PUBLIC NOTICE
Alaska Department of Environmental Conservation (DEC)
Wastewater Discharge Authorization Program/§401 Certification
555 Cordova Street, Anchorage AK9501-2617
Phone: 907-269-6285 | Email: DEC-401Cert@alaska.gov

Notice of Application for State Water Quality Certification

Public Notice (PN) Date: September 20, 2022
PN Expiration Date: October 20, 2022
PN Reference Number: POA 1996-00211 v1.0
Waterway: Liese Creek & Goodpaster River

Any applicant for a federal license or permit to conduct an activity that might result in a discharge into navigable waters, in accordance with Section 401 of the Clean Water Act (CWA) of 1977 (PL95-217), also must apply for and obtain certification from the Alaska Department of Environmental Conservation that the discharge will comply with the CWA, the Alaska Water Quality Standards, and other applicable State laws.

Notice is hereby given that a request for a CWA §401 Water Quality Certification of a Department of the Army Permit application, Corps of Engineers’ PN Reference Number indicated above has been received for the discharge of dredged and/or fill materials into waters of the United States (WOUS), including wetlands, as described below, and shown on the project figures/drawings. The public notice and related project figures/drawings are accessible from the DEC website at http://dec.alaska.gov/water/wastewater/.

To comment on the project or request for a public hearing with respect to water quality, submit comments electronically via the DEC public notice site at https://water.alaskadec.commentinput.com/?id=fTrhm on or before the public notice expiration date listed above.

Applicant: Northern Star Resources, Ltd (NSR) Michael Eckert, PO Box 145 Delta Junction, AK 99737; (907) 895-2834; meckert@nsrltd.com.

Project Name: Pogo Mine Expansion

Location: The proposed activity is located within Section 25, 26, T. 5 S, R. 14 E; Fairbanks Meridian; in Fairbanks North Star Borough, Alaska. Project Site: Latitude 64.45350640, Longitude -144.90451040, With potential discharge location(s) as follows: Laydown Fill Pad and Road 64.455919, -144.910686; Dry Stack Tailings Facility (DSTF), Expansion 64.445354, -144.877660.

Purpose: The Project Purpose is to expand existing facilities at the Pogo Mine to operate economically and safely for 10 additional years. NSR requires an approved, permitted and contained place for tailings and waste rock in order to operate. NSR will expand an existing laydown area for safe truck operation and equipment storage. The updated and larger sized surface fleet requires additional road and storage space. The mine will continue as an underground mine at the increased production rate using the surface mill and DSTF. No change to existing access roads, power lines or other components are planned by this action.

At the end of mining activities, the DSTF and associated diversion ditches will be reclaimed and closed according to the approved Reclamation and Closure Plan. The mine is bonded to ensure this activity. As part of the DSTF Expansion and permit renewals, the Pogo Mine Reclamation and Closure Plan and Reclamation Cost Estimate will be updated for these proposed changes.

Project Description: Pogo is an operational underground gold mine that was purchased by Northern Star Resources, Ltd (NSR) in 2018. Over the past three years NSR has taken the Pogo Mine from certain closure to continued operation and expansion. During that time, NSR increased output from the mine by 30% and optimized the equipment fleet with new underground haul trucks and higher utilization with larger 60-ton haul trucks on the
surface. NSR is currently operating the mine at increased production rates with the mill expansion completed in 2021. Due to the increase in material production of both tailings and waste rock, NSR needs to expand the Pogo Mine Dry Stack Tailings Facility (DSTF), as it is nearing its 20 Million ton (Mt) capacity. The existing DSTF is expected to fill up by the end of 2023. The proposed expansion will increase capacity to 32 Mt capacity and increase the life of the DSTF by approximately 10 years.

The DSTF is a co-disposal waste storage facility that contains tailings and mineralized rock placed in compacted layers. Non-mineralized rock is used for construction of embankment shells, construction of the roads around the DSTF, lining of the perimeter of the DSTF for drainage, and for the underdrain system below the DSTF. The DSTF is situated in the upper part of Liese Creek Valley, upgradient of the underground mine workings, mill facilities, and Recycled Tailings Pond (RTP). To manage non-contact water, there is a set of diversion ditches above the dry stack to divert water from Liese Creek North Fork and South Fork to an area below the RTP. As the DSTF continues to rise with new material, new diversion ditches will be constructed at a higher elevation and tied into the existing system.

