description

Oil Search (Alaska), LLC, a subsidiary of Santos Limited (Santos), is requesting a modification to revise the 401 Certification associated with Department of the Army (DA) permit for the Pikka Development Project POA-2015-00025. The proposed changes are for the Nanushuk Drillsite C (NDC) components and represent a 3.44 acre increase in the project footprint in Waters of the US (WOTUS).

Santos proposes to modify the footprint of the NDC Pad to accommodate updated safety and logistics considerations for operations, drilling, and completions activities, including relocating the drilling camp area on the NDC Pad. The pad expansion and modification will increase the footprint of the pad by 2.3 acres. The proposed NDC Pad modifications will require an additional 32,000 cubic yards of gravel fill.

Due to the proposed NDC Pad footprint modification and drilling camp relocation, the NDC road has been extended 0.03 miles to meet the proposed NDC Pad, resulting in a 0.24 acre increase in footprint for the road. This area falls within the previously permitted Project footprint but will increase the NDC road fill quantity by 2,000 cubic yards.

Santos has also advanced pipeline design and proposes a minor update to the location of the NDC Infield Pipeline to include two proposed pipeline valve access pads. The valve pads have been placed on either side of the Kachemach River Pipeline Bridge. The valve pads will also allow year-round access for inspections and emergency response. The two proposed valve pads will increase the total Project footprint by 0.9 acres (~12,500 cubic yards of gravel). The valve pad on the west side of the Kachemach River Bridge will be approximately 0.5 acres and the valve pad located on the east side of the bridge will be approximately 0.4 acres.

## Modified Sections

Discharge Information  
Permit Information  
Contact Information  
Facility Information  
Attachments

Instructions for filling out the 401 Certification Form are located on the Alaska DEC website at the link below.

[401 Certification Form Instructions](#)

## Permit Information

### Federal Permit License Number

POA-2015-00025 M9

## Contact Information (1 of 2)

### Required Contacts

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The following **Contact Roles are REQUIRED**. Please select the appropriate role(s) for each contact and complete the contact details. Multiple role(s) may be assigned to each unique individual.

- **Applicant** (Responsible Party)
- **Billing Contact**

Edit the contact roles and details as needed. If the contact is no longer active, please remove all roles for the assigned person and indicate the contact is In-Active, and add a new contact with the appropriate roles versus writing over the previous one.

### Contact Role(s)

Agent  
Application Preparer  
Billing Contact

### Is this contact In-Active?

No

## Contact

**Prefix**

NONE PROVIDED

**First Name**

Shauna

**Last Name**

Holben

**Title**

Permitting Coordinator

**Organization Name**

Oil Search (Alaska), LLC, a subsidiary of Santos Limited

**Phone Type**

Business

**Number**

907-375-4600

**Extension****Email**

shauna.holben@santos.com

**Mailing Address**

601 W 5th Avenue

Anchorage, AK 99501

USA

## Contact Information (2 of 2)

### Required Contacts

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The following **Contact Roles are REQUIRED**. Please select the appropriate role(s) for each contact and complete the contact details. Multiple role(s) may be assigned to each unique individual.

- **Applicant** (Responsible Party)
- **Billing Contact**

Edit the contact roles and details as needed. If the contact is no longer active, please remove all roles for the assigned person and indicate the contact is In-Active, and add a new contact with the appropriate roles versus writing over the previous one.

**Contact Role(s)**

Applicant

**Is this contact In-Active?**

No

## Contact

**Prefix**

NONE PROVIDED

**First Name**

Alan

**Last Name**

Johnson

**Title**

Vice President Operations

**Organization Name**

Oil Search (Alaska), LLC, a subsidiary of Santos Limited

**Phone Type**

Business

**Number**

907-375-4600

**Extension****Email**

Alan.johnson@santos.com

**Mailing Address**

601 W 5th Avenue

Anchorage, AK 99501

USA

## Project / Facility Site Info

### Identify the applicable federal license or permit

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A copy of the federal permit or license application is required to be submitted with the request for the water quality certification. (18 AAC 15.130, 18 AAC 15.180)

**Federal Agency**

Army Corps of Engineers (USACE)

