

Legend

- Platform
- Onshore Facilities
- Pad
- Easement
- Unit Boundaries
- ADL 232963
- Pipeline

August 6, 2018

Purpose of Analysis and Proposed Decision

Harvest Alaska, LLC submitted two pipeline Right-of-Way (ROW) lease applications on September 1, 2017, for the CIPL Cross Inlet Pipeline Extension Project.

The Right-of-Way Leasing Act (Alaska Statute 38.35) governs an application for an oil or gas pipeline right-of-way across state lands. Under this Act, the Commissioner of the Department of Natural Resources (Commissioner) is granted all powers necessary to lease state land for pipeline right-of-way purposes. The Commissioner must make a written finding that the applicant is fit, willing, and able to perform the transportation or other acts proposed in a manner that will be required by the present or future public interest. Prior to granting a right-of-way lease, the Commissioner is required to prepare an analysis of the application.

This is the Commissioner's Analysis and Proposed Decision for the conversion of portions of the existing Cook Inlet Gas Gathering System (CIGGS) pipeline segments including:

- The approximately 21-mile subsea CIGGS-A Marine segment (CIGGS-A) that occupies State-owned tide and submerged lands within Cook Inlet, originating at Granite Point and terminating in Nikiski.
- The approximately 4.7-mile onshore Low Pressure CIGGS segment (CIGGS-LP) that originates near the Middle Ground Shoals Facility and will terminate at the Swanson River Oil Pipeline near the Andeavor Refinery; all within Nikiski. The segment is located on multiple privately-owned parcels and State-owned lands within highway rights-of-ways, and occupies State-managed section-line easements.

The public comment period for this Analysis and Proposed Decision expires at 5:00pm on September 5, 2018. Written comments may be emailed to: spco.records@alaska.gov, faxed to (907) 269-6880, or submitted by U.S. Mail (or in person) to:

Alaska Department of Natural Resources
Division of Oil and Gas
State Pipeline Coordinator's Section
3651 Penland Parkway
Anchorage, AK 99508

A public hearing for the CIGGS-A right-of-way lease application and the Tyonek Commissioner's Analysis and Proposed Decision was held in Nikiski on March 14, 2018.

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Attachment A1: CIGGS A Design Basis and Criteria
Attachment A2: CIGGS LP design basis and Criteria
Attachment B: Draft ROW Lease with Exhibits
Attachment C: ADF&G Comments
Attachment D: Mineral Order 1204 & Amendment 1204-A01
Attachment E: Reviewed Technical Documents

I. INTRODUCTION

Nature of the Request

On September 1, 2017, Harvest Alaska, LLC (Harvest) applied to the State of Alaska, Department of Natural Resources (DNR) for two non-exclusive Alaska Statute (AS) 38.35 Right-of-Way (ROW) leases for the purpose of converting an existing natural gas pipeline segment to oil and the construction of a new natural gas pipeline segment within the tide and submerged lands of Cook Inlet. These applications are part of the CIPL Cross Inlet Pipeline Extension (Cross Inlet) Project, which proposes to reorganize/re-purpose various Cook Inlet pipelines to:

1. Transport oil from the west side of the inlet to the east by connecting the Cook Inlet Pipeline (CIPL) to the CIGGS-A, thus eliminating the need for the Drift River Terminal. To accomplish this, the existing CIGGS-A natural gas pipeline segment must be converted to oil (ADL 232963).
2. Transport natural gas from the east side of the inlet to the west by reversing the flow of the Tyonek Pipeline System and building a new segment of pipe from the Tyonek Platform to the Kenai-Beluga Pipeline at Ladd Landing (ADL 232962). Natural gas that was transported by the CIGGS-A would be rerouted through this system. The decision for the new Tyonek segment was issued on February 7, 2018.

On June 12, 2018, Harvest submitted a supplement to the CIGGS-A application to include the existing CIGGS-LP. Originally, Harvest had planned to utilize an existing pipe owned by the Kenai Pipeline Company (and located on privately-owned lands) to transport the oil from the Middle Ground Shoals Facility to the Andeavor Refinery; however, engineering concerns about the connection of the pipelines lead to the decision to utilize the dormant CIGGS-LP.

This decision addresses the application for the conversion of the CIGGS pipeline under ADL 232963.

The Commissioner must determine in a written finding if applicants are fit, willing, and able to construct, operate, maintain, and terminate pipelines for hydrocarbon transportation in a manner consistent with present or future public interests. (AS 38.35.100). The Commissioner is required to prepare an analysis of the application and propose an action for it. (AS 38.35.080) This document satisfies both statutory requirements.

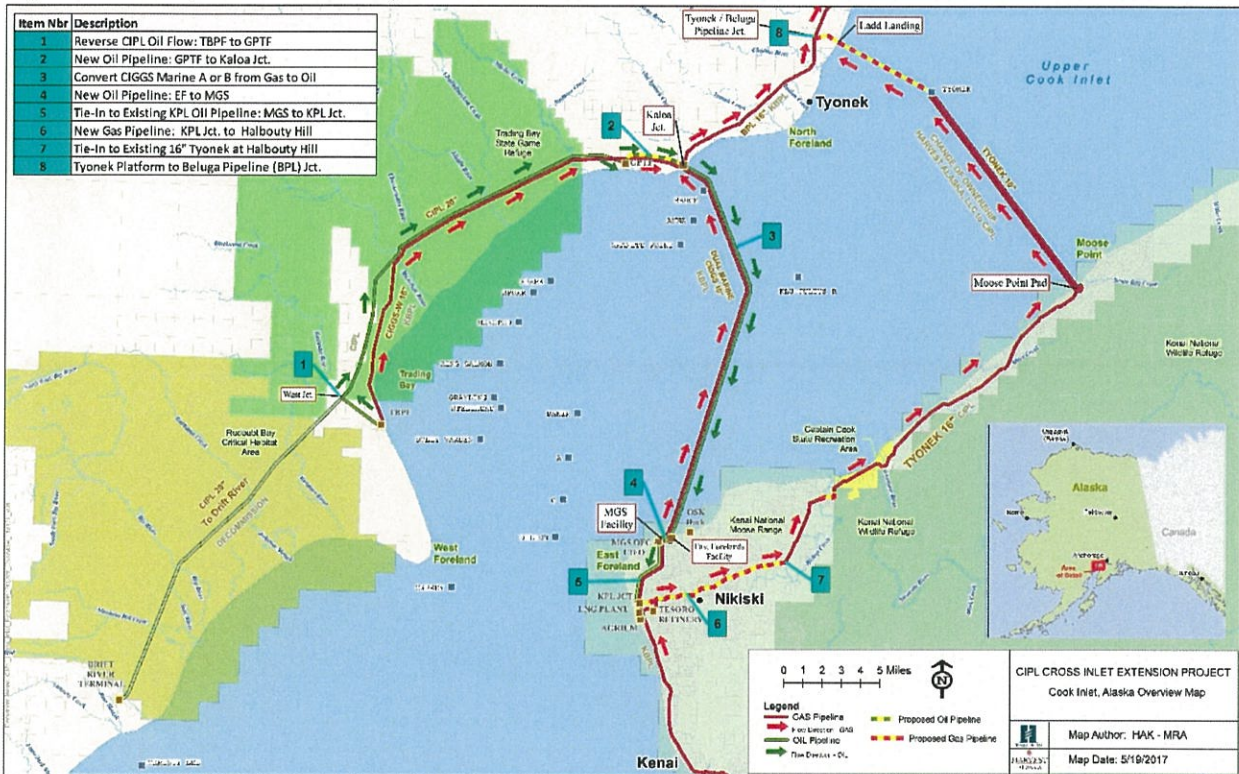
Applicant

Harvest Alaska, LLC, was incorporated in Delaware on May 13, 2014, and registered in Alaska on May 14, 2014, for the purpose of building, operating, and managing pipelines for the transportation of crude oil. Harvest is in good standing with the State of Alaska Department of Commerce, Community, and Economic Development. The applicant is a wholly-owned subsidiary of Hilcorp Alaska, LLC, which is a wholly-owned subsidiary of Hilcorp Energy I, LP, which is the main holding company for the Hilcorp Group.

Project Description

The Cross Inlet project is designed to reorganize/repurpose Cook Inlet pipelines to more efficiently transport Cook Inlet oil and natural gas to consumers and reduce the risk of oil spills by eliminating the need for the southern half of CIPL, the Drift River Oil Terminal, and the Christy Lee Platform.

Figure 1: Hilcorp's Cross Inlet Project Overview



Proposed CIGGS Change To Service

As part of the Cross Inlet project, Harvest has applied to DNR for permission to implement a Change To Service on the CIGGS-A and CIGGS-LP pipeline segments from natural gas to crude oil and reverse the primary direction of flow. Instead of transporting natural gas from the east side to the west, they would transport crude oil from the west side to the east.

The subsea portion of the CIGGS system was constructed in 1972 and consists of two 10-inch-diameter pipelines (Marine A and B) that lay weighted on the seabed of Cook Inlet. The pipelines are authorized under an AS 38.05.330 Right of Way Permit (ADL 56285) issued by the Division of Lands in December of 1971 for the transportation of natural gas from Nikiski to Granite Point.