To continue mine operation for the next ten years additional laydown space and road widening is required. NSR will expand Road 8 and the Ruen Laydown area for safety and equipment storage. The mine will continue to operate using the permitted and constructed facilities in the Liese Creek Valley.

After reviewing the application, the Department may certify there is reasonable assurance the activity, and any discharge that might result, will comply with the CWA, the Alaska Water Quality Standards, and other applicable State laws. The Department also may deny or waive certification.

The permit application and associated documents are available for review. For inquires or to request copies of the documents, contact dec-401cert@alaska.gov, or call 907-269-6285.

**Disability Reasonable Accommodation Notice**

The State of Alaska, Department of Environmental Conservation complies with Title II of the Americans with Disabilities Act (ADA) of 1990. If you are a person with a disability who may need special accommodation in order to participate in this public process, please contact ADA Coordinator Jason Burnett at 907-269-3056 or TDD Relay Service 1-800-770-8973/TTY or dial 711 prior to the expiration date of this public notice to ensure that any necessary accommodations can be provided.
Figure 2
Drystack Tailings Facility (DSTF) and Recycled Tailings Pond Map
Drystack Tailings Facility Expansion Project
Figure 3
Potential Wetlands and Uplands Disturbance
Drystack Tailings Facility Expansion Project
1. Detail design of ditch configurations will be completed during design engineering phase. Current configurations are based on configurations of existing diversion ditches.

2. Bedrock surface may not be reached in all areas particularly along south-facing slopes. Bedrock will likely not be intersected in drainage draws.

3. Section depths indicative of typical conditions. Maintenance control of ice/aufeis anticipated in stewardship of diversion ditch.

4. Slope excavation support, e.g., mesh and anchors, only placed as required in field.

5. Where bedrock not intersected, base of ditch may require geofabric, imported material, soil treatment, shotcrete, or other appropriate method.

6. Side slope varies: as an appropriate guide to field fit under the direction of the field engineer - in bedrock use 0.5H:1V; in ripable bedrock use 1H:1V; and in unsupported overburden use 1.5H:1V. Where mesh and soil anchors are used, overburden slopes can be 1H:1V or greater as directed by the engineer.

7. Existing slopes of valley in vicinity of proposed diversion ditches varies between 2.5H:1V and 3H:1V.

NOTES

<table>
<thead>
<tr>
<th>STATIONING</th>
<th>TOTAL DEPTH (H)</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Ditch</td>
<td></td>
</tr>
<tr>
<td>0+00 to 38+34 (End)</td>
<td>2.5</td>
</tr>
</tbody>
</table>
| North Ditch         | Variable Depth  | 3.0 - 4.0
Figure 5
Road 8 / Ruen Additional Laydown Area
2022 Pogo Mine
Figure 6
Road 8 / Ruen Additional Laydown Area
2022 Pogo Mine

Note -
Total disturbance area is 3.65 acres
Potential wetlands disturbance area is 2.28 acres
Contour Interval = 25ft

Previously Approved Disturbance Area
Potential Road 8 / Ruen Wetland Disturbance Area
Road 8 Additional Area to be Filled
Wetland Areas
Stormwater
Pollution Prevention
Plan Maps
Figure 10

Legend
- AST
- Flume
- Portal
- Drainage and Sediment Ponds
- Culvert
- RTP Toe
- Creek
- Basin
- Seepage Collection Wells
- Stormwater Collection Pond
- USACE Permitted Wetlands Disturbance
- Creek
- East Deep 1 (ED1)
- East Deep 2 (ED2)
- South Pogo 2 (SP2)
- Reclaimed

Note: Refer to Figures 10 and 11 for exploration road BMPs.
POA-1996-00211, Goodpaster River; Plan Sheet 11 (July 25, 2022)

LEGEND

USACE Permitted Wetlands Disturbance
Old Diversion Ditch
Flume
Portal
Drainage and Sediment Ponds
Culvert
RTP
RTP Toe
Seepage Collection Wells
Diversion Ditch Flume Headwall
Exploration Roads