**Permit License Number (ex. USACE: POA-XXXX-XXXX; FERC: FERC-xxxx-xxxx; EPA: AK#####)**

POA-2015-00025 M9

**Project Name or Title**

Pikka Development Project

**Primary Receiving Waterbody Name**

Ugnuravik River

**Estimated Project Dates (+/- 30 days)**

Project Estimated Start Date	Project Estimated End/Completion Date
11/01/2015	12/31/2030

**Approximate date(s) when any Discharge(s) may commence (+/- 30 days)**

Description	Discharge Estimated Start Date	Discharge Estimated End Date
Gravel placement for NDC Pad, road, and valve pads	11/01/2026	12/29/2028

### **Project Description (Nature of Activity, include all features)**

Oil Search (Alaska), LLC, a subsidiary of Santos Limited (Santos), is requesting a modification to revise the 401 Certification associated with Department of the Army (DA) permit for the Pikka Development Project POA-2015-00025. The proposed changes are for the Nanushuk Drillsite C (NDC) components and represent a 3.44 acre increase in the project footprint from that originally permitted, into waters of the US.

Santos proposes to modify the footprint of the NDC Pad to accommodate updated safety and logistics considerations for operations, drilling, and completions activities, including relocating the drilling camp area on the NDC Pad. The pad expansion and modification will increase the footprint of the pad by 2.3 acres. The proposed NDC Pad modifications will require an additional 32,000 cubic yards of gravel fill.

Due to the proposed NDC Pad footprint modification and drilling camp relocation, the NDC road has been extended 0.03 miles to meet the proposed NDC Pad, resulting in a 0.24 acre increase in footprint for the road. This area falls within the previously permitted Project footprint but will increase the NDC road fill quantity by 2,000 cubic yards.

Santos has also advanced pipeline design and proposes a minor update to the location of the NDC Infield Pipeline to include two proposed pipeline valve access pads. The valve pads will be located on either side of the Kachemach River Pipeline Bridge. The valve pads will allow year-round access for inspections and emergency response. The two proposed valve pads will increase the total Project footprint by 0.9 acres (~12,500 cubic yards of gravel). The valve pad on the west side of the Kachemach River Bridge will be approximately 0.5 acres and the valve pad located on the east side of the bridge will be approximately 0.4 acres.

A description of all permitted features is provided below:

Original permit and M1 includes construction of NDA (aka DS1) Pad, NDB (aka DS2) Pad, NDC (aka DS3) Pad, Nanushuk Processing Facility (NPF), Nanushuk Operations Pad (NOP), Tie-In Pad (TIP), Pumphouse Pad, Boat Ramp, Access Road, NDA (aka DS1) Road, NDB(aka DS2) Road, NDC (aka) DS3 Road, Watersource Access Road, Boat Ramp Access Road, Mustang Road Upgrades, Miluveach River Bridge, Kachemach River Bridge, Culverts, VSMs and Slurry for Pipelines, Screeding at Oliktok Point, and Power/Fiber Optic Cable trenching. It also included minor upgrades and maintenance to the existing road system. Gravel material for project development will be sourced from one or more existing gravel mine sites.

M2 includes the Seawater Treatment Plant (STP) and the STP seawater pipeline, associated gas pipeline, and fiber optic line connecting with the previously permitted make-up water pipeline, gas pipeline, and fiber optic line. To construct these components, the Project will involve driving sheet pile, driving piles, trenching, excavating, placing gravel fill, screeding, installing vertical support members (VSMs) and pipeline, and constructing ice roads and pads.

M3 included increases in footprint for the Boat Launch Road and Pad, Pump House Pad, Miluveach River Valve Pad w/ Tundra Access Ramp, Valve Pad East of the Miluveach River, East Miluveach Pipeline Crossing, and the Tundra Pad Pipeline Crossing

M4 approved ♦ Oil Search Nanushuk Project Compensatory Mitigation Plan: Rev 3 POA2015-025 ♦ dated May 2021.

