Proposed Action: Alyeska Pipeline Service Company (APSC), agent for the Trans-Alaska Pipeline System (TAPS) lessees, requested two amendments to the Trans-Alaska Pipeline Right-of-Way (ROW) Lease, ADL 63574. One request is for the use of approximately 2.1 acres of land to support the installation of cathodic protection improvements along TAPS, the Old Richardson Highway alignment, and under the Lowe River, near pipeline milepost (PLMP) 779.8. The second request is for the use of 27.6 acres of land during the construction of a bank erosion control structure and for the extraction of material from the Lowe River, near PLMP 779. These amendment requests are necessary for protecting the integrity of TAPS from external corrosion and further erosion. Once construction activities are concluded, the added land to the operational ROW will be surveyed and may include less acreage than approved for construction.

The lands proposed to be added to the ROW are within Township 9 South, Range 4 West, Copper River Meridian, Alaska.

- The proposed construction ROW for the cathodic protection upgrades is approximately 2,200 ft. long by 40 ft. wide; located within W2SE4 and E2SW4 Section 12, containing approximately 2.1 acres; and

- The proposed construction ROW for the construction of a bank erosion control structure and extraction of material from the Lowe River is approximately 1,500 ft. long by 800 ft. wide within the SE4 of Section 12, containing approximately 27.6 acres with 18.3 acres below Ordinary High Water (OHW).

The purpose of the cathodic protection improvements is to protect the integrity of TAPS from external corrosion through the installation of two new AnodeFlex systems (System A and System B) that are energized by two new rectifiers. These systems are discussed further in the Project Description section. The purpose of the bank erosion control structure is to prevent further erosion and is discussed in more detail in the Project Description section.

The additional lands are necessary to support the existing pipeline system as defined in AS 38.35.230(7) and authorized by the Trans-Alaska Pipeline ROW Lease, ADL 63574. See drawings for more details (Attachments A and B).

Authority: AS 38.35.015 and Trans-Alaska Pipeline ROW Lease, ADL 63574.

Administrative Record: Trans-Alaska Pipeline ROW Lease, ADL 63574, and the associated ROW Lease Amendment case files constitute the administrative record.
Background: Public notice of the ROW amendment application for the cathodic protection improvements was published in the Anchorage Daily News, posted on the State of Alaska online Public Notice webpage, on the Division of Oil and Gas Newsroom webpage, and sent for posting in the U.S. Post office in Valdez on March 20, 2019.

Public notice of the ROW amendment application for the bank erosion control structure was published in the Anchorage Daily News, posted on the State of Alaska online Public Notice webpage, the Division of Oil and Gas Newsroom webpage, and sent for posting in the U.S. Post Office in Valdez and in the Valdez Consortium Library on March 28, 2019.

Pursuant to AS 38.35.070, the following coordinate agencies were notified of the applications and associated documents: Department of Labor & Workforce Development, Department of Transportation & Public Facilities, Department of Environmental Conservation, and Regulatory Commission of Alaska. Additionally, the following agencies received the link to the applications and associated documents: Department of Administration, Department of Law, Department of Fish & Game (ADF&G), Department of Commerce, Community, & Economic Development; and Department of Public Safety.

The Office of History and Archaeology (OHA) reviewed the proposed cathodic protection improvement area. On April 5, 2019, OHA determined there are no known culture resource sites in the area of the proposed activity. OHA reviewed the bank erosion control structure project area and also determined that no historic properties were affected by this proposed action and provided confirmation of this determination on April 25, 2019.

If inadvertent discoveries of cultural resources occur, OHA must be notified to evaluate whether the resource should be preserved in the public interest pursuant to AS 41.35.070(d). Examples of cultural resource sites that can be encountered include: historical cabin remains, adits, dredges, mining equipment, cultural depressions or pits, graves or cemeteries, tools, artifacts, and paleontological remains.

Project Description: The project sites for the cathodic protection installation and bank erosion control structure are located approximately 17 miles east of the City of Valdez, south of milepost 16.5 of the Richardson Highway. In this area, the pipeline diverges from the Richardson Highway, crosses underneath the Lowe River, and follows the south side of the Lowe River Valley to the Valdez Marine Terminal.

