THE STATE of ALASKA
GOVERNOR BILL WALKER

Department of Natural Resources
DIVISION OF OIL AND GAS
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November 5, 2015

Ms. Gretchen Stoddard
Environmental Specialist
Hilcorp Alaska, LLC
3800 Centerpoint Drive, Suite 1400
Anchorage, Alaska 99503

RE: **LO/CI 15-003**, **Hilcorp Alaska, LLC, Deep Creek Unit**, **Happy Valley Middle Pad Construction and Exploration Drilling, Unit Plan of Operations Decision**

Dear Ms. Stoddard:

I. INTRODUCTION

On August 3, 2015 Hilcorp Alaska, LLC (Hilcorp) submitted a request to the Division of Oil and Gas (Division) for approval of a Unit Plan of Operations (Plan) to construct a new gravel pad, Happy Valley Middle Pad, and an access road in the Deep Creek Unit (DCU) near Ninilchik, Alaska, and to drill up to two gas exploration wells. Approval of this Plan, along with approvals from other state and federal agencies (Agencies), is necessary for Hilcorp to carry out construction of Happy Valley Middle Pad. Any further exploration is subject to further review and approval by the Department of Natural Resources (DNR).

II. SCOPE OF DECISION

The DNR Commissioner has delegated authority for approval of Unit Plan of Operations activities to the Division under Department Order: 003 in accordance with Alaska Statute (AS) 38.05 and 11 Alaska Administrative Code (AAC) 83.346. As set forth below, the Division has evaluated the proposed Plan to determine if sufficient information as required by 11 AAC 83.346 is provided. The Division has also considered the criteria set forth in 11 AAC 83.303. In approving a Plan, the Division may require amendments that it determines are necessary to protect the State's interests (11 AAC 83.346(e)).

The Division and the Cook Inlet Region, Inc. (CIRI) jointly manage the DCU that was approved on December 31, 2001. The Happy Valley Participating Area (PA) was formed in 2004. On January 1, 2012, Hilcorp acquired the DCU from the former unit operator, Union Oil Company of California (Unocal). Since that time, Hilcorp has actively pursued various exploratory drilling projects. By regulation and under the terms of the DCU unit agreement and leases, DNR must approve a plan of operations before Hilcorp may conduct operations on or in the unit.

Hilcorp submitted a Plan to construct a new gravel pad and access road in the DCU, and to drill up to two gas exploration wells. The road includes stream crossing and culvert work. This is an exploration project which does not include development plans or off pad flowlines.

The development of section line easements will be reviewed by the Division of Mining, Land and Water (DMLW), Southcentral Regional Office (SCRO). Hilcorp proposed widening a road locally known as Tim Avenue within a section line easement located near Ninilchik, Alaska.

III. LAND STATUS

The DCU is comprised of state and non-state lands.

A. Division's Leased Lands: This section refers to Division managed oil and gas leases regardless of ownership of overlying surface lands.

Affected Oil and Gas Lease: 389225
Oil and Gas Mineral Estate Lessee(s): Hilcorp
Surface Ownership and Access Agreement: State of Alaska
Special Use Lands: N/A per 11 AAC 96.014
Jointly Managed Lands: None identified.
Other Considerations: The DCU is jointly managed by the State of Alaska and CIRI.

Project Components	Meridian, Township, Range, & Section(s)	GPS Coordinates
Happy Valley Middle Pad, plus up to two gas wells and associated facilities	Seward Meridian, T003S, R013W, Section 6	59.940601, -151.571921
Portion of Access Road	Seward Meridian, T003S, R013W, Section 6	N/A
Middle Pad Well #1 – Bottom Hole Location	Seward Meridian, T003S, R013W, Section 7	Approximate: 59.936, -151.572 (subject to revision based on final well trajectory)

Affected Oil and Gas Lease: 384380
Oil and Gas Mineral Estate Lessee(s): Hilcorp
Surface Ownership and Access Agreement: State of Alaska
Special Use Lands: N/A per 11 AAC 96.014
Jointly Managed Lands: None identified.
Other Considerations: The DCU is jointly managed by the State of Alaska and CIRI.

Project Components	Meridian, Township, Range, & Section(s)	GPS Coordinates
Portion of Access Road	Seward Meridian, T002S, R013W, Section 31	N/A

Affected Oil and Gas Lease: 389226
Oil and Gas Mineral Estate Lessee(s): Hilcorp
Surface Ownership and Access Agreement: State of Alaska
Special Use Lands: N/A per 11 AAC 96.014
Jointly Managed Lands: None identified.
Other Considerations: The DCU is jointly managed by the State of Alaska and CIRI.

Project Components	Meridian, Township, Range, & Section(s)	GPS Coordinates
Portion of Access Road	Seward Meridian, T003S, R014W, Section 1	N/A

B. State of Alaska Surface Lands: This section refers to State owned surface lands where no Division managed oil and gas leases exist.

Not applicable for this project.

C. Non-State Lands: This section refers to areas where the State does not own the surface land and no Division managed oil and gas leases exist.