M5 includes Seawater Treatment Plant (STP) pipeline equipment crossings, STP pipeline existing road pipeline crossings, Spine Road Y Pigging Platform, Gas Spur Pipeline (GSP) pipeline equipment crossings, GSP existing road pipeline crossings, GSP Parking Pad & Platforms at SS-1C Road, Sales Oil tie-in (SOT) Parking Pad & Platforms, additional VSMs for STP and GSP, bonding cable trenching.

M6 approved an extension of the permit until May 31, 2030.

M7 approved a relocation of Equipment Crossing (EQ) 52.

M8 approved the placement of a valve pad abutting NPF.

### **Project Purpose (Describe the reason(s) for discharge)**

The purpose of the Project is to safely produce commercial quantities of liquid hydrocarbons in oil and gas leaseholds by operating from a site east of the Colville River Delta; to process hydrocarbons on or near the drill sites; and to transport sales-quality oil through an export pipeline to the Kuparuk sales oil pipeline, and then to TAPS.

The purpose of the modification to the Project is to expand the NDC Pad and add pipeline valve access pads to accommodate updated safety and logistics considerations for operations, drilling, and completions activities. The Pikka Development Project changes are a result of incremental advancements in project design, construction methods, and operational requirements.

USACE permit discharge are provided below by modification:

POA-2015-00025

The discharge of 2,934,150 cubic yards of clean fill material into 266.2 acres of WOTUS, including wetlands, and temporary impacts to 5.7 acres of the Beaufort Sea adjacent to Oliktok Dock for screeding of sediments, and temporary impacts to 0.1 acres of wetlands due to trenching for cable burial, for total impacts to 272 acres of WOTUS. For construction of NDA (aka DS1) Pad, NDB (aka DS2) Pad, NDC (aka DS3) Pad, Nanushuk Processing Facility (NPF), Nanushuk Operations Pad (NOP), Tie-In Pad (TIP), Pumphouse Pad, Boat Ramp, Access Road, NDA (aka DS1) Road, NDB(aka DS2) Road, NDC (aka) DS3 Road, Watersource Access Road, Boat Ramp Access Road, Mustang Road Upgrades, Miluveach River Bridge, Kachemach River Bridge, Culverts, VSMs and Slurry for Pipelines, Screeding at Oliktok Point, and Power/Fiber Optic Cable trenching. Minor upgrades and maintenance to the existing road system may also be required to facilitate transportation of sealift modules. Gravel material for project

development will be sourced from one or more existing gravel mine sites.

#### POA-2015-00025-M1

This is the 1st modification of the original permit. The permit is hereby modified as follows:

- ◆ Re-configure the DS2 Pad resulting in a net increase of 1.3 acres of fill. The modified DS2 Pad is 20.8 acres.
- ◆ Relocate the Tie-in Pad to northeast of the Kuparuk Central Processing Facility 2 resulting in a net increase of 0.1 acres. The modified Tie-in Pad is 0.9 acres.
- ◆ Locate the Pump house Pad 500 feet west of the permitted location.
- ◆ Expand the water source access road 8 feet in width resulting in an increase of 0.3 acres. The modified water source access road is 32 feet wide.
- ◆ Design build calculations resulted in a total increase of gravel fill into 0.2 acres.
- ◆ In total, this modification authorizes an increase of discharged fill material into 1.9 acres of wetlands. The entire project footprint is modified from 272.0 acres to 273.9 acres.

#### POA-2015-00025-M2

This is the 2nd modification of the original permit. The permit is hereby modified as follows:

- ◆ Sea Water Treatment Pipeline - Discharge of sand slurry (7,100 CY) into 0.05 acre wetlands to install vertical support members (VSMs) to support an 18.4-mile make-up water pipeline. The pipeline would be installed by drilling holes into frozen ground in the winter and backfilling with sand slurry.
- ◆ Sea Water Treatment Plant (STP) - Discharge of gravel fill (190,000 CY) and sunken barge (47,000 CY) into 6.83 acres of marine waters in the summer.
- ◆ Dolphins - Installation of 4 mooring dolphins, each 48 inch in diameter by 75 feet in length, to a depth of approximately -50 feet MLLW during the winter in ground fast ice in marine waters.
- ◆ Screeding (17,000 CY), grooming humps and depressions in the sea floor, to a depth of 7.5 to 8.0 feet of 8.32 acres of sea floor in the summer, up to annually.
- ◆ Installation of sheet pile - 2,218 linear feet of sheet pile will be installed into 0.01 acres of marine waters during the winter in ground fast ice.
- ◆ Outfall - Install a 24-inch diameter by 457-foot outfall pipe into 0.02 acres of marines waters during the winter in ground fast ice below MHW by trenching (110 CY) of the seafloor. Excavated material will be backfilled to cover the pipe and excess material will be side cast.
- ◆ Excavation - The 1.94-acre area designated for STP barge placement will be dewatered and excavated to - 9.5 feet MLLW during the summer, and the excavated material (12,000 CY) will be placed in the sheet pile enclosure.