0 500 1,000 1,500 Feet

Note: Refer to Figures 10 and 11 for exploration road BMPs

Recycled Tailings Pond and Dry Stock Tailings Facility
March 2022
100080-003
LEGEND

Exploration Roads

- East Deep 1 (ED1)
- East Deep 2 (ED2)
- East Deep 3 (ED3)
- East Deep 4 (ED4)
- Water Bar
- Culvert
- Reclaimed
- Insets from Figure 1
CWA 401 Water Quality Certification Request
version 1.12
(Submission #: HPK-C5WW-3GX5Q, version 1)

Details

Site: Pogo Mine Expansion
Submission ID HPK-C5WW-3GX5Q

Form Input

Form Instructions

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

Contact Information (1 of 3)

Required Contacts

The following contacts are required for this application. Multiple roles may be selected per contact.

- Applicant (Responsible Party)
- Billing contact

Contact

Prefix
Mr.

First Name	Last Name
Victor	Ross

Title
Principal Regulatory

Organization Name
Stantec

Phone Type	Number	Extension
Mobile	907-521-3588

Email
victor.ross@stantec.com

Mailing Address
351 West Parks Highway, Suite 200
Wasilla, AK 99654

Contact Role(s)
Application Preparer
Consultant

Contact Information (2 of 3)
Required Contacts

The following contacts are required for this application. Multiple roles may be selected per contact.

- Applicant (Responsible Party)
- Billing contact

Contact

<table>
<thead>
<tr>
<th>Prefix</th>
<th>First Name</th>
<th>Last Name</th>
<th>Title</th>
<th>Organization Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr.</td>
<td>Russell</td>
<td>Gossett</td>
<td>Environmental Superintendent</td>
<td>Northern Star Resources LLC</td>
</tr>
</tbody>
</table>

<table>
<thead>
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<th>Phone Type</th>
<th>Number</th>
<th>Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>907-895-2831</td>
<td></td>
</tr>
</tbody>
</table>

Email
ggossett@nsritd.com

Mailing Address
Post Office Box 145
Delta, AK 99737

Contact Role(s)
Billing Contact
Onsite Contact

Contact Information (3 of 3)

Required Contacts

The following contacts are required for this application. Multiple roles may be selected per contact.

- Applicant (Responsible Party)
- Billing contact

Contact

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<tr>
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<th>Last Name</th>
<th>Title</th>
<th>Organization Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr.</td>
<td>Michael</td>
<td>Eckert</td>
<td>General Manager</td>
<td>Northern Star (Pogo) LLC</td>
</tr>
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<th>Extension</th>
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</thead>
<tbody>
<tr>
<td>Business</td>
<td>907-895-2834</td>
<td></td>
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</tbody>
</table>

Email
meckert@nsrltd.com

Mailing Address
PO Box 145
Delta, Junction, AK 99737

Contact Role(s)
Applicant
**Facility Information**

**Identify the applicable federal license or permit**

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)

**Permit License Number (eg. POA-XXXX-XXXX)**
POA 1996-00211

**Federal Agency**
Army Corps of Engineers (USACE)

**Project Information**

**Project Name or Title**
Pogo Mine Expansion

**Project Address**
- PO Box 145
- Delta, AK 99737

**What is the land use designated as?**
State

Visit the link below to help with conversion between DMS and Latitude/Longitude
[DSM - Lat/Long converter](#)

**Project Location**
64.45350640000000,-144.90451040000000

- PO Box 145, Delta, AK
- Visit the link if you need to convert the lat/long to get the PLSS information.

[Converter for Township and Range](#)

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

<table>
<thead>
<tr>
<th>Borough/Municipality</th>
<th>Meridian</th>
<th>Section</th>
<th>Township</th>
<th>Range</th>
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<tbody>
<tr>
<td>Fairbanks North Star Borough</td>
<td>Fairbanks</td>
<td>25, 26</td>
<td>5 S</td>
<td>14 E</td>
</tr>
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</table>