Cathodic Protection Improvements: The proposed improvements designated System A, located on the north side of and beneath the Lowe River, will consist of approximately 1,500 feet of AnodeFlex along the Old Richardson Highway. System A will be accessed from the Richardson Highway at milepost 16.8, and be connected to the buried pipeline via a bored crossing of the Lowe River. System A is parallel to an anadromous stream where a vegetative buffer is proposed to be left in place and surface waters not impacted.
System B will consist of 3,090 feet of AnodeFlex along TAPS on the south side of the Lowe River, and will be accessed via Richardson Highway at milepost 16.1 and TAPS Access Road 5-APL-1. System B may require a diversion of the seasonal drainage stream at pipeline milepost 780.24. Construction is targeted between the end of May and mid-July to minimize potential impacts to fish spawning.

Copper Valley Electric Association (CVEA), contracting for APSC, will perform the horizontal directional drilling (HDD) under the Lowe River and pull two conduits, one for the power cable and one for the APSC AnodeFlex cable. The AnodeFlex cable will be energized by two new rectifiers and a new CVEA service drop is proposed to be located within the existing TAPS ROW. CVEA is requesting separate authorizations from DMLW for their activities under ADL 233379 for an extension of an electric distribution line and under ADL 233359 for a fiber optic line. APSC provided Letters of Non-objection on January 29, 2019 for the electric distribution line and on April 4, 2019 for the fiber optic line.

**Bank Erosion Control Structure:** The purpose of the structure is to mitigate further bank erosion and prevent exposure of the buried pipeline through the installation of the structure and the riprap trench key. Access to the bank erosion control structure project site will be from TAPS Access Road 5-APL/AMS-2 southwest from the Richardson Highway at PLMP 17.9.

The proposed bank erosion control structure and riprap trench key will be located upstream of the buried pipeline crossing under the Lowe River. The project is proposed to have a 40 ft. long class III-IV riprap trench key and approximately 375 ft. long and 20-50 ft. wide bank erosion control structure. The structure is anticipated to be 3-4 ft. above ground level and extend approximately 10 ft. below ground level. The north side of the structure will be above OHW and the south side will be below OHW. It will consist of 400 cubic yards (cy) of class III-IV riprap keyed in to a trench, tree boles, and the voids filled in with an estimated 3,300 cy of local alluvial sand and gravel. The gravel will be extracted within the construction area pursuant to AS 38.05.565(a)(3). In a separate action, DNR may authorize the sale of materials under the terms of a material sale contract with APSC.

One or more temporary stream diversion berms 100 ft. in length and requiring 150 cy of sand and gravel are proposed to be installed upstream of the permanent erosion control structure to divert water during construction. These berms will be removed post construction, or the Lowe River will naturally erode the structures over the course of the project term. The sand and gravel will be extracted from adjacent unvegetated gravel bars within the inactive Lowe River floodplain.

**Title:** The State of Alaska holds fee title to the subject lands from Patent No. 50-76-0050, dated, November 13, 1975, and the Submerged Lands Act Amendment of August 16, 1988, P.L. 100-395, 43 U.S.C 1631.
Planning and Classification: The proposed projects are within the Prince William Sound Area Plan (PWSAP), amended April 3, 2007 and originally adopted in June 1988. The subject areas are within Management Unit 21: City of Valdez, Subunit 21P - Keystone Canyon; and Subunit 21W - Wortmanns. The primary uses of the subunits are public recreation and settlement, the secondary uses are transportation and forestry, respectively. Other uses, such as material sales and land leases may be allowed if consistent with the management intent and guidelines.

The Trans-Alaska Pipeline ROW Lease pre-dates the land classifications made under CL-510 and CL-SC-86-037; the PWSAP acknowledges the Trans-Alaska Pipeline as a part of the existing transportation network within the respective subunits. Additionally, per 11 AAC 55.260, no classification or reclassification affects valid rights existing before the classification or reclassification.

State lands within 300 feet each side of the TAPS pipeline centerline are closed to mineral entry by Mineral Order (MO) 1147 dated August 1, 2014.

Cathodic Protection Improvements: The improvements are consistent with the management intent and guidelines outlined in the Prince William Sound Area Plan. A secondary use of subunit 21P Keystone Canyon is to manage the area for multiple uses and accommodate the ROW needs of existing and future transportation corridors. The cathodic protection improvements will protect the integrity of TAPS from external erosion. The areawide land management policies in Chapter 2 of the Prince William Sound Area Plan set management guidelines for transportation and utilities as follows: consolidating corridors and avoiding unnecessary duplication, avoiding significant effects on the quality of water resources, recontouring and revegetating stream banks to prevent soil erosion, and minimizing construction in wetlands. The project is consistent with these guidelines. The proposal to install cathodic protection and electric lines simultaneously avoids duplication and consolidates corridors. Impacts to water resources will be minimized by the use of HDD to bore under the Lowe River and pull the conduits to the opposing side bank. Once the HDD activities are concluded the banks are to be restored, minimizing construction impacts in the floodplain.