Oil and Gas Mineral Estate Owner and Relationship with Applicant: N/A- no mineral estate activity.
Surface Ownership and Access Agreement: CIRI
Special Use Lands: N/A
Jointly Managed Lands: Private lands are not jointly managed. The private lands are managed by CIRI and outside the DCU.
Other Considerations: A letter of support or non-objection from CIRI is anticipated from Colleen Miller, CIRI Resource Manager (907-263-5117).

Project Components	Meridian, Township, Range, & Section(s)	GPS Coordinates
Portion of Access Road outside DCU	Seward Meridian, T002S, R014W, Section 36	N/A

IV. PROPOSED OPERATIONS

The Plan describes the proposed operations in full detail. Set forth below is a summary of the key details.

A. Sequence and Schedule of Events

Project Milestone #	Project Milestone	Proposed Start Date	Proposed End Date
1.	Clear vegetation and prepare site for construction, (Date not confirmed, depends on permitting timeline and wetland permitting).	12/1/2015	1/15/2016

2.	Construct gravel access road and pad	12/15/2015	1/20/2016
3.	Drill first well	5/1/2016	6/1/2016
4.	Well testing and completion	6/1/2016	7/20/2016
5.	Further potential activities include possible second well to additional reservoir area, additional studies, or additional remedial activities to determine reservoir characteristics. Those tasks will depend on results of exploration drilling.	6/1/2016	6/1/2019
6.	Remedial activities and additional work to determine reservoir characteristics	7/30/2016	7/30/2018

The Division anticipates changes to the schedule.

B. Well Sites

Hilcorp proposes to construct an approximately 300-foot by 400-foot gravel pad (see Figure 1 in Appendix A). Pad construction activities will include clearing and grubbing existing vegetation, placement of geotextile liner on the cleared land within the pad footprint, and placement of gravel fill over the liner. Gravel fill will be compacted and a 2-foot containment berm will be built around the edge of the pad. Up to two gas exploration wells will be drilled from the pad which is to be known as Happy Valley Middle Pad. Well installation will include installation of well cellar and conductor.

C. Buildings

Permanent buildings, including production facilities, are not proposed at this time. Contingent on the outcome of exploration activities at the proposed pad, Hilcorp would propose to install production facilities for gas processing prior to transmission via pipeline to the ENSTAR gas line. Production facilities could include produced water tank, line heaters/separators, compressors, gas dehydration module, and generators.

D. Fuel and Hazardous Substances

During drilling, diesel fuel for refueling equipment will be stored in an approximately 5,000-gallon tank. Methanol may be stored in a 450-gallon tote for freeze protection. No produced water tank is proposed with this exploration project, but a drilling fluids tank is proposed with rig activities. A produced water tank would be proposed for use if exploration results are favorable and a development project is proposed.

E. Solid Waste Sites

No solid waste sites are included in the proposed project. Solid waste will be properly segregated and handled for proper disposal. Returned drilling mud and drilling waste will be transported to injection at the Kenai Gas Field, Grind and Inject facility. This injection facility has appropriate Alaska Oil and Gas Conservation Commission (AOGCC) injection approval. If this option is not available, then drilling wastes will be disposed through an approved waste

contractor. Household and approved industrial garbage will be segregated and transported to the Kenai Borough Central Peninsula Landfill for disposal.

F. Water Supplies

Approximately 100 barrels (bbls) per day of freshwater will be used for drilling each gas well. An on-pad source is the preferred alternative. Hilcorp proposes to permit and drill a water well from the Happy Valley Middle Pad through DMLW. If needed, fresh water may be trucked in from one or more additional off-site Alaska DNR-permitted wells.

G. Utilities

Utilities will be provided by onsite rented generator. This will be a standard combustion engine generator. Rented light plants will be used during some seasons and project tasks.

H. Material Sites

Material will come from sites chosen by the road contractor. Several gravel mine sites are in the area, and Hilcorp expects to use one of these sites. Hilcorp expects that an existing permitted site will be utilized due to project time constraints. Hilcorp will require clean gravel and that appropriate permits and approvals are in place before using the material sites.

I. Roads

A gravel access road will be constructed to tie the pad into an existing logging road. The logging road is an extension of Tim Avenue which connects to the Sterling Highway at Milepost 142.8. In addition to a new 2.29-mile gravel access road extending from the logging road, the project will also include road widening and culvert replacement in Tim Avenue.

The gravel access road will be 18 feet wide at the crown, resulting in a minimum of 28 feet wide at the base and between 2 and 3 feet thick with 2:1 side slopes. Construction of the road and installation of the culverts will result in approximately 2,971 cubic yards (cy) of fill placed in approximately 0.92 acres of wetlands. Road construction activities will include clearing and grubbing existing vegetation and placement of a geotextile liner on the cleared land within the access road footprint where the road connects to the existing logging road. Two 18-inch-wide, 30-foot-long corrugated steel culverts will be installed in the gravel access road for cross-drainage in wetlands areas (Sheets 4, 9 and 10 in the Plan application). A third corrugated steel culvert measuring 24 inches wide by 45 feet long will be installed at the crossing of an unnamed stream (Sheets 6 and 11 in the Plan application). The three culverts will be laid on approximately 6 inches of pipe bedding material placed over non-woven geotextile.