**Directions to Site**
The Pogo Mine is located approximately 35 miles northeast of Delta Junction, Alaska. Driving north from Delta Junction or south from Fairbanks on the Richardson Highway, turn east on the Shaw Creek road until reaching the access gate.
Nature of Activity (Description of project, include all features)
Pogo is an operational underground gold mine that was purchased by Northern Star Resources, Ltd (NSR) in 2018. Over the past three years NSR has taken the Pogo Mine from certain closure to continued operation and expansion. During that time, NSR increased output from the mine by 30% and optimized the equipment fleet with new underground haul trucks and higher utilization with larger 60-ton haul trucks on the surface. NSR is currently operating the mine at increased production rates with the mill expansion completed in 2021. Due to the increase in material production of both tailings and waste rock, NSR needs to expand the Pogo Mine Dry Stack Tailings Facility (DSTF), as it is nearing its 20 Million ton (Mt) capacity. The existing DSTF is expected to fill up by the end of 2023. The proposed expansion will increase capacity to 32 Mt capacity and increase the life of the DSTF by approximately 10 years.

The DSTF is a co-disposal waste storage facility that contains tailings and mineralized rock placed in compacted layers. Non-mineralized rock is used for construction of embankment shells, construction of the roads around the DSTF, lining of the perimeter of the DSTF for drainage, and for the underdrain system below the DSTF. The DSTF is situated in the upper part of Liese Creek Valley, upgradient of the underground mine workings, mill facilities, and Recycled Tailings Pond (RTP). To manage non-contact water, there is a set of diversion ditches above the dry stack to divert water from Liese Creek North Fork and South Fork to an area below the RTP. As the DSTF continues to rise with new material, new diversion ditches will be constructed at a higher elevation and tied into the existing system.

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Project Purpose (Describe the reason(s) for discharge)
The Project Purpose is to expand existing facilities at the Pogo Mine to operate economically and safely for 10 additional years. NSR requires an approved, permitted and contained place for tailings and waste rock in order to operate. NSR will expand an existing laydown area for safe truck operation and equipment storage. The updated and larger sized surface fleet requires additional road and storage space. The mine will continue as an underground mine at the increased production rate using the surface mill and DSTF. No change to existing access roads, power lines or other components are planned by this action.

At the end of mining activities, the DSTF and associated diversion ditches will be reclaimed and closed according to the approved Reclamation and Closure Plan. The mine is bonded to ensure this activity. As part of the DSTF Expansion and permit renewals, the Pogo Mine Reclamation and Closure Plan and Reclamation Cost Estimate will be updated for these proposed changes.

Discharge Information

For fill material, identify the material source
Local non-mineralized rock from the mine

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

<table>
<thead>
<tr>
<th>Type</th>
<th>Cubic Yards</th>
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</thead>
<tbody>
<tr>
<td>Non mineralized mine rock</td>
<td>10,000</td>
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</table>

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

<table>
<thead>
<tr>
<th>Surface Area</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>4.9</td>
<td>Acres</td>
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</tbody>
</table>

Is dredging involved?
No

Is any portion of the work already complete?
No

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

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.

Waterbody Name (Unnamed Wetlands - Not Allowed)
Liese Creek & Goodpaster River

Location of potential discharge (Decimal Degrees, 6 places), describe if necessary
<table>
<thead>
<tr>
<th>#</th>
<th>Activity</th>
<th>Description</th>
<th>Receiving Waterbody Name</th>
<th>Longitude</th>
<th>Latitude</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Fill</td>
<td>Laydown Fill Pad and Road</td>
<td>Liese Creek</td>
<td>-144.910686</td>
<td>64.455919</td>
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<tr>
<td>2.</td>
<td>Fill</td>
<td>DSTF Expansion</td>
<td>Liese Creek</td>
<td>-144.877660</td>
<td>64.445354</td>
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Is the project within 1,500 feet of a known contaminated site?
No

Parameter(s) of Concern

Identify the parameters of concern that may be present in your discharge. Consider if other parameters may be present from past activities in the area.

Parameter(s)
Turbidity
Sediment

Describe if known 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

Fill will be placed in wetlands for a storage pad and roadway. All fill will be contained on site. The fill will be used to construct a pad and diversion ditches. No other potential fill discharges will take place. Clean water will be diverted via diversion ditches to direct flow of water around the DSTF and into Liese Creek. All water that contacts the DSTF flows into the Recycled Tailings Pond (RTP). This water will be treated at the Mine Water Treatment Plant, or reused in the Mill process, and will protect existing uses and meet effluent limitations.