The CIGGS-LP segment was also constructed in 1972, and consists of one 10-inch-diameter buried pipeline. The portion of the pipeline located within the Kenai Spur Highway is authorized under Alaska Department of Transportation and Public Facilities (ADOT&PF) Utility Permit A-490-1-72 for natural gas transportation within the highway ROW.

The Right-of-Way Leasing Act (AS 38.35) was adopted in May of 1972 and was intended to cover oil and gas pipelines not already authorized by an oil and gas lease, a gas only lease, or an oil and

gas or gas only unit agreement approved by the state. AS 38.05.330 is no longer a valid statute so amending the original land use authorization was not possible. A Miscellaneous Land Use Permit under AS 38.05.850 was not appropriate since this authorization is exclusively for a transportation of system for hydrocarbons from the field. AS 38.35 is the appropriate vehicle for changing the purpose of the CIGGS-A pipeline and bringing the permit up to date for those portions located on State-owned land. (The CIGGS-B Marine pipeline will remain authorized under ROW Permit ADL 56285.)

Proposed ROW Location

CIGGS-A: The existing CIGGS-A segment is located within the tide and submerged lands of Cook Inlet. The pipeline originates at Kaloa Junction (near Granite Point) and terminates at the East Forelands Facility in Nikiski. Most of the pipeline is located on state owned tide and submerged lands (approx. 21 miles). The short upland segments on both sides of the inlet are not located on State-owned lands and will not be included in the ROW lease.

The CIGGS-A segment transects State-owned land in the following locations:

Township 11N, Range 12W, SM, Section 25;
Township 11N, Range 11W, SM, Section 30, 31, and 32;
Township 10N, Range 11W, SM, Section 5, 8, 16, 17, 21, 28, and 33;
Township 09N, Range 11W, SM, Section 4, 9, 16, 17, 20, 29, 31, and 32;
Township 08N, Range 11W, SM, Section 6; and
Township 08N, Range 12W, SM, Section 1, 12, 13, 24, 25, 26, and 35.

Construction ROW: As no construction activities are needed on the sub-sea portion of the pipeline, no construction ROW is required.

Operation ROW: The requested width of the permanent subsea ROW on State lands is proposed at 50 feet; 25 feet on each side of the centerline. This would occupy approximately 128 acres.

CIGGS-LP: The existing CIGGS-LP segment is located on private and State-owned uplands in Nikiski. The pipeline originates near the Middle Ground Shoals Facility and will terminate at the Swanson River Oil Pipeline at the Andeavor Refinery. *(There is a short segment of new pipeline segment proposed to connect the East Forelands Facility to the CIGGS-LP referred to as the CIPL E 10 Pipeline. It will be located entirely on privately owned uplands, and is not included under this ROW lease.)*

The CIGGS-LP occupies State-owned land in the following locations:

Township 7N, Range 12 W, SM, Sections 10, 15, 16, and 21.

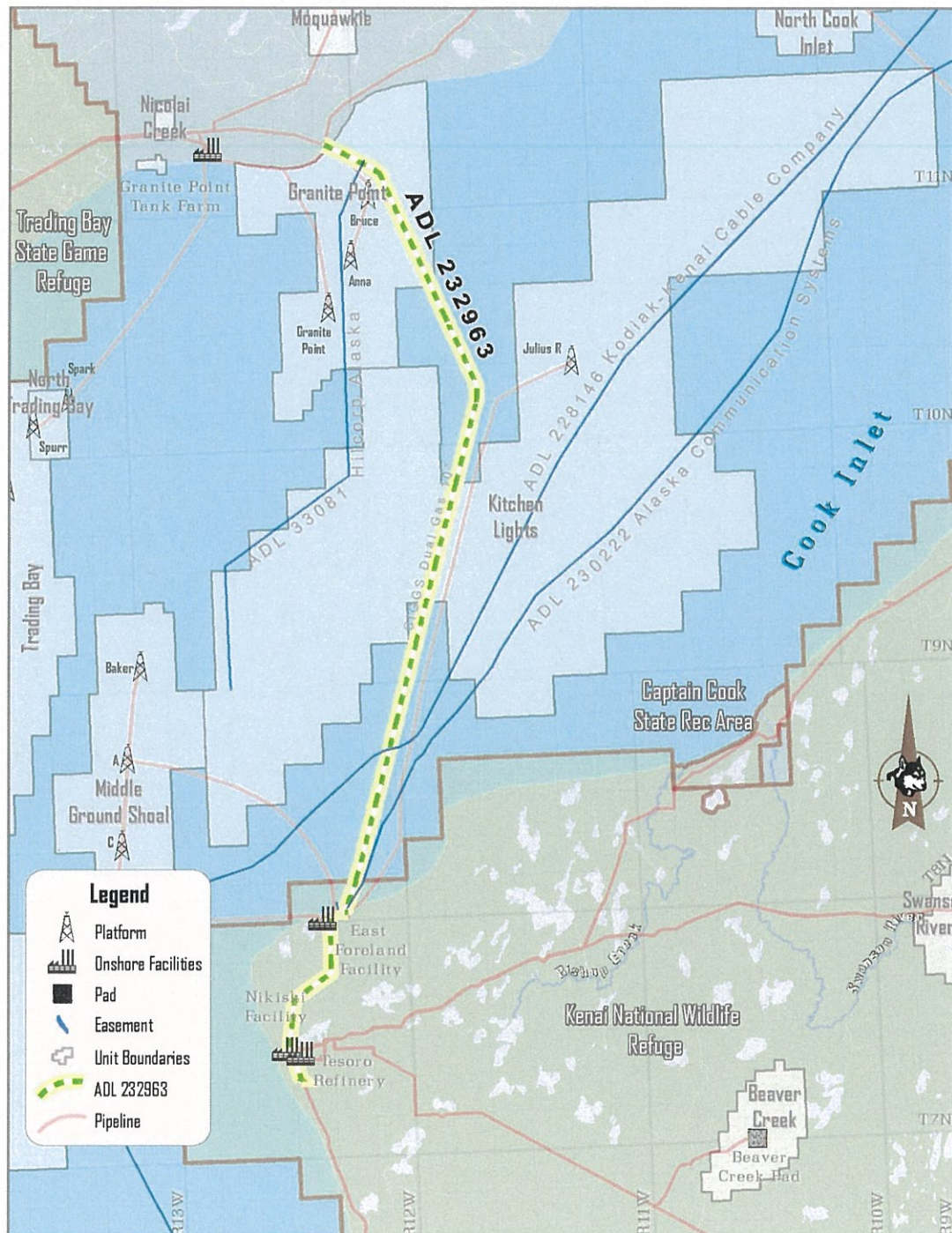
The CIGGS-LP occupies State-managed section line easements located on privately owned lands in the following locations:

Township 8N, Range 12 W, SM, Section 35
Township 7N, Range 12 W, SM, Sections 2, 3, and 10

Construction ROW: As no construction activities will be conducted under the ROW lease, no construction ROW is required.

Operation ROW: The requested width of the permanent ROW on state lands is proposed at 50 feet; 25 feet on each side of the centerline. This would occupy approximately 29 acres.

Figure 2: Proposed CIGGS ROW Overview



Proposed Change To Service Schedule

Conversion of the CIGGS pipeline is proposed to commence in late summer of 2018 with start-up proposed for the following fall.

II. ADMINISTRATIVE ACTIONS

AS 38.35 ROW Leases and the Adjudication Process

AS 38.35 ROW leases are legal agreements that grant a revocable interest in State land for the construction and operation of common carrier or contract carrier hydrocarbon pipelines. As part of the adjudication process, the Division works closely with multiple agencies to ensure the lease facilitates safe development of state resources and protects the land for future generations.

AS 38.35 and 11 AAC 80 apply to pipeline ROW leases, specifying standards all applicants must meet before a lease may be offered. To initiate the process, applicants must complete Form DL-10-130 and answer a wide array of questions about the project and the applicant's capabilities. Until those questions are adequately addressed, the application will not be considered complete. Once an application is complete, public notice for the application is held. (AS 38.35.070)

During the public notice period, the Division coordinates with other governmental agencies, writes the Analysis and Proposed Decision, and develops the proposed lease. In making a determination, the factors listed in AS 38.35.100 must be considered along with a clearly stated proposed action (Section VII of this document). To determine if an applicant satisfies these standards, the Division examines the land status of the proposed ROW (Section III), what natural resources could be affected (Section IV), the technical capability of the applicant (Section V), and their financial capability to construct, operate, maintain, and terminate the proposed project (Section VI). AS 38.35 also includes a minimum of 14 covenants that all leases for pipelines valued at \$1,000,000 or more must include (AS 38.35.120 or AS 38.35.121, as appropriate). Lease term length and the ability to renew are governed by AS 38.35.110. Other lease conditions and stipulations are negotiated with the applicant (AS 38.35.120(c) and (d)) and are tempered with the Division's technical knowledge of pipelines and experience managing State land.