Hilcorp also proposes to widen Tim Avenue and replace a culvert used to facilitate crossing over Happy Creek (Sheets 5, 6, 8 in the Plan application). The following culvert components will be removed: four steel posts north of Tim Avenue, concrete slabs north of Tim Avenue, and corrugated steel arch pipe. These will be replaced with a new 12-foot by 54-foot 10-gauge corrugated steel arch pipe, which will be installed on 6-inch minimum pipe bedding material over non-woven geotextile (Sheets 5, 6 in the Plan application). Local gravelly sand with clusters of cobbles will be placed in the pipe to match the upstream and downstream channel characteristics. Soil will be compressed and bedding material will be laid down before the culvert is placed. If excavation is required, materials will be disposed of in uplands areas.

During culvert replacement work, Happy Creek will be diverted around the culvert site via a stream flow diversion system. A pump intake sump with screen will be placed in the creek upstream of a temporary diversion dike on the north side of the road. Water from the creek will be transported to the south side of the road via a diversion pipe that will be buried in the road embankment. The water will flow out of the diversion pipe through an energy dissipation system, passing through nonwoven geotextile. During road widening and culvert replacement activities at Tim Avenue, silt fencing will be placed at the toe of the new slope and along Happy Creek at both ends of the culvert to prevent potential future erosion. The temporary diversion will be removed and the natural flow will be restored once the new culvert is installed. Happy Creek is not identified as supporting salmon habitat but does contain other resident fish.

Approximately 175 feet of Tim Avenue will be widened to complete the culvert replacement. Roadbed widening is necessary to support the new culvert and maintain road stability. Material from the existing road will be used in the roadbed widening area where possible. Approximately 4 inches of topsoil as well as erosion control matting with hydroseeding will be used to support the side slopes where widening will occur. A total of 117 cy of fill material will be placed into 0.02 acres of wetlands as a result of road widening and culvert installation in Tim Avenue.

J. Airstrips

No airstrips are proposed for the Happy Valley Middle Pad.

K. All Other Facilities and Equipment

At this time, pipelines are not part of the proposed project. Contingent on the outcome of exploration activities at the proposed pad, Hilcorp would apply to construct an approximately 5.6 mile buried pipeline that would link the pad to an existing ENSTAR gas pipeline approximately 3.4 miles to the south.

The Saxon Rig 169 will be used for drilling and well completion activities. Major equipment components include the following: drill rig and pipe, boilers, mud tanks/pumps, rig generator, work trailers for supervisory staff and support staff, and light plants. Hilcorp may use additional support equipment for infrastructure installation which may include, but is not limited to, an excavator, mini excavator, super sucker, zoom boom, and weld truck. Drilling will be a 24-hour operation with a trailer staged on the pad to house various supervisory personnel and a minimum number of support personnel. The remainder of the drilling crew will be housed offsite.

L. Rehabilitation Plan

Hilcorp's Plan states that the facility infrastructure will be removed from the Happy Valley Middle facility when the facility is decommissioned. After the field is no longer producing, the access road and pad will be cleaned and reclaimed to the satisfaction of the surface landowner and in compliance with applicable laws and regulations.

M. Operating Procedures Designed to Minimize Adverse Effects

In approving a Plan, DNR may require amendments necessary to protect the State's interest (11 AAC 83.346). The Division has determined that to protect the State's interest, it is necessary to incorporate into the Plan the 2009 Cook Inlet Areawide Oil and Gas Lease Sale Final Finding Mitigation Measures. Hilcorp addressed these mitigation measures in the application process, but it is necessary to amend the Plan to make clear that the Plan incorporates the 2009 Cook Inlet Areawide Oil and Gas Lease Sale Final Finding Mitigation Measures. All plan applicants

must complete a mitigation measure analysis demonstrating that each mitigation measure is satisfied or inapplicable to the proposed Plan, or that the applicant is seeking an exception. The 2009 Cook Inlet Areawide Oil and Gas Lease Sale Final Finding Mitigation Measures allow for the Division to grant an exception if the applicant shows that compliance with the measure is not practicable or that the applicant will undertake an equal or better alternative to satisfy the intent of the mitigation measure. Hilcorp completed the mitigation measure analysis for the Cook Inlet areawide and no exception(s) were requested.

The Division has determined that to protect the State's interest, it is necessary to incorporate the Cook Inlet Mitigation Measures as amendments and stipulations to this Plan (11 AAC 83.346(e)).

Other operating procedures designed to minimize adverse effects include:

Fish and Wildlife Habitats: The access road was designed so that the route avoids wetlands to the maximum extent practicable minimizing the loss of waters of the United States. The proposed route does cross wetlands at one location, but this crossing cannot be avoided and is needed to meet the overall project purpose.

The Tim Avenue culvert replacement will improve the flow regime of Happy Creek and improve fish passage for Dolly Varden and other resident fishes. The current culverts constrict flow resulting in higher flow velocities which have caused a deep scour pool below the outlet as well as erosion of the downstream bank. The stream simulated culvert proposed will allow for a more natural flow regime for Happy Creek and improve resident fish passage along with various functions and characteristics above and below the creek crossing.

Cross-drainage culverts will be placed in the gravel access road in wetland areas to maintain surface water drainage patterns.