Bank Erosion Control Structure: The structure is consistent with the management intent and guidelines outlined in the Prince William Sounds Area Plan. A secondary use of subunit 21P Keystone Canyon is to manage the area for multiple uses and accommodate the ROW needs of existing and future transportation corridors. The Lowe River has eroded approximately 300 ft. of the bank deposits adjacent to the pipeline. The erosion control structure is essential to mitigating further erosion and exposure of the buried pipeline.

The areawide land management policies in Chapter 2 of the Prince William Sound Area Plan set management guidelines for material such as, consideration should be given to existing upland sources, the location of the material sites should be as near as feasible to a project to minimize construction and maintenance costs of material transportation, and material extraction should not cause significant adverse impacts in the inactive floodplain. The project is found consistent with these guidelines as there are no feasible upland alternatives for sand and gravel near the project.
site. Material extraction will only occur on unvegetated, inactive portions of the floodplain, making material transport negligible due to the area’s location being immediately adjacent to the proposed erosion control structure. The Lowe River is a large, anadromous braided river. APSC has consulted with ADF&G and has been notified that a Title 16 Fish Habitat Permit is required. The terms of the Trans-Alaska Pipeline ROW Lease, ADL 63574, requires the Lessee protect important resources such as; water resource quality, habitat, historical and archaeological resources, scenic resources, and access to lands.

The proposed cathodic protection improvements and bank erosion control structure will protect the integrity of TAPS and are compatible with the management intent of both areas for public recreation and wildlife habitat use. There is nothing in the classifications that prohibits the issuance of the ROW amendments for the installation of cathodic protection upgrades or the erosion control structure.

Public Notice: Notice of this Analysis and Proposed Decision combining both lease amendment requests will be published in the Anchorage Daily News, posted on the State of Alaska online Public Notice webpage, and on the Division of Oil & Gas Newsroom webpage on April 30, 2019. It will also be sent for posting in the Valdez Post Office and Valdez Consortium Library on April 30, 2019.

If public comment indicates the need for significant changes in the proposed decision, additional public notice will be given on or after May 30, 2019. If no significant change is required, the proposed decision, including any minor changes, will be issued as the final decision of the Department of Natural Resources after May 30, 2019, without further notice.

Analysis: AS 38.35, the Alaska Right-of-Way Leasing Act, sets forth the procedures by which certain ROW leases are granted by the State of Alaska and the conditions under which they can be amended. Pursuant to AS 38.35.010, it is the policy of the state that development, use, and control of a pipeline transportation system make the maximum contribution to the development of the human resources of this state, increase the standard of living for all its residents, advance existing and potential sectors of its economy, strengthen free competition in its private enterprise system, and carefully protect its incomparable natural environment.

Pursuant to AS 38.35.015, the Commissioner has the power to grant leases of state land for pipeline ROW purposes. The Commissioner found it to be in the best interest of the residents of the State of Alaska to issue the Trans-Alaska Pipeline ROW Lease, ADL 63574 on May 3, 1974, and the Renewal and Amendment of ROW Lease for the Trans-Alaska Pipeline and Associated Rights, ADL 63574, effective May 2, 2004. The terms, conditions, stipulations and reservations contained in the Trans-Alaska Pipeline ROW Lease, ADL 63574, will apply to these lands if added to the lease.
AS 38.35.020(a) requires the applicant to obtain a ROW lease of state land from the Commissioner. The cathodic protection improvements protect TAPS from external corrosion; the bank erosion control structure mitigates erosion and exposure of the buried pipe. Both the proposed activities are for protecting the integrity of the pipeline and are consistent with the original purpose of the lease. The cathodic protection improvements and bank erosion control structure projects require additional disposals of interest in state land beyond what was included in the original terms of the Trans-Alaska Pipeline ROW Lease, ADL 63574. Therefore, an amendment to the lease is required when there is a disposal of an interest in state land or resources beyond what was reviewed and approved during the original adjudication.

The improvements to the cathodic protection system are to reduce external corrosion; the installation of a bank erosion control structure is to mitigate bank erosion and exposure of the buried pipeline. Cathodic protection installation and bank erosion control are addressed in Stipulations 1.1.1.36(11) and 1.1.1.36(8) respectively, of the Trans-Alaska Pipeline ROW Lease, ADL 63574. They are considered "Related Facilities," of which their substantial and continuous use is necessary for the operation or maintenance of TAPS.