Once the Analysis and Proposed Decision has been issued, a public notice of not less than 30 days for the decision is required. There is no appeal process for an AS 38.35 ROW lease decision, and only certain parties have standing to seek a judicial review: the applicant, a competing applicant, and a person with a direct financial interest who raised objections within 60 days of notice of the application. The only grounds for a judicial review are failure to follow the procedures of the AS 38.35, and abuse of discretion so capricious as to constitute a denial of due process.

If the Commissioner's Final Decision is to offer the applicant a ROW lease, the potential lessee has 30 days to return the signed lease to the Division for final execution along with the annual fee, insurance, bonding, and other project specific documents. (AS 38.35.100(c))

If a lease is issued, Harvest must obtain a Written Authorization (WA) for start-up of the pipeline from the Division before oil transport commences. To obtain the WA, Harvest must submit a

variety of documents for approval, including the finalized Change to Service plan, final engineering designs, and a Quality Management Plan. Attachment B of the draft lease contains further details about proposed requirements.

Administrative Record

Case file ADL 232963 constitutes the administrative record for this decision. DNR Division of Mining, Land and Water (DMLW) files ADL 56285 (CIGGS Marine) and ADL 33333 (CIPL) provided historical background information concerning existing pipelines. ADOT&PF provided historic background information concerning permit A-490-1-72 for the CIGGS-LP segment.

Public Notice of Application

The public notice for both Cross Inlet applications began on September 13, 2017, and expired on November 13, 2017. The notice was posted on the Division website and the State's public notice website, published in the Alaska Dispatch News and the Peninsula Clarion, and sent to post offices near the project area. Notices were also provided to third party interest holders, government agencies/entities, and Alaska Native Claims Settlement Act (ANCSA) Regional and Village Corporations within the vicinity of the project. Complete copies of the applications were sent to the Kenai, Soldotna, Homer, Anchor Point, and Ninilchik libraries and coordinating state agencies (as defined by AS 38.35.230).

One written public comment from Cook Inlet Keeper was submitted during the notice period with comments concerning both projects.

Cross Inlet Public Hearing

DNR provided public notice for the Cross Inlet public hearing concurrently with the notice for the Tyonek ROW lease decision. It was held in Nikiski at the Community Recreation Center on March 12, 2018.

III. LAND STATUS WITHIN THE PROPOSED ROW

Title

The State of Alaska holds title to the tide and submerged lands of the CIGGS-A project area under the Submerged Lands Act of 1953 and the Equal Footing Doctrine. The State of Alaska also holds fee title to the Kenai Spur Highway and Wik Road rights-of-way through the Omnibus Deed dated June 30, 1959, and retains an interest to the section line easements within the CIGGS-LP project area.

Third Party Interests

There are several existing authorizations granted by the State of Alaska within or adjacent to the proposed ROW. These include pipeline easements, utility easements, and oil and gas leases. Below is a list of identified third party interests that have the potential to be directly affected by the proposed ROW.

Table 1: Third Party Interests

File Number	Name	Authorization Type	Sub-type	Status	Project
ADL 228146	Kodiak-Kenai Cable Company, LLC	Private Easement	Tdld Fiber Optic Rwe	Interim	CIGGS A Marine
ADL 231758	Furie Operating Alaska, LLC	Private Easement	Non Exclusive Row	Interim	CIGGS A Marine
ADL 230222	Alaska Communications System Group (ACS)	Private Easement	Tdld Fiber Optic Rwe	Issued	CIGGS A Marine
ADL 33081	Hilcorp Alaska, LLC	Private Easement	TideInd Nonexc Rwe	Issued	CIGGS A Marine
ADL 56285	Kenai Beluga Pipeline, LLC	Private Easement	TideInd Nonexc Rwe	Issued	CIGGS A Marine
ADL 64352	Hilcorp Alaska, LLC	Private Easement	TideInd Nonexc Rwe	Issued	CIGGS A Marine
ADL 232307	Homer Electric Association	Dev w/in existing easement	SLE Secondary NonObj	Approved	LP CIGGS
ADL 17586	Hilcorp Alaska, LLC	Oil & Gas Lease Comp	Cook Inlet	Issued	CIGGS A Marine
ADL 17587	Hilcorp Alaska, LLC	Oil & Gas Lease Comp	Cook Inlet	Issued	CIGGS A Marine
ADL 18742	Hilcorp Alaska, LLC	Oil & Gas Lease Comp	Cook Inlet	Issued	CIGGS A Marine
ADL 389924	Cornucopia Oil & Gas Company, LLC	Oil & Gas Lease Comp	Cook Inlet	Issued	CIGGS A Marine
ADL 389925	Cornucopia Oil & Gas Company, LLC	Oil & Gas Lease Comp	Cook Inlet	Issued	CIGGS A Marine
ADL 391598	Cornucopia Oil & Gas Company, LLC	Oil & Gas Lease Comp	Cook Inlet	Issued	CIGGS A Marine
ADL 391599	Cornucopia Oil & Gas Company, LLC	Oil & Gas Lease Comp	Cook Inlet	Issued	CIGGS A Marine
ADL 391606	Cornucopia Oil & Gas Company, LLC	Oil & Gas Lease Comp	Cook Inlet	Issued	CIGGS A Marine
ADL 391607	Cornucopia Oil & Gas Company, LLC	Oil & Gas Lease Comp	Cook Inlet	Issued	CIGGS A Marine

Area Plans and Classifications

DNR is responsible for management of State-owned land. Area Plans are among the tools DNR uses to guide how State land will be used. These plans encompass large tracts of land and, through a public process, establish goals, policies, management intent, and guidelines for the use of State lands. These plans also classify lands for certain types of activities and determine if some types of activities should be restricted or prohibited.

The project area is subject to the Kenai Area Plan, Regions 5 and 11. The CIGGS-A crosses Units 506B and 514, which have the classification of Resource Management Land; and Units 511 and 567, which have the classification of Waterfront Development Land. The CIGGS-LP is located predominantly on private lands that are not subject to DNR land classifications. Where it is within State-owned Omnibus rights-of-way, the land will be managed in accordance with the purpose of the Omnibus Deed as a transportation corridor. The CIGGS-LP is also adjacent to Units 297 and 298, which have the classifications of Settlement and Resource Management Land, respectively. The classification of Resource Management Land indicates that there is no singular resource value that merits a primary designation; the classification of Waterfront Development Land indicates that the lands are suitable for commercial or industrial activities, and the classification of Settlement Land indicates that the lands are suitable for residential, recreational, or industrial development. Additionally, as the pipeline will allow for the transportation of hydrocarbons and not interfere with the primary use for vehicular traffic, it is in accordance with the Omnibus Deed. Furthermore, nothing in the Kenai Area Plan prohibits or restricts the use of these lands for pipelines and the project is consistent with the plan's goals, policies, management intent, and guidelines.

Mineral Order 1204

Pursuant to AS 38.05.185(a) and AS 38.05.300(a) the Commissioner may close lands to mineral entry or mining when those activities would be incompatible with significant surface uses. The lands within the proposed ROW are currently open to mineral entry. As mining activities are incompatible with oil and gas pipelines (a significant surface use) the Commissioner has approved the closure of lands under the CIGGS-A segment, plus 100 feet on either side, to mineral entry through Mineral Order 1204 if the proposed ROW lease is issued.

Mineral Order 1204 did not include the uplands under the constructed CIGGS-LP segment. An amendment to MO 1204 is proposed, concurrent with this decision, to add those State lands crossed by the CIGGS-LP and to allow MO 1204 to accommodate future related facilities that may be added to the CIGGS right-of-way lease (ADL 232963). The addition of the CIGGS-LP lands constitutes up to 66 acres of land.

Access To Public and Navigable Waters

Before the State may lease land adjacent to or inclusive of a waterbody or waterway, DNR shall determine if that waterbody or waterway is navigable or public waters and, if so, establish specific easements to and along them. (AS 38.05.127) The purpose of these easements is to guarantee free public access to waterbodies and waterways for transportation, recreation, fishing, and a variety of other purposes.

Cook Inlet is a navigable waterbody and as such is subject to AS 38.05.127 access easements. An easement of 50 feet seaward of the mean high tide line is reserved at both landfall locations of the CIGGS-A segment.

Public Trust Doctrine

All authorizations for this project will be subject to the principals of the Public Trust Doctrine; specifically, the right of the public to use navigable waterways and the land beneath them for navigation, commerce, fishing, hunting, protection of areas for ecological studies, and other purposes. These rights will be protected.

IV. NATURAL RESOURCES WITHIN THE PROPOSED ROWS

Introduction

The Commissioner's Analysis and Proposed Decision must consider existing resources within the right-of-way. (AS 38.35.100) Below are summaries of those resources found within or adjacent to the project area.