Historic and Archeological Sites: Hilcorp contracted Stephen R. Braund & Associates (SRB&A) to identify potential historic and cultural resources in the project area. The proposed pad and road will have no impact on archaeological/cultural resources. The report will be submitted to the State Historic Preservation Office (SHPO). No cultural resources were located within the project area, therefore SRB&A recommends a finding of "no historic properties affected." If the proposed construction site reveals any site, structure, or object of prehistoric, historic, or archaeological significance, Hilcorp will make reasonable efforts to preserve and protect the discovered site or object and consult with the Office of History and Archaeology to determine the course of action for preservation efforts.

Public use areas will not be impacted by the proposed project. While public access to Happy Valley Middle Pad will be restricted, the access road and other areas around the pad will not be restricted.

V. CONSIDERATION OF UNIT PLAN OF OPERATIONS REQUIREMENTS UNDER 11 AAC 83.346(c-d) and 11 AAC 83.390

A. Full Payment of Damages to the Surface Owner 11 AAC 83.346(c)

For the non-State land owner, Hilcorp confirmed that the land owner was contacted and an agreement reached. Thus Hilcorp has provided for full payment of damages prior to starting operations (11 AAC 83.346(c)).

B. Plan Sufficiency 11 AAC 83.346(d)

A proposed plan must include statements, maps, or drawings setting forth

(1) the sequence and schedule of operations;
(2) the projected use requirements directly associated with the proposed operations;
(3) plans for rehabilitation;
(4) a description of operating procedures to prevent or minimize adverse effects on natural resources and concurrent uses of the area (11 AAC 83.346(d)).

The information in section IV. Proposed Operations, above and additional information contained in Hilcorp's proposed Plan satisfy the requirements for a plan under 11 AAC 83.346(d) and thus provide the Division with sufficient information available at this time to determine the surface use requirements and impacts directly associated with the proposed operations.

C. Oil and Gas Lease Bond 11 AAC 83.390

The State owns a portion of the surface land the proposed Plan will be located on. The State owns a portion of the mineral estate the proposed Plan will be producing from. For the State, a lessee provides for payment of damages by posting a bond, and remains liable for full damages under the lease. Hilcorp has a Statewide Oil and Gas Bond in the amount of $500,000.00 and continuing liability under the leases.

VI. CONSIDERATION 11 AAC 83.303 CRITERIA

A. Protection of Public Interest

The Division has considered the public interest considering statutory provisions that provide for conserving natural resources through unitized development (11 AAC 83.303(a); AS 38.05.180(p)). The legislature has declared the public's interest in oil and gas development as an interest in developing oil and gas resources to maximize economic and physical recovery, maximize competition, and maximize use of Alaska's human resources (AS 38.05.180(a)(1)).

This Plan addresses the means for carrying out the construction of the Happy Valley Middle Pad and access road, and drilling up to two gas exploration wells which, as determined by the 2015 Plan of Development (POD) and Operations for the DCU, is necessary for maximizing recovery of the gas resources. Additionally, any future development under this Plan would contribute positively to the market by increasing overall natural gas production in the area.

The proposed Plan provides for use of Alaska's human resources by pledging to provide local employment and contracting opportunities and to encourage its contractors to do the same (Proposed Plan Mitigation Measure Analysis A.7.a).

B. Conservation of Natural Resources

The Division has considered whether the Plan promotes conservation of all natural resources, including all or part of an oil or gas pool, field, or area (11 AAC 83.303(a)(1)). Conservation, in this context, means maximizing the efficient recovery of oil and gas and minimizing the adverse impacts on the surface and other resources (11 AAC 83.395(1)). Development within a unit is

intended to provide more efficient development than on the individual leases that make up the unit, and this Plan considers the development of the Unit, not single leases. Efficient development creates less impact on the land and promotes maximum use of all natural resources in the area, consistent with the public interest.

There are a number of ways in which the Plan seeks to minimize adverse impacts on natural resources. This Plan incorporates the mitigation measures set forth in the 2009 Cook Inlet Areawide Oil and Gas Lease Sale Final Finding (Cook Inlet Mitigation Measures). These mitigation measures include measures to protect habitat, fish, and wildlife, protect subsistence resources, and limit the impact from fuel and hazardous substances (2009 Cook Inlet Final Finding at sections 9-3 to 9-6). The Plan also includes operating procedures to prevent or minimize adverse effects, including effects on the environment, wildlife, and subsistence resources discussed in section IV.M of this decision.

C. Prevention of Economic and Physical Waste

The Division has considered whether the Plan promotes the prevention of economic and physical waste (11 AAC 83.303(a)(2)). Issues of economic and physical waste are carefully considered during Unitization and annually thereafter in the 2015 POD and Operations for the DCU; this Plan conforms to the current 2015 POD and Operations for the DCU on file with the Division's Units Section.

D. Protection of All Parties of Interest, Including the State

The Division has considered whether the Plan provides for the protection of all parties of interest, including the State (11 AAC 83.303(a)(3)). The parties of interest to a unit plan are the unit operator and working interest owners. The State has an economic interest in the oil and gas resources because it receives royalties from production. It is further in the State's best interest to encourage assessment of oil and gas resources, recognize the costs of exploring in varied geographic regions, and minimize the adverse impact of exploration, development, production, and transportation activity (AS 38.05.180(a)(2)).