**Findings:** The proposed projects are integral to the protection of the pipeline. The cathodic protection improvements and bank erosion control structure are both considered a "Related Facility," as defined by the lease, and will be managed under the lease. The proposal to add the above-described lands to the Trans-Alaska Pipeline ROW Lease, ADL 63574, is consistent with the lease. The terms, conditions and stipulations contained in Trans-Alaska Pipeline ROW Lease, ADL 63574, adequately address and protect the interest of the State of Alaska. The cathodic protection improvements will protect the integrity of TAPS from external corrosion and the bank erosion control structure will mitigate erosion and exposure of the buried pipeline.

SPCS will examine the project area upon completion of the construction activities to ensure all lands are in a condition acceptable to the Commissioner. An as-built survey is required for this amendment to identify the additional ROW area and to depict the location of the cathodic protection improvements and bank erosion control structure in relation to the control line survey of the ROW. The as-built survey is to be submitted for review and acceptance by the Commissioner, pursuant to Section 1(e) of the Trans-Alaska Pipeline ROW Lease, ADL 63574, as amended.

The addition of these lands to the lease does not constitute a significant amendment to the lease, since the impact on state resources will be negligible and the project does not conflict with or significantly change existing use of the land. Approval of the request for the amendment to add the described lands is consistent with state statutes and the terms of the lease. The lessee is required to secure all necessary permits or authorizations required by other state and federal agencies.
**Proposed Decision:** I find that the request to amend the Right-of-Way Lease for the Trans-Alaska Pipeline, ADL 63574, to include the lands described in this proposed decision is in the best interest of the state and does not constitute a significant amendment to the lease.

If no significant change is required because of public comment or objection, then the proposed decision, including any minor changes, will be issued as the final decision of the Department of Natural Resources after May 30, 2019, without further notice.

Tom Stokes
State Pipeline Coordinator

Date

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Attachment A: Trans-Alaska Pipeline System
H-119 2019 Cathodic Protection Capital Improvements
PLMP 779.8-780.3, Sheets 1 through 4, dated 03/07/2019 (4 pages)

Attachment B: Trans-Alaska Pipeline System
X319 2019 Bank Erosion Repair
PLMP 779, Sheets 1 through 3, dated 02/15/19 (3 pages)
LOWE RIVER VICINITY

SCALE: NTS

NOTES:
1. JUNCTION BOXES, CP CABLES, AND ANODEFLEX SHALL BE LOCATED WITHIN THE EXISTING OLD RICHARDSON HIGHWAY RIGHT-OF-WAY.

ALYESKA PIPELINE SERVICE CO.

TRANS ALASKA PIPELINE SYSTEM

DATE: 03/07/19
A-00-PER780

SCALE: AS NOTED
SHEET 1 OF 4

AUTOCAD DWG. DO NOT REVISE MANUALLY.

ATTACHMENT A
OLD RICHARDSON HWY AREA

1"=200'-0"

NOTES:
1. JUNCTION BOXES, CP CABLES, AND ANODEFLEX SHALL BE LOCATED WITHIN THE EXISTING OLD RICHARDSON HIGHWAY RIGHT-OF-WAY.

2. ADDITIONAL BEST MANAGEMENT PRACTICES (e.g. SILT FENCING) WILL BE USED, AS NEEDED, TO PROTECT THE SALMON STREAM.

ALYESKA PIPELINE SERVICE CO.

TRANS ALASKA PIPELINE SYSTEM

H119 - 2019 CATHODIC PROTECTION CAPITAL IMPROVEMENTS
PLMP 779.8 - 780.3 ANODEFLEX
OLD RICHARDSON HIGHWAY AREA

DATE: 03/07/19
A-00-PER780

SCALE: AS NOTED
SHEET 2 OF 4

ATTACHMENT A
NOTES:

1. JUNCTION BOXES, CP CABLES, AND ANODEFLEX SHALL BE LOCATED WITHIN THE EXISTING OLD RICHARDSON HIGHWAY RIGHT-OF-WAY.

2. LOCATION OF BORE PITS AND HDD BEGINNING AND END ARE APPROXIMATE.

3. HDD BENEATH LOWE RIVER WILL BE PERFORMED BY CVEA. SEE CVEA DESIGN FOR DETAILS.

ALYESKA PIPELINE SERVICE CO.