Oil and Gas Resources

The first significant oil discovery in the Cook Inlet area was made on July 23, 1957, by the Richfield Oil Corporation in the Swanson River area. This profitable development created a flurry of exploration, and by the late 1960's there were 14 offshore platforms in Cook Inlet. The fifteenth platform, Steelhead, was installed in 1986. Oil production in Cook Inlet peaked in 1970 at 83 million barrels annually and natural gas peaked in the late 1990s/early 2000s at 222 billion cubic feet of gas annually.

Recently, new drilling technologies and advancements in seismic surveying have revitalized the oil and gas industry in the Cook Inlet area. As the life expectancies of old fields are extended and new wells are brought online, new, updated, or repurposed infrastructure will be needed to transport the oil and natural gas to customers.

Mineral Resources

Generally, the seafloor of Cook Inlet has low potential for locatable minerals, and no marketable minerals are known to be in or near the CIGGS-A project area. The CIGGS-LP segment of the pipeline runs through developed transportation corridors where no marketable minerals are known to exist, and where pursuit of those minerals would likely be restricted due to the existing infrastructure.

Material Resources

Generally, the seafloor of Cook Inlet has low value for material (sand, gravel, and rock) extraction, and no marketable materials are known to be in or near the CIGGS-A project area. The CIGGS-LP segment of the pipeline runs through developed transportation corridors, where extraction of material resources would likely be restricted due to the existing infrastructure.

Cultural Resources

The National Historic Preservation Act (NHPA) established the State Historic Preservation Office (SHPO) and the Section 106 Review Process for preserving historical and archaeological sites. In Alaska, SHPO resides within DNR's Division of Parks and Outdoor Recreation. As part of the application review, SHPO was contacted and as no ground disturbing activities are proposed under the AS 38.35 ROW lease, no Section 106 review is required for this decision.

Fish, Wildlife, and Biotic Resources

The State of Alaska Department of Fish and Game (ADF&G) has primacy of management over all fish within freshwaters and fish in marine waters within three miles of shore. The ADF&G manages the commercial, sport, subsistence, personal use, and educational fisheries in Cook Inlet. ADF&G also manages sport hunting of wildlife in the Cook Inlet area in Game Management Units (GMUs) 9, 14, 15, and 16. Some marine mammals, groundfish species, and fish in waters from 3-200 miles offshore are managed by the National Marine Fisheries Services, a branch of the National Oceanic and Atmospheric Administration (NOAA).

Cook Inlet species, including Pacific salmon, beluga whales, and harbor seals, can be found within, adjacent to, or passing through the marine project area. For detailed information about these and other Cook Inlet species, see Section One of Attachment C.

Sport Fishing and Hunting

Major sport fisheries occur in many freshwater streams near the project area, such as the Chuit, Theodore, Lewis, and Beluga Rivers on the west side of Cook Inlet, and the Kenai, Kasilof, and Swanson Rivers on the east side. Additionally, some sport fish species are harvested along the coastline of Cook Inlet. Please see Section Two of Attachment C for more information about sport fishing near the project areas.

Large game species, such as moose or bear, and migratory birds may travel within the proposed project ROW, and could be harvested within the project area. Please see Section Two of Attachment C for more information about sport hunting near the project areas.

Personal Use

Personal use fisheries provide an important source of food for many urban and rural Alaskans. Personal use fishing methods, seasons, harvest limits, and locations are determined by ADF&G and include the mouth of the Kasilof and Kenai Rivers and the Beluga River, which are near the project areas. Please see Section Two of Attachment C for more information about the personal use fisheries near the project area.

Commercial Fishing

The commercial fishery for Cook Inlet is large and divided into two management areas by the ADF&G, the Upper Cook Inlet (UCI) and Lower Cook Inlet (LCI). The project area is located within the UCI, which has commercial fisheries for five species of Pacific salmon, Pacific herring, smelt, and razor clams. Pacific salmon and smelt commercial fishing takes place within or adjacent to the proposed CIGGS-A segment of the proposed ROW; however, the project is not expected to affect the Pacific herring and razor clam fisheries. Please see Section Three of Attachment C for more information about the commercial fisheries near the project area.

Subsistence Use

Alaska law defines subsistence as “noncommercial, customary and traditional uses.” The communities of Tyonek, Beluga, and Nikiski harvest and utilize wild resources within and adjacent to the project areas. Please see Section Four of Attachment C for more information about these communities and their subsistence activities.

V. TECHNICAL CAPABILITY OF THE APPLICANT

Introduction

The Commissioner's Analysis and Proposed Decision must consider whether an applicant has the technical capability to transport oil in Alaska consistent with the present and future public interest. (AS 38.35.100) Harvest has submitted original design documents along with conversion to service plans to the Division for technical review. The purpose of the technical review is to:

1. evaluate a submitted design basis for the improvement to the State lease;
2. evaluate the applicant's technical ability to build, maintain and operate the improvements to the lease;
3. ensure the design addresses all areas of pipeline integrity, conforms to laws and regulations, protects the environment, protects the public safety, protects safety to construction, operations and maintenance personnel, and accommodates removal or remediation (if required) at lease termination; and
4. ensure that the design basis has been followed in the design documents and calculations.

Reviewed Documents

Attachment E, Reviewed Technical Documents, is the list of documents, reports, and data used during the technical review of the CIGGS application.

Background

CIGGS A: The dual CIGGS Marine A and B pipelines are approximately 21.9 miles in length, nominal 10-inch diameter, entirely in a Class 1 location and were originally designed for gas

service per 49 CFR 192. Both pipelines were constructed to transport natural gas from East Forelands to Kaloa Junction. Originally owned by Union-Marathon, they were commissioned in 1972 and configured to be bi-directional based on gas demand. Both pipelines have been operational since commissioning and no known leaks have been observed. Maximum Allowable Operating Pressure (MAOP) is 1,480 pounds per square inch (PSI). Numerous integrity studies have been performed and reports generated to describe the condition of both lines. Harvest purchased these gas transportation pipelines in 2011, and has operated them without any known adverse incidents. Harvest requests a Change to Service for the CIGGS-A pipeline to transport sales quality crude oil per 49 CFR 195.

CIGGS LP: The Low Pressure CIGGS pipeline is an existing 3.77-mile-long, 10-inch nominal diameter onshore pipeline that will be converted from natural gas service to crude oil service between Station O and the KPL oil facility. This pipeline was constructed in 1972 and there are no known records of any pipeline leaks. The MAOP is 1,480 PSI. After conversion to oil service, the CIGGS LP pipeline will become part of the CIPL E 10 pipeline.

Codes, Regulations, and Standards

Applicable codes governing the project include, but are not limited to:

- 49 CFR 195: Transportation of Hazardous Liquids by Pipeline
- ASME B 31.4: Pipeline Transportation Systems for Liquids and Slurries

Transported Product (Fluid and Flow)

The product transported by the CIGGS Pipeline System will be sales quality crude oil. It will be transported to the east from Granite Point Tank Farm, across Cook Inlet, to the Andeavor refinery in Nikiski. The pipelines are expected to have an average throughput of approximately 19,200 barrels per day (bpd). The pipeline would have the capacity to handle a larger throughput – up to 31,700 bpd – to handle increased supply from west Cook Inlet suppliers.

Pipeline Segment Description

The repurposing of the CIGGS pipeline for the Cross Inlet project includes four segments of pipes: CIPL West 10, CIGGS-A Marine, CIPL East 10, and CIGGS-LP. The CIPL W 10 and the CIPL E 10 are not located on State-owned land and will not be authorized under this lease; however, these segments are part of the technical review because they are part of the complete CIGGS pipeline system and are integral to understanding system integrity.

The CIPL West 10 is a new, buried, 3.4 mile-long 10-inch pipeline between the Granite Point Tank Farm (GPTF) and Kaloa Junction, where it will connect to the existing CIGGS A segment. New pumps are proposed at the Granite Point Tank Farm facility for this project.

The CIGGS-A Marine Pipeline was constructed in 1972 and will be connected to an existing buried pipeline at a block valve near Kaloa Junction on the west side of the Inlet. It lies in a general northwest to southeast orientation, is approximately 21.9 miles in length, and has a nominal pipe diameter of 10 inches. The pipeline was laid on the ocean floor and over time has been partially buried with sediment via current transport. Maximum water depth along the pipeline alignment is

approximately 125 feet. The pipeline segment terminates on the east side at a tie-in at the east Forelands Facility.

The CIPL E 10 is a new 0.6-mile-long, 10-inch nominal diameter pipeline that connects the CIGGS-A pipeline on the east side of Cook Inlet at East Forelands and connects to the CIGGS-LP pipeline at Station O.

The CIGGS-LP pipeline was constructed in 1972 and will be connected to the CIPL East 10 pipeline at the Middle Ground Shoals Facility block valve. It is buried and generally lies north to south along the edge of a subdivision until it connects with the Kenai Spur Highway, then lies parallel to the highway to the Andeavor refinery. The buried pipeline is co-located with other existing pipelines and utility infrastructure.

Pipe Physical Characteristics

CIGGS A: The American Petroleum Institute (API) specification for Line Pipe material is high strength carbon steel with a minimum yield strength of 52,000 PSI. The subsea portion has a nominal pipe size (NPS) of 10-inch diameter seamless line pipe with a 0.594-inch wall thickness.