Without approval of a Plan, Hilcorp cannot develop the Happy Valley Middle Pad, and the State cannot recover royalties from potential future development. The Plan thus protects the Unit Operators, working interest owners' and the State's interests in exploring the resources.

E. Environmental Costs and Benefits

The Division has considered the environmental costs and benefits of unitized development outlined in this Plan and through the 2015 POD and Operations for the DCU, and annual updates, on file with the Units Section (11 AAC 83.303(b)(1)); this Plan conforms to the current 2015 POD and Operations for the DCU on file with the Division.

The Cook Inlet Mitigation Measures, incorporated into this Plan by amendment, include measures to protect habitat, fish, and wildlife (2009 Cook Inlet Final Finding at sections 9-3 to 9-5). Additional operating procedures designed to minimize adverse effects on other natural resources and other uses of the unit area and adjacent areas are discussed in section IV.M of this decision.

F. Geological and Engineering Characteristics of Hydrocarbons

DNR previously considered the geological and engineering characteristics of a potential hydrocarbon accumulation or reservoir when it approved the unit agreement (11 AAC 83.303(b)(2)); this Plan conforms to the current 2015 POD and Operations for the DCU on file with the Division's Units Section.

G. Prior Exploration Activities

The Division has considered prior exploration activities in the Plan area pursuant to 11 AAC 83.303(b)(3). The Happy Valley Middle Pad project area has been studied to determine if commercially significant subsurface deposits of hydrocarbon and natural gas are present in the area. These studies were completed in the project area and results were used to determine exploration plans such as Unocal's 2-dimensional seismic study completed in 2004, Unocal's gravity line survey by snowmachine completed in 2004, Unocal's geochemistry/soil vapor survey completed in 2004 and Hilcorp's 3 dimensional seismic study completed in 2012. The results of these studies indicated the potential for deposits of natural gas in the project area, and shaped plans to explore the area. Exploration drilling results will be used to determine if further development will be proposed at the site.

H. Plan of Development

The Division has considered the plans for development set forth in and approved by DNR in the POD (11 AAC 83.303(b)(4)). The 12th POD approved on April 27, 2015, approves Hilcorp to carry out operations in the proposed Plan.

I. Economic Costs and Benefits to the State

The Division has considered the economic costs and benefits to the State (11 AAC 83.303(b)(5)). Without approval of a plan, Hilcorp will be unable to proceed with developing the Happy Valley Middle Pad, which will cost the State the economic benefit of the royalties, as well as other economic benefits from potential production.

J. Other Relevant Factors to Protect the Public Interest

The Division has considered other relevant factors necessary or advisable to protect the public interest (11 AAC 83.303(b)(6)). These other factors consist of the mitigation measures (section IV.M of this document) that will apply to this Plan; and the necessity to obtain other permits and approvals by different Agencies and landowners.

VII. CONSULTATION WITH OTHER GOVERNMENT ENTITIES

In reviewing the proposed Plan, the Division considered the fact that Hilcorp may require approvals from Agencies for other elements of its project. Although mentioned in the Plan and above, these aspects of the project are not operations being approved by this decision and the Division offers no opinion on whether an agency should or should not approve these activities.

In addition to considering the approvals required by Agencies as they relate to this decision, the Division provided an Agency review and comment opportunity for the activities considered for authorization under this decision. The following government entities were notified on August 25, 2015 for comment on the Plan: Alaska Department of Fish and Game (ADFG), Alaska Department of Environmental Conservation (ADEC), AOGCC, Department of Transportation & Public Facilities (DOTPF), CIRI, City of Kenai, Kenai Peninsula Borough, National Oceanic and Atmospheric Administration (NOAA), United States Fish and Wildlife

Service (USFWS), United States Army Corps of Engineers (USACE) and DNR: DMLW, Review and Compliance Program of the Office of History and Archaeology, Office of Project Management and Permitting, and Division of Oil and Gas. The comment deadline was 4:30 pm Alaska time on September 8, 2015. No extension was requested. Comments were received and the Division, Applicant, and commenting agency(ies) reconciled the comments without modifying the Plan ; Agency comment(s) and Applicant's response(s) are summarized in Appendix B. The Plan was then publicly noticed.

VIII. PUBLIC NOTICE

Public notice of the Plan and opportunity to comment, per AS 38.05.035, was published in the Alaska Dispatch News (ADN) and Peninsula Clarion on September 10, 2015 with a deadline for comments of October 10, 2015 at 4:30 pm Alaska time. Additionally, a copy of the notice was posted on DNR's web site and faxes of the public notice were sent to the Kasilof, Kenai, Nikiski, Ninilchik, Soldotna, Tyonek and Willow post offices. Comments were received and considered by the Division. No modifications to the Plan were made as a result of the comments; public comments are summarized in Appendix B.