TRANS ALASKA PIPELINE SYSTEM

H119 - 2019 CATHODIC PROTECTION CAPITAL IMPROVEMENTS
PLMP 779.8 - 780.3 ANODEFLEX
LOWE RIVER CROSSING AREA

DATE: 03/07/19
A-00-PER780

SCALE: AS NOTED
SHEET 3 OF 4

ATTACHMENT A
LOW WATER CROSSING
PLMP 780.24

NOTE: no additional land use authorization is required at the LWC. The sheet is included with letter no. 41892 for information only.

NOTES:
1. LOW WATER CROSSINGS WILL HAVE SAND BAG DAMS AND PUMP AROUNDS WITHIN EXISTING RIGHT OF WAY TO DIVERT WATER FROM UPSTREAM TO DOWNSTREAM TO ALLOW FOR TRENCHING. CROSSINGS WILL BE REPAIRED TO PRE-EXISTING CONDITION OR BETTER AFTER CONSTRUCTION IS COMPLETE.

H119 – 2019 CATHODIC PROTECTION CAPITAL IMPROVEMENTS
PLMP 779.8 – 780.3 ANODEFLEX
LOW WATER CROSSING

ALYESKA PIPELINE SERVICE CO.
TRANS ALASKA PIPELINE SYSTEM

DATE: 03/07/19
A-00-PER780

REV. A
DWN. RMG
CKD. BRD
APPR. MAF

SCALE: AS NOTED
SHEET 4 OF 4

ATTACHMENT A
NEW TRENCH KEY, CLASS III-IV RIPRAP WITH GRAVEL-FILLED Voids (LENGTH=40'±)

NEW BANK EROSION CONTROL STRUCTURE, CLASS III-IV RIPRAP, ALLUVIAL GRAVELS AND WOODEN MATERIAL (LENGTH=375'±)

BERM(S) WILL BE REMOVED UPON PROJECT COMPLETION RETURNING GRAVELS TO LOCAL SOURCES.

BERM LENGTH = 100 FT (APPROX)
BERM VOLUME = 150 CY (APPROX)

1. BERM(S) WILL BE REMOVED UPON PROJECT COMPLETION BY RETURNING GRAVELS TO LOCAL SOURCES.
   BERM LENGTH = 100 FT (APPROX)
   BERM VOLUME = 150 CY (APPROX)

2. PRIMARY SOURCE FOR LOCAL GRAVEL/MATERIAL FILL MAY BE NEARBY UNVEGETATED GRAVEL BARS ON THE FLOODPLAIN: 0.5'-2' DEPTH OF BORROW (APPROX). CONTINGENT SOURCE MAY BE IMPORTED MATERIAL FROM LOCAL SUPPLIER.

PHOTO DATE: 2013

PLAN
SCALE: 1" = 300'

ADJACENT PROPERTY OWNER: STATE OF ALASKA

ALYESKA PIPELINE SERVICE CO.

X319 TAPS MP 779 LOWE RIVER BANK EROSION REPAIR PLAN

TRANS ALASKA PIPELINE SYSTEM

DATE: 02/15/19
PLATE 2

SCALE: AS NOTED
SHEET 2 OF 3

AUTOCAD DWG. DO NOT REVISE MANUALLY.
ATTACHMENT B
### ESTIMATED MATERIAL QUANTITIES

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<tr>
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<th>BELOW OHW</th>
<th>ABOVE OHW</th>
<th>TOTAL</th>
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<tr>
<td>CLASS III-IV RIPRAP (CY)</td>
<td>150</td>
<td>250</td>
<td>400</td>
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<tr>
<td>CLASS III-IV RIPRAP (SF)</td>
<td>960</td>
<td>640</td>
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<tr>
<td>ALLUVIAL GRAVEL (SF)</td>
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<td>0</td>
<td>17,000</td>
</tr>
</tbody>
</table>

### TYPICAL SECTION A

**SCALE: 1" = 5'**

- Existing ground (dashed)
- New bank erosion control structure, imported Class III-IV riprap, and local alluvial gravels
- Wooden material (imported tree trunks with rootwads)
- New Class III-IV riprap with gravel-filled voids (trench key)
- Limit of excavation
- Existing organic soil (replaced on top)

### TYPICAL SECTION B

**SCALE: 1" = 10'**

- DOF
- Existing ground (dashed)
- Local gravel fill (temporary stream diversion berm)

### TYPICAL SECTION C

**SCALE: 1" = 5'**

- OHW

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**Adjacent Property Owner:** State of Alaska

**Alyeska Pipeline Service Co:**

**X319 TAPS MP 779 Lowe River Bank Erosion Repair Sections**

**Date:** 02/15/19

**Plate: 3**

**Scale:** As noted

**Attachment B**

**AutoCAD DWG. DO NOT REVISE MANUALLY.**