#### POA-2015-00025-M3

This is the 3rd modification of the original permit. The permit is hereby modified as follows:

1. Extend boat launch road from 1.5 miles to 1.8 miles and relocate boat launch pad.
2. Increase the pump house pad from 1.1 acres to 1.8 acres.
3. Increase the Miluveach River Valve Pad with tundra access ramp from 0.27 acres to 0.54 acres.
4. Increase the valve pad east of the Miluveach River from 0.2 acres to 0.3 acres.
5. Discharge gravel fill into 1.4 acres to construct the East Miluveach pipeline crossing.
6. Discharge gravel fill into 0.19 acres to construct a tundra pad pipeline crossing.

#### POA-2015-00025-M4

This is the 4th modification of the original permit. The permit is hereby modified as follows: The ◆ Oil Search Nanushuk Project Compensatory Mitigation Plan: Rev 3 POA-2015-025◆ dated May 2021 will replace ◆ Oil Search Nanushuk Project Compensatory Mitigation Plan: Rev 2 POA-2015-025◆ dated March 2019.

#### POA-2015-00025-M5

This is the 5th modification of the original permit. The permit is hereby modified as follows:

- ◆ Discharge 7,900 CY of fill into 1.2 acres of wetlands for STP equipment crossings.
- ◆ Discharge 8,800 CY of fill into 0.4-acre of wetlands for STP road pipeline crossings.
- ◆ Discharge 1,600 CY of fill into 0.2-acre of wetlands for STP Piggings Platform at Spine Road Y.
- ◆ Discharge 1,980 CY of fill into 0.2-acre of wetlands for SOT parking pad/platform.
- ◆ Discharge 3,000 CY of fill into 0.5-acre of wetlands for GSP equipment crossings.
- ◆ Discharge 4,400 CY of fill into 0.4-acre of wetlands for GSP parking pad/platforms at DS1C Road.
- ◆ Discharge 1,500 CY of fill into 0.2-acre of wetlands for 30 STP VSMs.
- ◆ Discharge 1,840 CY of fill into 0.1-acre of wetlands for 460 GSP VSMs.
- ◆ Discharge 170 CY of fill into 0.1-acre of wetlands for bonding cable trenching

#### POA-2015-00025-M6

This is the 6th modification of the original permit. The permit is hereby amended to read as follows:

- ◆ The time limit for completing the work authorized ends on May 31, 2030.

#### POA-2015-00025-M7

This is the 7th modification of the original permit. The permit is hereby modified as follows:

- ◆ Place fill material in 0.2 acre of wetlands for the construction of an equipment crossing Pad (EQ52).

POA-2015-00025-M8

This is the 8th modification of the original permit. The permit is hereby modified as follows:

- ◆ Place 0.19 acre of fill material into wetlands for the construction of valve pad abutting the Nanushuk Process Facility (NPF) pad.

**Is any portion of the work already complete?**

Yes

**Please describe the completed work**

Since receipt of the DA permit, Santos began Project gravel placement during winter of 2019-2020 and began drilling operations at the Nanushuk Drillsite B (NDB) in 2023. Santos has also completed gravel placement for Project components required for startup of production including:

- ◆ Pikka Access Road
- ◆ NDB Pad and NDB Access Road
- ◆ Nanushuk Drillsite A (NDA) Access Road
- ◆ Nanushuk Processing Facility (NPF) and abutting Valve Pad
- ◆ Nanushuk Operations Pad (NOP)
- ◆ Tie-In Pad (TIP)
- ◆ Pikka Sales Oil Tie-in (SOT) Parking Pad and Platform
- ◆ Seawater Treatment Plant (STP) Facility
- ◆ Water Source Access Pad
- ◆ Pikka Infield Pipelines
- ◆ Pikka Pipelines (between NPF and TIP)
- ◆ STP Pipelines
- ◆ Equipment Crossing Locations
- ◆ Gas Spur Pipeline (GSP)
- ◆ Mustang Road Upgrades
- ◆ Pikka Boat Launch and the Boat Launch Access Road

**Description of current activity site conditions**

North Slope tundra and wetlands. See attached figures.

**Relevant Site Data, Photographs that Represent Current Site Conditions, or other Relevant Documentation**

NONE PROVIDED  
**Comment**  
NONE PROVIDED

**Is this a linear project? (i.e., utility line, road, etc.)**

No

**Project Address**

Pikka Unit and surrounding project areas  
Nuiqsut, AK 99789

Visit the link below to help with conversion between DMS and Latitude/Longitude

[DSM - Lat/Long converter](#)

**Project Location**

70.264755,-150.749226

Visit the following link if you need to convert the lat/long to get the **PLSS information**

[Converter for Section, Township, and Range](#)

**PLSS Location (Public Land Survey System)**

State Tax Parcel ID	Borough/Municipality	Meridian	Section	Township	Range
NONE PROVIDED	North Slope Borough	Umiat	25, 36	11N	5E
NONE PROVIDED	North Slope Borough	Umiat	21-23, 28-31	11N	6E

## Directions to Site

The proposed project modifications are located approximately 56 miles west of and, at its closest point, is approximately 7 miles northeast of the community of Nuiqsut on OSA-operated State of Alaska and Arctic Slope Regional Corporation (ASRC) oil and gas leases southeast of the East Channel of the Colville River. The Project is located southwest of the existing Ooguruk Development Project, west of the existing Kuparuk River Unit (KRU), and east of the existing Alpine and Alpine Satellite Development Projects.

## Federal Agency Contact (1 of 1)

### Have you been working with anyone in the Federal Agency?

Yes

### Federal Contact Role

USACE

### Federal Agency Contact

First Name	Last Name
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Drew	Sliger
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#### Title

Project Manager Regulatory Division

#### Organization Name

USACE

Phone Type	Number	Extension
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Business	9077532723	
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#### Email

Drew.E.Sliger@usace.army.mil

## Dredge Material to be Discharged

### Is dredging involved?

No

## Tier Analysis

A tier analysis is comprised of a layered approach to determine the need for testing the dredge material to aid in generating physical, chemical, toxicity and bioaccumulation information, but not more information than is necessary to make factual determinations.

The tier analysis is a series of tiers (I - IV) or levels of intensity (and cost) of investigation. It is necessary to proceed through the tiers only until information is sufficient to make factual determinations, no further testing is required.

- 

- **Tier I - Site Evaluation and History.** The initial tier (Tier I) uses readily available, existing information (including all previous testing). For certain dredge materials with readily apparent potential for environmental impact (or lack thereof), information collected in Tier I may be sufficient for making factual determinations.

- **Tier II - Chemical Testing** is concerned solely with sediment and water chemistry.

- **Tier III - Biological Testing (bioassay and/or bioaccumulation testing)** is concerned with well-defined, nationally accepted toxicity and bioaccumulation testing procedures.

- **Tier IV - Special Studies** allows for case-specific laboratory and field testing, and is intended to for use in unusual circumstances.

For more information regarding a Tier analysis, see below references

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- [EPA Inland Testing Manual](#)

- [USACE Seattle District Civil Works DMMP User Manual](#)

## Fill Material to be Discharged

### Will Fill Material be Discharged?

Yes

### For fill material, identify the material source

Local North Slope gravel site

### Types of material being discharged and the amount of each type (cubic yards)

Type	Cubic Yards
Gravel	3,300,135

### Surface area in (acres or linear feet) of wetlands or other waters filled

Surface Area	Units
299.27	Acres

## Discharge Location Information (1 of 2)

Identify the location and nature of any potential discharge that may result from the proposed project and the location of receiving waters

### Discharge Location ID (001, 002, 003, - increment by one)

001

NOTE: if you have a receiving water that is Wetlands, just enter the generic term "Wetlands". Do not enter "Wetlands of Tanana River", for example.