IX. CONDITIONS OF APPROVAL

Having considered the proposed project, the Division approves the Plan as amended and modified by this decision and subject to the below conditions of approval and project specific stipulations:

To protect the State's interest, the Division finds that it is necessary to amend the Plan to incorporate the following Conditions of Approval:

a) The applicant shall defend, indemnify and hold the State of Alaska harmless from and against any and all claims, damages, suits, losses, liabilities and expenses for injury to or death of persons and damage to or loss of property arising out of or in connection with the entry on and use of State lands authorized under this approval by the applicant, its contractors, subcontractors and their employees.
b) The applicant shall inform and ensure compliance with any and all conditions of this approval by its employees, agents and contractors, including subcontractors at any level.
c) Unless pre-authorized by a general permit, amendments and modifications to this approval require advance notice and must be approved in writing by the DNR.
d) The Commissioner of the DNR may require that an authorized representative be on-site during any operations conducted under this approval. This stipulation is required to ensure that the Divisions of Oil and Gas and Mining, Land and Water meet their statutory responsibilities for monitoring activities taking place on State-owned lands.
e) A status report for the activities conducted under this approval must be filed with this office on May 1 and November 1 each year, from the date this approval is issued and until a final completion report is filed with the Division. If a lessee requests an assignment, a status report must also be submitted during the assignment process. Failure to file in a timely manner may result in revocation of this approval.
    a. Each status report shall include a statement describing and map(s) depicting all operations actually conducted on the leased area as of the date the report is prepared, which includes the location, design and completion status of well sites,

material sites, water supplies, solid waste lines, buildings, roads, utilities, airstrips, and all other facilities and equipment installed.

b. Upon completion of operations, the applicant will submit a completion report which will include all information required of a status report described in (a) above as well as a statement indicating the date of operations completion, any noncompliance with the terms of this plan approval of which a reasonable lessee would have knowledge of, clean-up activities conducted, the method of debris disposal, and a narrative description of known incidents of surface damage.

f) Notification. The applicant shall notify the DNR of all spills that must be reported under 18 AAC 75.300 under timelines of 18 AAC 75.300. All fires and explosions must be reported to DNR immediately. The DNR 24 hour spill report number is (907) 451-2678; the fax number is (907) 451-2751. The Department of Environmental Conservation (DEC) oil spill report number is (800) 478-9300. DNR and DEC shall be supplied with all follow-up incident reports.

g) A certified As-Built survey of the improvement shall be provided within one year of placement of the improvement. This As-Built must be submitted in both electronic and physical format.

To protect the State's interest, the Division finds that it is necessary to amend the Plan to incorporate the following Project Specific Stipulations:

1.) CIRI will require Hilcorp to obtain a CIRI permit for road access and construction on those CIRI lands that are outside the unit within section 36.

X. FINDINGS AND DECISION

Having considered the proposed project and based on the foregoing discussion and consideration of issues and conditions of approval, the Division makes the following findings:

1. The Plan provides sufficient information, based on reasonably available data, for the Division to determine the surface use requirements and impacts directly associated with the proposed operations.
2. The Plan includes statements, maps, or drawings setting forth the sequence and schedule of operations, projected use requirements, description of operating procedures, and a plan of rehabilitation designed to prevent or minimize adverse effects.
3. To protect the State's interest and mitigate potential adverse social and environmental effects associated with the Plan, the Division finds it necessary to amend the Plan to incorporate the mitigation measures set forth in the 2009 Cook Inlet Areawide Oil and Gas Lease Sale Final Finding.
4. All oil and gas activities conducted under oil and gas leases are subject to numerous local, state and federal laws are regulations with which Hilcorp is expected to comply.
5. The people of Alaska have an interest in developing the state's oil and gas resources and maximizing the economic and physical recovery of those resources. AS 38.05.180(a).
6. Alaska's economy depends heavily on revenues related to oil and gas production and government spending resulting from those revenues. The related revenue sources include bonus payments, rentals, royalties, production taxes, income taxes, and oil and gas property taxes.

7. The potential benefits of approving this Plan outweigh the possible adverse effects, which have been minimized through imposition of mitigation measures, conditions of approval, and project specific stipulations, and thus approval of this Plan is in the State's best interest.

Based upon the Plan, supporting information provided by the applicant and the Division's review, determination of applicable statutes and regulations, consultation with other agencies, relevant entities and individuals, public comment, and the above findings related to that Plan, the Division hereby approves the Plan as modified.