Impaired Waters

See the link below for the most recently approved report and category listings.
https://dec.alaska.gov/water/water-quality/integrated-report/

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

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
Infrastructure improvements

Economic Importance Analysis
Employment, job availability, and salary impacts
Expanded leases and royalties
Access to recourses
Tax base impacts
Commercial activities
Access to a transportation network

Describe
Pogo provides benefit to the local and state economies through employment opportunities, annual lease fees and taxes to the state, and spending with local businesses who support operations. Pogo has 525 direct employees and 150 full-time contractors. The average wage is nearly double the average annual salary in Alaska. The Pogo Mine Road provides access to logging resources and other mineral exploration sites in addition to the gold resources at the Pogo Mine.

Description of Social or Economic Importance, if needed
NONE PROVIDED

Comment
NONE PROVIDED
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

New water drains and diversion ditches will be constructed to divert clean water away from the mineralized rock in the DSTF. The disturbance area will be an extension of the current DSTF and will use drainage controls that are currently in place. All DSTF contact water will be diverted to the Mine Water Treatment Plant before it is discharged to the Goodpaster River. NRS will follow their sitewide Stormwater Pollution Prevention Plan (SWPPP). The SWPPP flow directions are shown in attached 404 figures to demonstrate how the proposed plan uses existing drainage structures and controls to manage surface water avoiding and minimizing fill in wetlands. The SWPPP plan has been designed and is operated to minimize contact water interface. This plan ensures contact water is diverted to the Mine Water Treatment Plant prior to discharge.

The boundaries of all clearing and fill limits will be marked in advance of work. Mechanized land clearing or fill actions will not exceed marked limits. Clearing and filling will not be conducted outside established boundaries.

Vegetative clearing will be scheduled to occur outside the migratory bird nesting season, or bird nesting surveys will be conducted to ensure nests are not disturbed, consistent with the United States Fish and Wildlife Service (USFWS) guidance.

Existing SWPPP will be followed for the site.
Existing diversions to be used.
Existing water treatment will be used.
Limits of cuts and fills will be marked on site.
See Supplemental CWA 401 information.

Have you been working with anyone in the Army Corps of Engineers (USACE)
No

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.

<table>
<thead>
<tr>
<th>Agency</th>
<th>Type of Approval*</th>
<th>Identification Number</th>
<th>Date Applied</th>
<th>Date Approved</th>
<th>Date Denied</th>
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<tr>
<td>ADNR</td>
<td>Certificate to operate dam</td>
<td>AK00304</td>
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<td>ADNR</td>
<td>Plan of Ops</td>
<td>FO189500</td>
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<tr>
<td>ADEC</td>
<td>Waste Management Plan</td>
<td>2018DB0001</td>
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<td>NONE PROVIDED</td>
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<tr>
<td>ADEC</td>
<td>SWPPP</td>
<td>AKR06AC58</td>
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<td>NONE PROVIDED</td>
<td>NONE PROVIDED</td>
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*Would include but is not restricted to zoning, building, and flood plain permits.

Addresses of Adjoining Property Owners, Lessees, Etc. Whose Property Adjoins the Waterbody

<table>
<thead>
<tr>
<th>#</th>
<th>Name</th>
<th>Address</th>
<th>City</th>
<th>State</th>
<th>Zip</th>
</tr>
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<tbody>
<tr>
<td>1.</td>
<td>ADNR</td>
<td>3700 Airport way</td>
<td>Fairbanks</td>
<td>Alaska</td>
<td>99709</td>
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</tbody>
</table>

Attachments

Include documentation that is listed as required below

Required: Copy of the federal license or permit requiring certification under 33 U.S.C. 1341 (Clean Water Act, Section 401) to include all accompanying information, contemporaneous with the submission of the application to the federal licensing or permitting agency. (18 AAC 15.130, 18 AAC 15.180)

Required: Figures and/or Drawings/Plan Sets

Other: supplemental information

Copy of Federal Application (USACE)

<table>
<thead>
<tr>
<th>Comment</th>
<th>Copy of Federal Application (USACE)</th>
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</thead>
<tbody>
<tr>
<td>NONE PROVIDED</td>
<td>Eng_4345_07202022signed.pdf - 07/22/2022 02:31 PM</td>
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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.