The material test reports (MTRs) reflect the installed line pipe met or exceeded industry standards at the time, 18th Edition API Specification 5LX, April 1971, the edition in effect when the pipeline was installed. Charpy impact and hydrostatic pressure tests were performed and passed procurement requirements. The pipeline was coated with two types of external protective surfaces.

- Coal tar enamel mastic protective layer to 1/8-inch thickness
- Concrete weight-coat for pipeline stability with varying thicknesses: ranging from 1-inch, 2-inches and 3.5-inches

An impressed current cathodic protection system is currently in use.

CIGGS LP: The API specification for Line Pipe material is high strength carbon steel with a minimum yield strength of 52,000 PSI. The pipe has a NPS of 10-inch diameter double submerged arc welded line pipe with a 0.250-inch wall thickness.

The MTRs reflect the installed line pipe met or exceeded industry standards at the time, 18th Edition API Specification 5LX, April 1971, the edition in effect when the pipeline was installed. Charpy impact and hydrostatic pressure tests were performed and passed procurement requirements.

The pipeline was coated with enamel and a glass fiber wrap. Cathodic protection is provided by an impressed current cathodic protection system located at East Forelands.

Proposed Pipeline Design

The existing CIGGS A and CIGGS LP pipeline segments are made of high-yield carbon steel (API 5L-X52) with a MAOP of approximately 1,480 pounds per square inch. The nominal subsea pipeline wall thickness is 0.594 inches, and the onshore pipeline wall thickness is 0.365 inch with less than 20% wall loss due to pitting corrosion. An external coating of coal tar enamel and

concrete weight coat are installed on the CIGGS-A pipeline. The buried CIGGS-LP pipeline has a Polyken #980-20 tape coating. The CIGGS A and the CIGGS LP pipelines were built in 1972 to federal pipeline requirements in accordance with the U. S. Code of Federal Regulations (CFR), Title 49, Part 192.

CIGGS-A Marine is laid on the sea floor, with a concrete weight coating around the pipe, and is pinned in place by Sea-Crete bags as needed to stabilize the pipeline.

The pipeline system will include a pig launcher at the Granite Point Tank Farm and a pig receiver at the CIGGS-LP connection with the Swanson River Oil Pipeline (SROP) at the Kenai Pipeline Junction (KPL). These facilities allow the pipelines to be internally inspected by means of pigging.

Cathodic protection is provided to the CIGGS-A pipeline on land segments by impressed current cathodic protection system. The system rectifiers are located at East Forelands in Nikiski and at the Kaloa facility on the west side of Cook Inlet. Additional cathodic protection is provided to the subsea pipelines using numerous anode sleds. Cathodic protection is provided to the CIGGS-LP pipeline by a deep well anode.

The overall CIGGS pipeline length between shutdown valves is 113,239 feet (21.5 miles) and has a volume of 56,472 cubic feet (422,412 gallons; 10,057 barrels) at standard atmospheric pressure and temperature. Isolation valves for the subsea segment are located at Kaloa Junction and East Forelands.

No additional power or communication cables, housing, or access routes are proposed to be constructed for operation of these pipelines, as they are in developed areas with sufficient facilities available. The applicant plans to conduct maintenance, inspection, emergency response, and repairs using support facilities available in the Cook Inlet region.

Design Life

The design life of the pipeline is 20 years, which coincides with the length of the proposed lease. Should the applicant want to renew the lease, the pipeline will be evaluated for useful life.

A 20-year design life does not indicate that the pipeline and associated structures will be used up, failure-prone, or requiring replacement near the end or at the end of the lease. Engineering design life is established from a combination of technical, regulatory, economic, and commercial considerations. There are various definitions of design life however, for the purposes of this lease, it can be defined as the period over which the systems, components, and structure are required to perform their primary functions with acceptable safety, regulatory, and environmental performance, and with an acceptable probability that they will not experience large failures, require extensive replacements, or need significant repairs.

Geotechnical and Soils

CIGGS-A Marine: In general, seafloor sediments in the Cook Inlet vary from glacially-derived coarse grained sand and gravel in the north to fine-to-medium grained sand sculpted bedforms in the central and lower Cook Inlet (BOEM, 2016). During the melting season, fine-grained silt and clay particles are carried down from streams, rivers, and glaciers in the Susitna, Matanuska, and

Knik Valleys, into the Cook Inlet, and suspended in the water column. Because of the turbid nature of currents and tides, the fine-grained sediments are carried out of the Inlet, with some suspended sediments settling out in the winter. As a result, bottom sediments along the pipeline alignment are typically coarse grained: cobbles, pebbles, and sand, with only minor amounts of varved silt and clay and occasional erratic boulders. Average grain size distribution is expected to be in the range of sandy gravel to gravel (BOEM, 2016).

No portions of the pipeline alignment are known to be subject to differential displacement due to mass soil movements. It is assumed that there are no locations of landslides, liquefaction, or other situations where the pipeline could be damaged by minor movements of soil. Geological evidence demonstrates massive subsurface movements creating regional folding in subsea deposits, but the pipeline does not cross over active faults. The transition zones in the tidally influenced areas are susceptible to soil erosion by ice scour, wind, and dynamic water movement. The minimum depth of cover for the near shore transition zone is six feet. Once the pipe descends the bluff into the tidal zone, it remains buried until it reaches subsea conditions.

The relatively long and narrow geography and the shallow depths of Cook Inlet, the Coriolis effect (more significant at higher latitudes), and other factors combine to create one of the world's largest tides, in excess of 30 feet, in upper Cook Inlet. These tides are generally recognized as the third highest in the world and produce strong currents and turbulence. The Cook Inlet has high current velocities, but subsea pipelines have a successful 50-year history in this harsh environment. Much has been learned about restraining pipelines against currents. For the proposed conversion of service, Cook Inlet current measurements were used to gain an understanding of velocities and turbulence stresses on the subsea pipeline. Newly-acquired bathymetry was also used for the basis of design.

No geotechnical engineering work was done for the existing CIGGS LP pipeline. It has been buried adjacent to the Kenai Spur Highway since construction in 1972 with no known soil related issues.

Seismic Design

The most significant source of seismicity in southcentral Alaska is the plate-boundary subduction zone, known as the Alaska-Aleutian Megathrust. Spanning the width of the Aleutians to the Gulf of Alaska, this plate boundary accommodates oblique subduction of the Pacific Plate beneath the North American Plate and has the potential to generate the largest earthquakes in the world. In 1964, the second-largest (M_w 9.2) instrumentally recorded earthquake occurred in the western Gulf of Alaska and affected much of southern Alaska, causing strong ground motion, a tectonic tsunami, liquefaction and lateral spread of soils, and many subaerial and submarine landslides that generated local tsunamis. Additionally, because sub-surface slip in megathrust earthquakes is so great (75+ ft), regions above the subduction zone experienced lasting uplift or subsidence (many tens of feet) after the 1964 event. Although the geologic activity of Alaska essentially guarantees that more damaging earthquakes will occur in the future, we cannot predict when. The proposed pipeline is located above this highly active plate interface.

Secondary to the Alaska-Aleutian Megathrust, there are many active structures in the upper crust of Cook Inlet that form in response to right-lateral transpression. These fault-cored anticlines, or ridge-shaped folds, are northeast-trending, discontinuous, and doubly plunging and have formed during the Plio-Pleistocene time and generate numerous small earthquakes. On April 26, 1933, a shallow M 6.9 earthquake occurred in northern Cook Inlet (most likely) on the 23 km-long North Cook Inlet anticline. Based on their sizes, these structures all have the potential to generate M6-7 earthquakes. Little is known about the recurrence of large earthquakes in this area and most of what we know is from proprietary seismic reflection data. Aside from strong ground motion, any permanent ground deformation from earthquakes on these structures would likely include broad warping of growing anticlines. While not totally impossible, we do not see evidence for discrete surface rupture in the Inlet.

There are no known surface-rupturing faults that intersect the proposed pipeline route. The nearest known surface-rupturing fault is the Castle Mountain Fault, an east-northeast trending structure approximately 10 miles north of the banks of Cook Inlet (extending between the Talkeetna Mountains and the Susitna River). Two historic earthquakes have occurred on the Castle Mountain fault, a M5.7 in 1984 and a M4.6 in 1996. These were right-lateral events, but did not produce surface ruptures, as surface ruptures typically do not occur for earthquakes smaller than M 6.5. Given the length of the structure, its geomorphic expression, and regional tectonic activity, the Castle Mountain fault has potential to produce significant, surface rupturing earthquakes (M6.8+). A 2002 paleoseismic study determined the Castle Mountain fault has an average recurrence interval of ~700 years, with the last large earthquake occurring ~650 years ago.

Significant earthquakes from any of these sources have the potential to disturb the ground at sea level near the proposed CIGGS-A Marine pipeline. Strong ground shaking and regional uplift/subsidence could generate a tectonic tsunami, a local slope failure-derived tsunami, a seiche (sloshing), or a permanent change in regional coastline elevation. The burial of the pipeline near shore serves as a protective measure should a tsunami reach the area.