Sincerely,

Kim Kruse

Kim Kruse
Permitting Section Manager
Division of Oil and Gas

11/5/2015
Date

Appeal

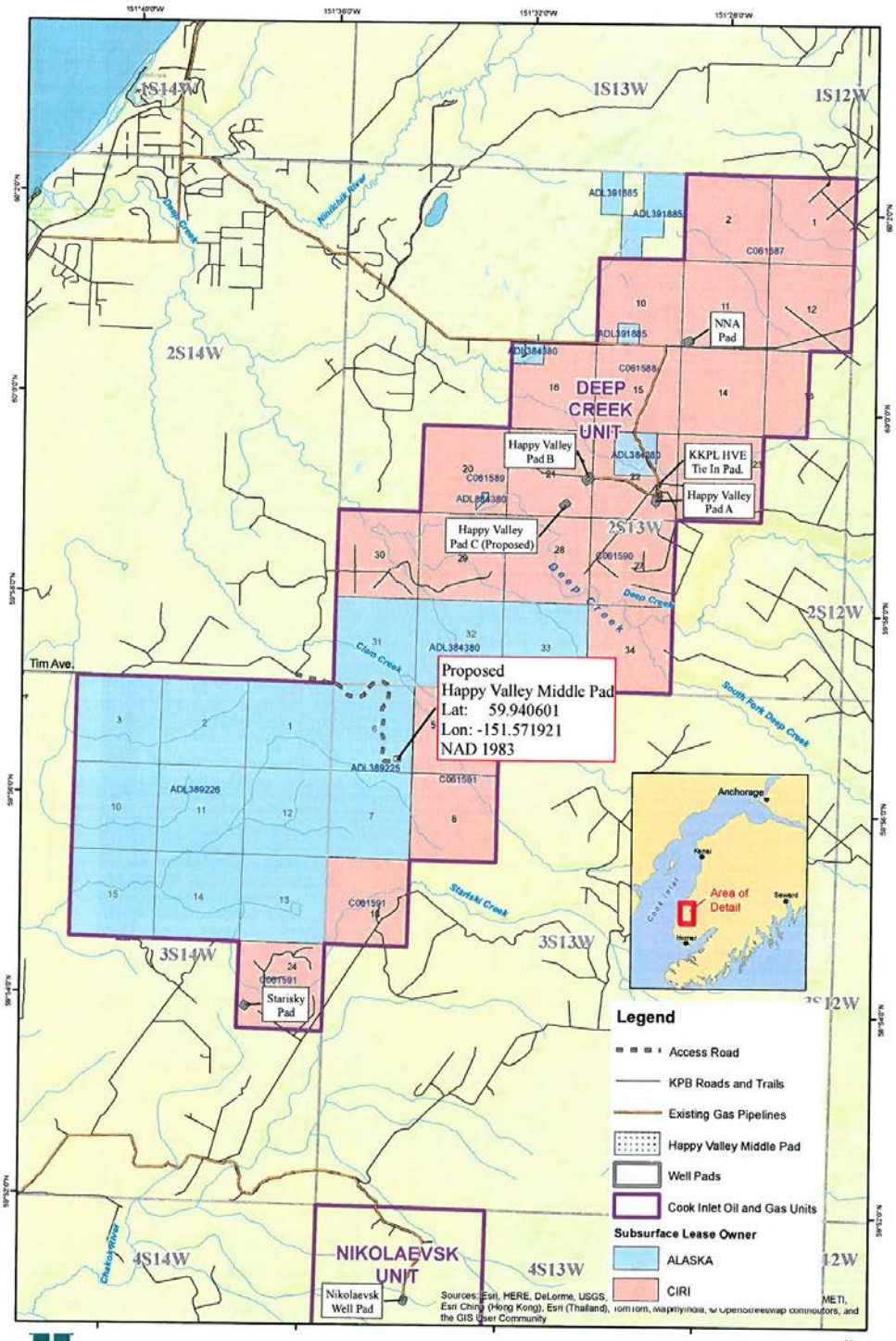
An eligible person affected by this decision may appeal it, in accordance with 11 AAC 02. Any appeal must be received within 20 calendar days after the date of issuance of this decision, as defined in 11 AAC 02.040(c) and (d), and may be mailed or delivered to the Commissioner, Department of Natural Resources, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska 99501; faxed to 1-907-269-8918; or sent by electronic mail to dnr.appeals@alaska.gov. This decision takes effect immediately. An eligible person must first appeal this decision in accordance with 11 AAC 02 before appealing this decision to Superior Court. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources.

Attachments:

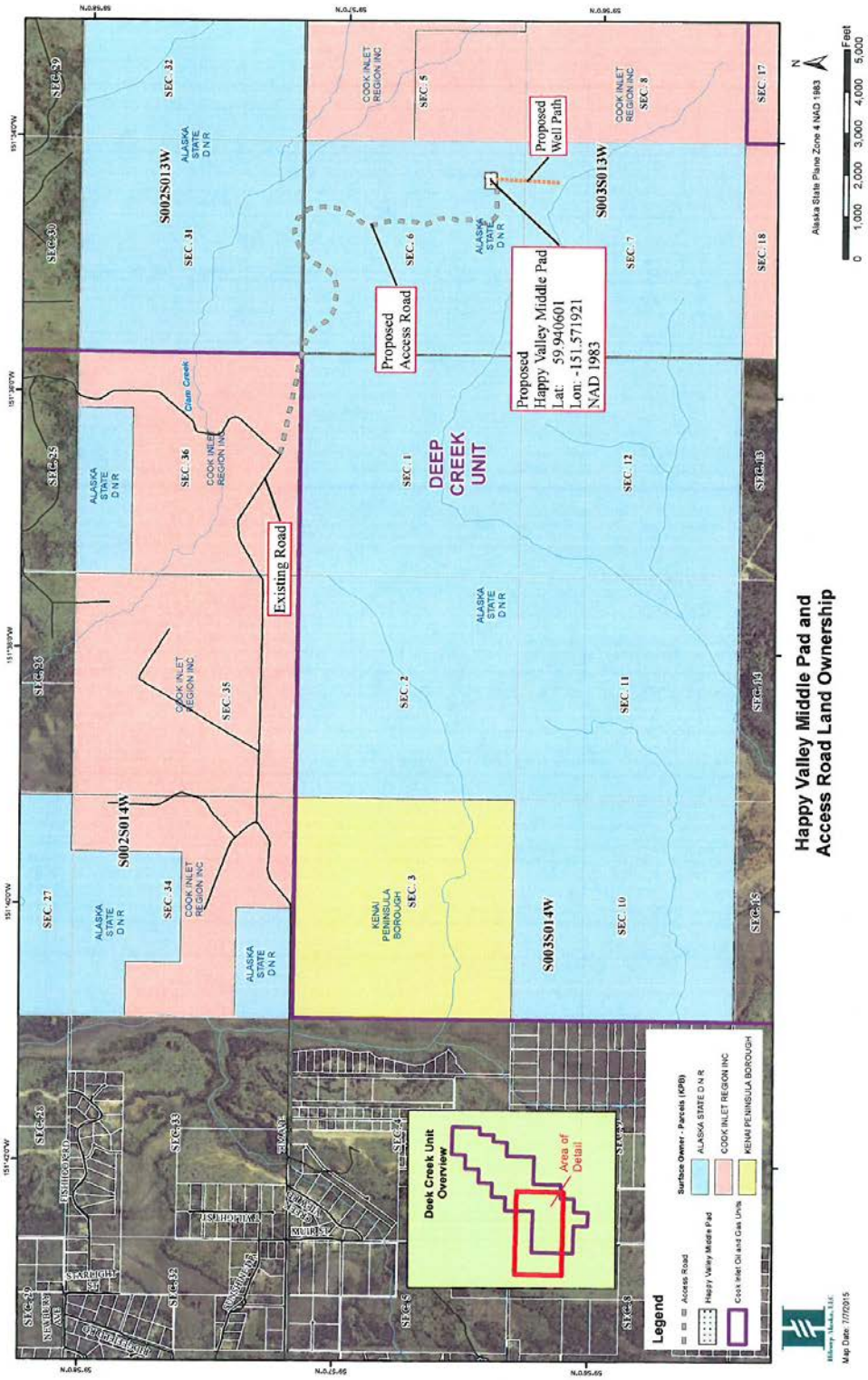
Appendix A: Maps
Appendix B: Agency and Public Comments