Please select 'Other' if your waterbody is not in the list below.  
You can start typing the name of the waterbody to filter the list.

### Receiving Waterbody / Wetlands Name

Wetlands

### Discharge Location

70.264755,-150.749226

## Discharge Location Information (2 of 2)

Identify the location and nature of any potential discharge that may result from the proposed project and the location of receiving waters

### Discharge Location ID (001, 002, 003, - increment by one)

002

NOTE: if you have a receiving water that is Wetlands, just enter the generic term "Wetlands". Do not enter "Wetlands of Tanana River", for example.

Please select 'Other' if your waterbody is not in the list below.  
You can start typing the name of the waterbody to filter the list.

### Receiving Waterbody / Wetlands Name

Kachemach River

## Discharge Location

70.28328041701769,-150.65872495055962

## Other Pollutant Sources

### Contaminated Site Information

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Determine if your project is **within 1,500 feet** of a known Alaska DEC Contaminated Site. See the *Alaska DEC Contaminated Web Map* below. This will help you to identify if any potential pollutants/parameters of concern may be present on your project site., see DEC's website:

- [Contaminated Sites Web Map](#)
- [Contaminated Sites Database Search website](#)

Is the project within 1,500 feet of a known contaminated site?

No

## Parameters of Concern that may be present in discharge

### Parameter(s) of Concern

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Identify the parameters of concern that may be present in your discharge from the dredge and/or fill material.

Note, **TURBIDITY** and **SEDIMENT** are routine parameters associated with dredge and/or fill activities.

Consider if other parameters may be present from past activities in the area such as contaminated site data, impaired waters or other relevant water quality data, or other parameters of concern identified during the application process.

### Parameter(s)

Turbidity  
Sediment

If known, describe respective concentrations, persistence, and potential impacts to the receiving water and data on parameters that may alter the effects of the discharge to the receiving water

Unknown. Short-term duration from construction impacts.

### Impaired Waters

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An **impaired waterbody** are those listed as a **Category 4 [304(b)]** or **Category 5 [303(d)]** in the current EPA approved [Alaska's Integrated Water Quality Monitoring and Assessment Report](#).

For the most recently *Approved Integrated Water Quality Monitoring And Assessment Report (Integrated Report)*, see DEC's website:

- [Integrated Water Quality Monitoring And Assessment Report https://dec.alaska.gov/water/water-quality/integrated-report](https://dec.alaska.gov/water/water-quality/integrated-report)

Does a discharge of any parameter identified above occur to an impaired waterbody?

No

If determined necessary and requested by the Department, submit sufficient and credible baseline water quality information for the receiving water which meets the requirements of 18 AAC 70.016(a)(6)(A-C).

## **Avoidance & Minimization BMPs and Mitigation Measures**

Describe how impacts are being avoided and minimized on the project site. Include best management practices (BMPs) for sediment and erosion controls that will be implemented to minimize environmental impacts, and any methods and means proposed to monitor the discharge and the equipment or measures planned to treat, control, or manage the discharge.

### **Include a description of any methods and means proposed to monitor the discharge and the equipment or measures planned to treat, control, or manage the discharge**

As required by the USACE POA-2015-00025 permit Special Condition 5 and 6, all authorized fill area boundaries will be surveyed and clearly delineated prior to discharge. Road and fill pad surfaces and slopes will be maintained without discharging fill material outside of permitted fill embankments. Fill slopes will be stabilized using best management practices (BMPs) to prevent erosional impacts.

### **Avoidance Measures**

The following measures will be taken to avoid impacts to aquatic ecosystems, including wetlands, to the greatest extent practicable:

- ◆ Placement of proposed fill is adjacent to the already permitted NDC Pad, pipeline, and access road. This concentrates gravel fill placement in areas already permitted for development and avoids additional impacts to undisturbed tundra areas.
- ◆ Gravel for the Project will either be stockpiled on uplands or be transported directly from the material site and placed within the permitted footprint.
- ◆ Single-season ice roads and ice pads will be used to support winter construction, avoiding the need for temporary fill during construction.