Onshore Hydrology and Waterways

No significant streams, rivers, or lakes bisect the pipeline route. Surface water exists in some wetland areas and typical construction techniques for mitigating surface runoff during pipeline construction have been employed.

Supervisory Control and Data Acquisition (SCADA)

All 10-inch-diameter pipelines will be monitored and controlled through Hilcorp's existing SCADA system. The primary control and operations center for the pipeline is located at the Kenai Gas Field facility. The backup control room is located at KPL Junction.

Leak Detection Systems

The leak detection system will include two separate leak detection technologies consisting of a statistical mass balance leak detection system and a wave rarefaction model leak detection system.

The Atmos Pipe mass balance leak detection system is a statistical volume balance leak detection system that provides a very accurate method of detecting smaller leaks over a longer period or

larger leaks over a short period of time. Operational experience at other Alaska oil pipelines using the Atmos Pipe system has verified it provides a highly reliable and accurate method of leak detection on crude oil pipelines in similar oil production service.

Flow meters carefully monitor inlet and outlet flows of the pipeline system for comparison of these values. Differences would indicate possible leaks. A statistical mass balance leak detection computer modeling system ties into the SCADA system that monitors the pipeline flow and generates predictable flow patterns over time. Disturbances such as those caused by temperature variations or varying flow or operating pressure are measured and masked out as "noise."

Atmos Wave is suited to identify larger leaks in a shorter period of time and is also able to identify the leak location. The Atmos Wave Leak Detection System is based on the detection of the negative pressure waves associated with the onset of a leak or theft. These rarefaction waves propagate from the location of the release in both directions and can be sensed by high performance pressure meters at the ends or along the pipeline. The basic principle is simple and it is used to detect and locate very large leaks using normal pressure meters. Unfortunately, when this principle is applied to very small leaks, the sensors detect not only the leak but also the large number of pressure changes that are part of normal pipeline operations and this causes many false alarms.

Atmos Wave is the result of several years of research and development directed at producing a pressure-based leak detection system that is based on state of the art hardware and telecommunication technology. A thorough review of the performance problems of the traditional systems leads to the decision to develop a completely new approach. This new approach is extremely successful. It examines all aspects of the negative pressure wave front and its propagation through the entire pipeline length. Three comprehensive algorithms filter out noise and arrange the analog pressure data into a detailed three-dimensional map that allows the system to differentiate true leak/theft events from the pressure changes caused by transient operation. Extensive performance evaluation and field trials have proven that Atmos Wave consistently differentiates opening and closing leak/theft signals during transients. These remarkable algorithms have been rigorously tested in operational pipelines with great success.

Atmos Pipe acts as the primary leak detection system aided by Atmos Wave. Both leak detection systems run independently of each other. If one system fails, the other system will continue leak detection. Atmos Wave provides the Atmos Pipe System with the ability to detect leaks more quickly and provide a more accurate leak location.

Integrity of Existing Pipeline Segments

CIGGS A: The CIGGS Marine dual pipelines are subject to environmental forces such as earthquakes, tidal and wave currents. Thirty-foot tides are common in upper Cook Inlet waters. The currents in this location are quite high owing to the Venturi effect, as seen from bathymetry data. Strong currents create a dynamic environment in which the pipelines reside and impart lift and drag forces upon those pipelines daily. Gradual grade changes occur over time along the mudline and pipeline interface, influenced by erosion and deposition of sand waves surrounding the pipelines. Separate analysis conducted by contracted pipeline integrity specialists

recommended Sea-Crete bags along the alignment to minimize free spanning and provide pipeline stability against tidal and wave currents. Over time, these stabilizing features may deteriorate and allow movements. Pipeline instability is a known threat to subsea pipelines. Harvest will conduct annual bathymetry surveys and mitigation measures will be employed to maintain free-span lengths to less than 50 feet.

Transition zones at both ends of the subsea segment have been direct buried to protect the pipeline from ice gouging and daily wave forces. These transition zones have received repeated special attention when integrity inspections found damaged protective coatings requiring repairs. Transition zones adequately protect the pipelines from near shore boating and fishing activities.

An unknown force, either intentional or accidental, has created a bend anomaly in the CIGGS Marine A and B pipelines. Multiple integrity studies have been conducted and, based on the geometry of the pipeline, the maximum recommended strain by ASME B 31.4 has been exceeded. Strain-based engineering methods have been employed to analyze the integrity of the pipeline. To confirm the engineering analysis, a portion of leftover pipe from the CIGGS construction was bent and burst tested. The burst tests were several orders of magnitude larger than the MAOP of the pipeline system. Through extensive analysis and study, including integrity assessment by a national pipe integrity specialist, Harvest has determined the pipeline can be operated in a safe manner and poses no additional risks than that of other Cook Inlet pipelines. As an added precaution, Harvest will limit the operating pressure of the CIGGS-A pipeline to a maximum of 600 PSI.

The "2017 Pipeline Integrity Review" performed on the CIGGS-A pipeline pipe found anomalies with suspected internal metal wall loss. A pipe section was removed onshore and replaced. Testing by destructive examination determined a manufacturing defect known as a scab. Recent in-line inspection (ILI) data suggests wall loss measurements of less than 20% from data collected by magnetic flux leakage (MFL) tool and are within current code and regulatory standards.

In 2018, an ILI was performed on the CIGGS LP pipeline. The integrity report did not identify any required repairs.

VI. FINANCIAL CAPABILITY OF THE APPLICANT

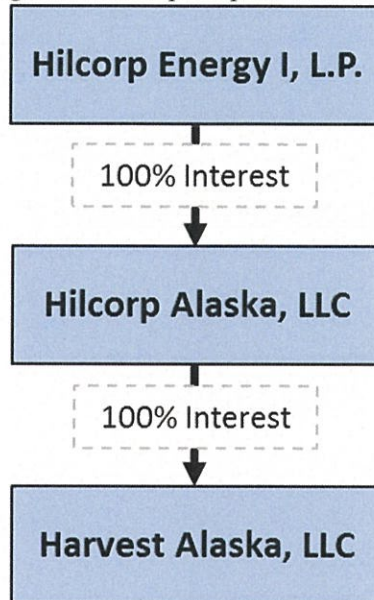
Introduction

The Commissioner's Analysis and Proposed Decision must consider whether an applicant has the financial capability to transport oil, natural gas, or other products in Alaska consistent with the present and future public interest. (AS 38.35.100) As part of its ROW lease application, Harvest submitted Hilcorp Alaska LLC's audited financial statements and requested they be held confidential under AS 38.05.035(a)(8)(D). DNR examined these financial statements, as well as other available information, to assess the applicant's financial capability to construct pipelines, operate and maintain pipelines, and restore, rehabilitate, and revegetate the ROW to the satisfaction of the Commissioner.

Background

Harvest is an Alaska limited liability company wholly owned by Hilcorp Alaska, LLC. Hilcorp Alaska, LLC, is a Delaware limited liability company wholly owned by Hilcorp Energy I, L.P., a Texas limited partnership. Harvest was formed in 2014 and has an ownership interest in several pipelines on the North Slope and within Cook Inlet. In 2014, Harvest acquired 68.46% interest in the Endicott Pipeline Company, 50% interest in Milne Point Pipeline, and 100% interest in the Northstar Pipeline Company. It also has 100% ownership interest in three Cook Inlet pipeline companies: Cook Inlet Pipeline Company, Kenai Beluga Pipeline, and Swanson River Oil Pipeline.

Figure 3: Hilcorp Corporate Structure



CIGGS Expenditures

Harvest expects that there will be no construction or installation costs required for converting the CIGGS A or the CIGGS LP segments from gas to oil service. The annual maintenance and operating cost for the CIGGS-A is expected to be \$200,000 and the CIGGS-LP is estimated at \$75,000.

Financial Review

Harvest submitted Hilcorp Alaska LLC's audited financial statements for 2014, 2015, and 2016. An independent auditor's statement confirmed they had been prepared in accordance with generally accepted accounting principles in the United States. Harvest requested these financial statements be held confidential under AS 38.05.035(a)(8)(D).

DNR reviewed Hilcorp Alaska LLC's financial statements, including its balance sheet, income statement, cash flow statement and notes to the financial statements. DNR calculated several common financial metrics to evaluate Hilcorp Alaska, LLC's overall financial capability and assess how its financial condition compares to other companies in the upstream oil and gas sector. The following financial metrics were considered:

- *Current Ratio* (Current assets/Current liabilities): measures a company's ability to convert assets into cash in the near term.
- *Cash Flow/Debt*: measures a company's capacity to meet financial obligations in the short term.
- *Debt/EBITDA and Debt/Equity*: measure a company's capability to meet financial obligations in the coming years. (EBITDA stands for earnings before interest, taxes, depreciation, and amortization.)
- *Altman Z-Score*: combines several financial ratios into a single score for a company's financial condition. Z-Scores fall within one of three zones: Safe Zone ($Z > 2.90$), Cautionary Zone ($1.23 \leq Z\text{-Score} \leq 2.90$), and Distress Zone ($Z\text{-Score} < 1.23$).

DNR reviewed announcements and rating actions by Moody's for Hilcorp Alaska LLC's parent company, Hilcorp Energy I, L.P. Moody's has recently stated positive factors helping Hilcorp Energy I, L.P.'s financial outlook, including the company's relatively modest debt levels, increased geographic diversity of its operations and consistency in maintaining a sound financial condition.

VII. ANALYSIS OF APPLICATION

Fit, Willing, and Able Standards

The Commissioner is required to determine whether an applicant is fit, willing, and able to construct and operate a pipeline in the State of Alaska. (AS 38.35.100) If a favorable determination is made, a ROW lease may be offered to an applicant. The Commissioner must consider existing uses of the land, technical and financial capability of the applicant to protect property interests, fish and wildlife and their habitat and the subsistence interests of individuals in the general area of the ROW.

Standard 1: Existing Uses

The Commissioner must consider whether the proposed ROW lease will unreasonably conflict with existing uses of the land involving a superior public interest.

Evaluation: Land uses along the proposed ROW include potential resource development, oil and gas leases, pipeline easements, utility easements and public access. General information about these land uses can be found in Section III and IV of this document. There are multiple shore fishery leases near the CIGGS-A landfall locations.

Oil and Gas Resources and Authorizations

The Cook Inlet area is well known for its proven and potential oil and gas resources. The CIGGS-A pipeline bisects the Kitchen Lights Unit (Cornucopia Oil and Gas Company LLC) and the Granite Point Unit (Hilcorp Alaska, LLC). The CIGGS-LP line transects several parcels where the subsurface estate is held by the Mental Health Land Trust and other third-party interests. To minimize potential conflicts between different users, lease Section 14 requires the lessee to promptly repair or reimburse for any damages caused by the project to infrastructure located on

State lands. Lease Stipulation 3.10.1 requires the lessee to protect existing third-party interests and to repair any damages the lessee may cause.

Utility Easements

There are two fiber optic cables crossing the CIGGS-A; one owned by the Kodiak-Kenai Cable Company, LLC, which provides telecommunication between mainland Alaska and Kodiak Island, and one owned by Alaska Communication System Group (ACS), which provides telecommunication between Alaska and the Lower 48. The CIGGS-LP shares a section line easement with Homer Electric Association and multiple other utilities within the Kenai Spur Highway right-of-way.

There are no known land use conflicts between the various user groups. However, to help protect third-party interests, lease Section 14 requires the lessee to promptly repair or reimburse for any damages caused by the project to infrastructure located on State lands and Lease Stipulation 3.10.1 requires the lessee to protect existing third-party interests and to repair any damages the lessee may cause.

Mineral Resources

There are no known marketable minerals or existing mining claims within or adjacent the project areas. DNR proposes to close the lands within the ROW, plus 100 feet on either side, to mineral entry during the life of the ROW lease under Mineral Order 1204. This Order is intended to eliminate all potential conflicts so no additional mitigation stipulations have been included in the lease.

Material Resources

There are no known marketable materials within or adjacent to the project areas. Should Harvest determine at some point during the life of the project that materials within the ROW could be used for pipeline purposes, they may apply for an AS 38.05.565(a)(3) material sale. If this situation arises, Lease Stipulation 3.15 provides a basic framework for that action.

Cultural Resources

No construction or other ground disturbing activities is planned within the proposed leasehold after lease issuance. Future maintenance activities could potentially disturb undiscovered archaeological sites. Lease Stipulation 3.7 requires the lessee to stop work immediately upon the discovery of possible artifacts and contact DNR's Office of History and Archaeology, the Division, and the Kenai Peninsula Borough for evaluation. SHPO may require a Cultural Resource Survey Permit with protective measures for newly discovered archaeological site(s).

Wildlife Protection

The project areas are home to several threatened or endangered species. To minimize conflicts between these protected species and the proposed ROW, Lease Stipulation 3.20 requires coordination with federal, state, and local government concerning protection of fish, wildlife and their habitat near the ROW. Agencies include, but are not limited to, the NOAA Fisheries Alaska Region Protected Resource Division, the U. S. Fish & Wildlife Service, the National Marine Fisheries Service, and ADF&G.

Hunting

This project is not expected to have a large impact on hunting activities as the CIGGS-A has a minimal upland footprint and the CIGGS-LP is in a developed highway corridor (hunting from constructed roads is prohibited). To minimize any potential conflicts between available animal populations and the project, Lease Stipulation 3.21 requires the lessee to adjust pipeline activities, with written notification, for unpredicted wildlife breeding, nesting, calving or migration behaviors. Lease Stipulation 3.13 prohibits project employees from hunting, trapping and shooting within the ROW.

Fishing

The Upper Cook Inlet is home to Pacific herring, capelin, eulachon, longfin smelt, Pacific sand lance, and five species of salmon. These fish are harvested for commercial, sport, personal use, subsistence and educational purposes. Lease Stipulation 3.22 requires the lessee to make reasonable provisions to prevent conflicts and to design and operate the pipeline in a manner that minimizes obstructions to fishing. Lease Stipulation 3.13 prohibits project employees from fishing within the ROW.

Shore Fishery Leases

There are multiple shore fishery lease sites near both CIGGS-A landfall locations. DNR is not aware of any land use conflicts between the two user groups; however, to help protect shore fishery interests during the life of the project, Lease Stipulation 3.10.2 requires the lessee to make reasonable provisions to avoid or minimize impacts to shore fishery leases.

Subsistence Use

ADF&G has documented the people of Tyonek, Beluga, and Nikiski use the general project areas for subsistence purposes. Lease Stipulations 3.20-3.22 support the protection of fish and wildlife and offers protection for all subsistence activities in the area.

Public Access

It is the policy of DNR that public access routes and the ROW will be open for the use and enjoyment of the public. To minimize conflicts between the public and pipeline activities, Lease Stipulation 3.9 allows the lessee to request restricted access to the ROW. The Commissioner may approve restricted access in any of the following situations:

1. The ROW is being used for construction or termination activities.
2. To facilitate operations and/or maintenance activities, or to protect workers, the public, wildlife or the environment from hazards associated with the project.
3. For the security of the pipeline.

To and Along Access

The CIGGS-A is buried within the tidelands at both landfall locations at Granite Point and Nikiski. Harvest has stated that the pipe is designed to withstand the transportation activities allowed under 11 AAC 96.020: Generally Allowed Uses. The ability of the public, and specifically the shore fishery lessees, to easily use the tidelands for access must be protected. To protect these interests,

Lease Stipulation 3.9.2 specifically prohibits Harvest from interfering with the public's access to the tidelands except for those specific exemptions listed above in Public Access.

Standard 1 Conclusion: The Commissioner is satisfied the proposed CIGGS pipeline complies with the standards of AS 38.35.100(a)(1) if the above listed mitigation measures and/or conditions are met.

Standard 2: Technical Capability

The Commissioner must consider whether the applicant has the technical capability to protect state and private property interests, prevent significant environmental impacts, undertake restoration and revegetation actions, and protect subsistence activities.

Evaluation: The most significant way Harvest can comply with this standard is through the design, construction, operation, and maintenance of a safe pipeline system. The Division has scrutinized the proposed conversion and has determined the CIGGS pipeline can perform safely and continue to withstand the conditions of Cook Inlet if the pipeline is properly monitored and maintained. Details about the engineering review of the conversion application is in Section V.

To ensure continuing compliance with AS 38.35.100 after, lease sections 13, 14, 27, 28, and 38, and Lease Stipulation sections 2 and 3 include conditions upholding technical standards for the life of the proposed project; including, but not limited to, the following lessee required documents, plans and programs:

- Change to Service Plan – Prior to Start-Up, Harvest shall submit any updates to the Change to Service plan for approval (Stipulation 3.1).
- Design Basis and Criteria – Prior to Start-Up, Harvest shall submit any updates to the Design Basis and Criteria for approval (Stipulation 2.4). After Start-Up, any modifications to the Design Basis and Criteria must be approved before those modifications are implemented. (Stipulation 1.4)
- Final Design – Prior to Start-Up, Harvest shall submit final design drawings and calculations for approval. If there is a significant change from the preliminary design documents, Harvest may be required to submit additional plans to address new components (Stipulation 2.5). After Start-Up, any modifications to the Final Design must also be approved before those modifications are implemented (Stipulation 1.4).
- Quality Management Program – Prior to Start-Up, Harvest shall submit a comprehensive safety and integrity program and describe how they will document compliance with all lease terms and conditions (Stipulation 3.2). After Start-Up, any modifications to the program must be approved before those modifications are implemented (Stipulation 1.4).
- Surveillance and Monitoring Program – Prior to Start-Up, Harvest shall submit a comprehensive health and safety program, demonstrating how they will detect, prevent, and abate situations that endanger people and the environment or the integrity of the

pipeline (Stipulation 3.3). After Start-Up, any modifications to the program must be approved before those modifications are implemented (Stipulation 1.4).