### **Minimization Measures**

The following additional measures will be taken to minimize impacts to the greatest extent possible:

- ◆ By expanding the permitted footprint of the NDC Pad, Santos will be able to accommodate completions, storage, well stimulation, and testing equipment; as well as temporary construction and production facilities, and avoid the need for a separate staging pad, therefore minimizing impacts to waters of the U.S. (WOTUS).
- ◆ Tundra access ramps, that allow access over the pipeline, were removed from the valve pad design to further minimize impacts to WOTUS. Since the Kachemach River Pipeline Bridge is located upstream of the river and NDC access road, it was determined that tundra access ramps would not be required.
- ◆ The proposed NDC Pad was designed to the minimum requirements for safe practices and planned development activities. Santos has planned well spacing to the minimum standards that still meet Project surface and subsurface requirements.
- ◆ Fill material acquired for the Project will be clean fill material and sourced from one of the local existing mine sites.
- ◆ Gravel fill material will be placed during frozen conditions to minimize wetland disturbance.
- ◆ Water withdrawal for ice pad and ice road construction will be conducted in compliance with Alaska Department of Natural Resources (ADNR) water withdrawal authorizations and Alaska Department of Fish & Game (ADF&G) fish habitat permit stipulations.

### **Mitigation Measures**

A compensatory mitigation plan (CMP) was approved for this Project and modified under file number POA-2015-00025-M4. The CMP is applicable to these proposed modifications and continues to provide appropriate and practicable compensatory mitigation to compensate for unavoidable loss of WOTUS based on USACE's watershed informed decision. Santos does not propose additional compensatory mitigation beyond what is being implemented under the approved plan.

## **Social / Economic Importance**

### **Social or Economic Importance**

(18 AAC 70.016(c)(5): Provide information that demonstrates the accommodation of important social or economic development. The applicant shall complete either a social OR economic importance analysis (or both) for each affected community in the area where the receiving water for the proposed discharge is located.

### **Social Importance Analysis**

Education and training

**Economic Importance Analysis**

Employment, job availability, and salary impacts  
 Expanded leases and royalties  
 Access to recourses  
 Tax base impacts

**Describe Social and/or Economic Importance of the project**

Santos will continue to provide cultural awareness education and training to all employees and contractors prior to Project commencement. Santos will evaluate education and training opportunities for local residents hired to support the Project. Santos participates in job fairs and actively promotes training and job opportunities for prospective candidates, in particular candidates from the North Slope region and the community of Nuiqsut. Santos directly supports educational and training programs, including the Alaska Science and Engineering Program (ANSEP) and GeoFORCE Alaska, which are administered through the University of Alaska. Santos actively supports the Arctic Education Foundation and engages with the Nuiqsut Trapper School and I?isagvik College.

**Description of Social or Economic Importance, if needed**

NONE PROVIDED

**Comment**

**Employment**

Santos has employed qualified Nuiqsut residents for oil field services jobs and will continue to as the Project progresses during construction. Santos will evaluate future long-term employment opportunities for Nuiqsut residents as the Project moves towards the operations phase. Construction of the facilities and pipeline could create up to approximately 350 jobs on the North Slope at the peak of construction and additional full-time jobs for operations.

**Tax Base & Royalty Impacts**

The Pikka Unit is estimated to hold more than 700 million barrels of oil. The overall Pikka Development Project development cost could range from \$4 to \$6 billion. Construction of the Project is anticipated to generate billions of dollars through state and local taxes, royalty revenues, fees, employment opportunities, and community investment contributions, which would benefit the City of Nuiqsut, NSB, State of Alaska, and Native Corporations. As stakeholders in the process, community residents, Kuukpik, the Native Village of Nuiqsut, City of Nuiqsut, ASRC, and NSB will see local benefits through community investment, taxes, and employment opportunities. Santos is working to identify significant opportunities for social investment in its Alaska lease area based on community, land-owner, and regional interests and needs. Access to Resources The purpose of the Project is to supply reliable make-up water so Santos can access additional oil and gas resources within Santos's lease area through a more efficient oil and gas recovery.

**List of Other Permits or Certificates**

\*Would include but is not restricted to zoning, building, and flood plain permits.

**Include a list of all other federal, interstate, tribal, state, territorial, or local agency authorizations required for the proposed project, including all approvals or denials already received.**

Agency	Type of Approval*	Identification Number	Date Applied	Date Approved	Date Denied
USFWS	LOA for Incidental & Intentional Take	TBD	NONE PROVIDED	NONE PROVIDED	NONE PROVIDED
ADNR DOG	Unit POO Amendment	LONS 19-003	NONE PROVIDED	NONE PROVIDED	NONE PROVIDED
ADF&G	FH Permits	TBD	NONE PROVIDED	NONE PROVIDED	NONE PROVIDED
NSB	Multiple	TBD	NONE PROVIDED	NONE PROVIDED	NONE PROVIDED
USACE	10 Rivers & Harbors Act Permit Amend	POA-2015-00025	03/23/2026	NONE PROVIDED	NONE PROVIDED
ADNR DOG	TWUA	various	NONE PROVIDED	NONE PROVIDED	NONE PROVIDED
USCG	Section 9 Bridge Permit (Road)	1a-21-17	NONE PROVIDED	07/01/2024	NONE PROVIDED
USCG	Section 9 Bridge Permit (Pipeline)	TBD	NONE PROVIDED	NONE PROVIDED	NONE PROVIDED

## Other Agency or Local Contacts (1 of 1)

### Contact Role

OTHER\_REG\_CNTCT

### Other Agency and or Local Contacts

**First Name**      **Last Name**

Janet                  Post

**Title**

North Branch Chief

**Organization Name**

USACE

**Phone Type**      **Number**              **Extension**

Business            9077532831

**Email**

Janet.L.Post@usace.army.mil

## Attachments

### Copy of Federal Application (USACE, EPA, or FERC, etc.)

[DA Eng\\_Form\\_4345\\_NDC Pad Expansion\\_signed.pdf - 03/26/2026 11:11 AM](#)

**Comment**

NONE PROVIDED

### Figures and/or Drawings/Plan Sets. To include a map or diagram of the proposed activity site, including the proposed activity boundaries in relation to local streets, roads, and highways.

[20260323\\_401 Cert Request Pikka Development NDC Modification\\_PD Figures-v1.pdf - 04/22/2026 12:18 PM](#)

**Comment**

Attached is the Project Description and Figures submitted in support of the USACE application form. There are also drawings, Sheets 1-81 that will be submitted via Email as instructed by the EDMS system as it is experiencing issues with attachments causing the signing process to time out.

### Document Attachments

NONE PROVIDED

**Comment**

NONE PROVIDED

### Delegation of Authority for Submission of Application

[20260413\\_Santos DOA\\_NDC 401 Modification\\_POA-2015-00025.pdf - 04/14/2026 07:56 AM](#)

**Comment**

NONE PROVIDED

As per 18 AAC 15.030 signing of applications, all permit or approval applications must be signed as follows:

- 1) in the case of corporations, by a principal executive officer of at least the level of vice president or his duly authorized representative, if the representative is responsible for the overall management of the project or operation;
- 2) in the case of a partnership, by a general partner;
- 3) in the case of a sole proprietorship, by the proprietor; and
- 4) in the case of a municipal, state, federal or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief. The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.

# Agreements and Signature(s)

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## Certification Statement

As per 18 AAC 15.030 signing of applications, all permit or approval applications must be signed as follows:

- 1) in the case of corporations, by a principal executive officer of at least the level of vice president or his duly authorized representative, if the representative is responsible for the overall management of the project or operation;
- 2) in the case of a partnership, by a general partner;
- 3) in the case of a sole proprietorship, by the proprietor; and
- 4) in the case of a municipal, state, federal or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief. The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.

**Signed By** Shauna Holben on 04/22/2026 at 12:21 PM  
N6p60gyw2IY2pASzxShxjPpDAZLGTK+TsoFDJf340wS2YiQ/GKnW+uoAj0BLCfRVzMx9ysg/EjVSoHZAPQV9Bg==