Standard 2 Conclusion: The Commissioner is satisfied Harvest has the capability to comply with the technical standards of AS 38.35.100(a)(2) - (3), if the above listed mitigation measures and/or conditions are met.

Standard 3: Financial Capability

The Commissioner must consider whether the applicant has the financial capability to protect state and private property interests, prevent significant environmental impacts, undertake restoration and revegetation actions, protect subsistence activities and pay reasonably foreseeable damages arising from the project.

Evaluation: DNR's review of Hilcorp Alaska, LLC (the parent company of Harvest), Harvest has sufficient financial capability and stability to undertake the proposed project.

The Commissioner requires agreement to the following lease conditions for Harvest, Hilcorp Alaska, LLC, and Hilcorp Energy I, LP:

1. **Parental Guarantee:** Hilcorp Alaska, LLC will provide DNR with a guarantee wherein Hilcorp Alaska, LLC irrevocably and unconditionally guarantees to the State the full performance, fulfillment and satisfaction of all the duties, obligations and liabilities of Harvest arising under or pursuant to the ROW lease. The proposed parental guarantee is Exhibit C of the lease.
2. **Dismantlement, Removal and Restoration (DR&R):** When Hilcorp Alaska, LLC acquired their first Alaskan oil and gas leases in 2011 a Financial Assurance Agreement (FAA) for DR&R obligations was entered between DNR, Hilcorp Alaska, LLC and Hilcorp Energy I, LP. The FAA governs Hilcorp's DR&R responsibilities in Alaska. Hilcorp Alaska, LLC and Hilcorp Energy I, LP will include the ROW lease DR&R obligations in the FAA's Attachment A at the next schedule update on December 31, 2018.
3. **Insurance:** Harvest will be required to obtain and furnish liability and property damage insurance from a company licensed to do business in the state, with the State of Alaska listed as an additionally insured.

To ensure continuing compliance, DNR will monitor Hilcorp Alaska, LLC's financial capability during the life of the project. Additional protection to property is required by lease Section 14, which requires the lessee to promptly repair or reimburse for damages caused by the project to infrastructure located on State lands.

Standard 3 Conclusion: The Commissioner is satisfied Harvest, through Hilcorp Alaska, LLC, has the financial capability to comply with the financial standards of AS 38.35.100(a)(2) - (4) if the above listed mitigation measures and/or conditions are met.

Standard 4: Hiring Alaska Residents

AS 38.35.100(a)(5) requires the applicant and its subcontractors to comply with all applicable laws regarding hiring Alaskan residents.

Evaluation: Section 33 of the lease requires the lessee to comply with all applicable laws and regulations regarding hiring state residents. Section 10 of the lease requires Lessee's subcontractors to abide by all terms of the lease. Harvest has agreed to this standard and the conditions established will be met upon the issuance of the lease.

Standard 4 Conclusion: The Commissioner is satisfied Harvest will comply with the standards of AS 38.35.100(a)(5), if the above listed mitigation measures and/or conditions are met.

Fit, Willing, and Able Determination

The Commissioner must determine an applicant is fit, willing, and able to construct, operate, maintain, and terminate a pipeline in Alaska.

Evaluation: Transportation of hydrocarbons results in significant contributions to the general welfare of the people of Alaska. It is the State's policy the development, use and control of a pipeline transportation system be directed to make the maximum contribution to the development of the human resources of the 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 protect its incomparable natural environment.

The Cross Inlet Pipeline Extension Project reconfigures existing Cook Inlet oil and natural gas pipelines to increase system efficiency and to improve environmental safety. Transporting oil by pipeline across Cook Inlet eliminates the need for the Drift River Oil Terminal and the associated barge traffic across Cook Inlet, greatly reducing the risk of an oil spill. The conversion of the CIGGS pipeline is the key component of this project.

Harvest and their parent company Hilcorp Alaska, LLC, began acquiring oil and gas assets in Alaska approximately six years ago including multiple pipelines on the North Slope and in the Cook Inlet area. The Division acknowledges since the companies began operating in Alaska they have received several warning letters from the Pipeline and Hazardous Material Safety Administration (PHMSA) and Orders and Notices of Violations from the Alaska Oil and Gas Conservation Commission (AOGCC). A recent incident resulted in a Notice of Proposed Safety Order from PHMSA for a processed dry natural gas release from the Middle Ground Shoal Fuel Gas System in Cook Inlet early in 2017. That order contained Proposed Corrective Measures and resulted in a Consent Agreement with actionable corrective measures, which Hilcorp Alaska, LLC has been addressing to the satisfaction of PHMSA. The facts of these cases have been considered during the evaluation of this project.

Six of Hilcorp Alaska, LLC affiliated companies' assets are authorized under an AS 38.35 ROW lease: Kenai Kachemak Pipeline, Northstar Oil, Northstar Gas, Endicott Oil, Milne Point Oil and Milne Point Products. Division oversight of these ROW leases includes regular monitoring of pipeline integrity, maintenance, operations, safety and environmental programs. A major

component of this decision includes consideration of DNR's regulatory relationship and history with the Hilcorp companies, which include no unsatisfactory (non-compliance) findings. Hilcorp works closely with the Division and they have demonstrated they can operate regulated pipelines in a responsible manner and have been responsive and adaptive to concerns raised by regulatory agencies.

The Division has spent a considerable amount of effort reviewing multiple technical documents, reports and data concerning the integrity of the 46-year-old CIGGS pipeline system. Repeated inspections via side-scan SONAR and in-line inspection devices have revealed that while some wear has occurred on the pipeline, it is well within acceptable operating standards. The surveys revealed the CIGGS A segment has a bend anomaly. However, a strain-based report has concluded the pipeline may be safely operated. The Division considers the condition and status of the pipe as satisfactory to transport oil or natural gas safely. Regular inspections and maintenance will be required and DNR and USDOT/PHMSA will monitor the pipeline for the life of the project. As an added precaution, Harvest will limit the operating pressure of the CIGGS-A pipeline to a maximum of 600 PSI.

The Division will exercise its authority to monitor the construction, operations, maintenance and termination of the pipeline in accordance with all applicable statutes, regulations, the lease and lease stipulations. This includes regular inspections, monitoring and review of integrity management, maintenance, response and safety programs.

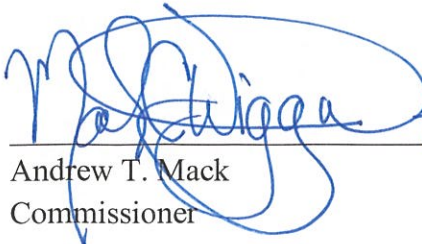
Conclusion: The Commissioner has reviewed and considered the applicant's proposal as described in their application and supporting documentation. This Right-of-Way lease is a benefit to the people of Alaska. All standards have been or will be met upon issuance of the lease. Continued compliance will be monitored by the Division throughout the life of the lease. The Commissioner has determined the applicant meets or exceeds the requirements of AS 38.35 and other applicable standards and is fit, willing and able for a ROW lease with the following modification:

- The operational ROW width of the CIGGS-A shall be 100 feet to maintain an adequate buffer zone around the pipeline.
- The operational ROW width of the CIGGS-LP within road rights-of-way and section line easements shall be 20 feet, which is consistent with the management of pipelines within existing Kenai Peninsula Borough road rights-of-way and easements.

COMMISSIONER'S PROPOSED DECISION AND ACTIONS

The Commissioner preliminarily concludes the applicant is fit, willing, and able to construct, operate, maintain, and terminate the proposed CIGGS-A and CIGGS-LP pipeline segments as presented and described in their application and supplemental information. This preliminary conclusion is subject to further consideration of all comments submitted during the public comment period for this lease application. The Commissioner directs the following actions:

1. DNR shall make copies of this Commissioner's Analysis and Proposed Decision available at cost to any member of the public requesting copies.
2. DNR shall solicit written comments about leasing State land for the CIGGS pipeline. DNR will place public notices on the State's public notice web site, the Division web site, in newspapers of general circulation and public libraries in Kenai, Soldotna, Homer, Anchor Point, and Ninilchik. The Kenai Peninsula Borough, local governments and local ANCSA corporations will be notified. Written comments must be received by the Division on or before 5:00 p.m. on September 5, 2018.
3. Following completion of the public comment period and consideration of all comments received, the Commissioner will make a final determination on the ROW lease application. If the Commissioner does not significantly alter this analysis following the public comment period and if the applicant meets all conditions preceding the lease offer, this Commissioner's Analysis and Proposed Decision shall constitute the Commissioner's Final Decision and the Commissioner will offer the applicant the ROW lease.
4. Should the ROW lease be issued, the Commissioner shall include those State lands adjacent to and included within the ROW lease to mineral entry under MO 1204.
5. Should the ROW lease be issued, Harvest will be required to obtain a Written Authorization from the Division before start-up of the CIGGS pipeline will be allowed.


Andrew T. Mack
Commissioner

Dep. Comm. for

8-6-18
Date