ecc: Division: Kim Kruse, Thomas Barrett, John Easton, Kyle Smith and Jeanne Frazier
DMLW: Project Development Team, Clifford Larson, James Sowerwine, Eric Moore and Henry Brooks
ADFG: Marla Carter and Virginia Litchfield
ADEC: Gary Evans, Mike Evans, Graham Wood and Tim Law
OPMP: Sara Taylor, Mark Morones, Sara Longan and Jeff Bruno
AOGCC: James Regg
DOTPF: David Post
Borough: Marcus Mueller, Johni Blankenship, Pamela Russell, Julie Denison and Dan Nelson
Other: Barbara Mahoney, Kimberly Klein, Lynnda Kahn, Linda Speerstra, Michael Dombkowski, Sandra Modigh, Colleen Miller, Tricia Waggoner, Roberta Highland and Kachemak Bay Conservation Society

Appendix A: Maps



Deek Creek Unit Boundary and Associated Leases
Figure 1


Happy Valley Middle Pad and
Access Road Land Ownership
DEEP
CREEK
UNIT
Proposed
Happy Valley Middle Pad
Lat: 59.940601
Lon: -151.571921
NAD 1983
Proposed
Access Road
Proposed
Well Path
Existing Road
S002S013W
S002S014W
S003S013W
S003S014W
SEC. 1
SEC. 2
SEC. 3
SEC. 5
SEC. 6
SEC. 7
SEC. 8
SEC. 10
SEC. 11
SEC. 12
SEC. 17
SEC. 18
SEC. 27
SEC. 31
SEC. 32
SEC. 34
SEC. 35
SEC. 36
ALASKA STATE D N R
COOK INLET REGION INC
KENAI PENINSULA BOROUGH
Clam Creek
Alaska State Plane Zone 4 NAD 1983
Feet
0 1,000 2,000 3,000 4,000 5,000
Deek Creek Unit Overview
Area of Detail
Legend
Access Road
Happy Valley Middle Pad
Cook Inlet Oil and Gas Units
Surface Owner - Parcels (KPB)
ALASKA STATE D N R
COOK INLET REGION INC
KENAI PENINSULA BOROUGH
Map Date: 7/7/2015

Appendix B: Agency and Public Comments

Agency Review:

The proposed Happy Valley Middle Pad was circulated for agency review on August 25, 2015. The comment period was for 14 days which ended on September 8, 2015. Two agencies commented:

1. Ms. Colleen Miller with CIRI, September 8, 2015.

CIRI does not object to the activity inside the Unit boundary, but will require Hilcorp to obtain a CIRI permit for road access and construction on those CIRI lands that are outside the unit within section 36.

Applicant's Response:
Hilcorp has contacted Ms. Miller at CIRI. Hilcorp's representative will send a separate reply with an update to the current status of the CIRI permit for road access and construction.

Division's Response:
The Division received an email from Ms. Miller on September 30, 2015 stating that CIRI is in the process of drafting a road/construction easement. CIRI anticipates having a draft agreement to Hilcorp within the week.

2. Mr. James Sowerwine with DMLW, SCRO, Easement Management Unit, September 8, 2015.

Mr. Sowerwine stated that Hilcorp's LO/CI 15-003 proposal describes an expansion of an existing public roadway (Tim Avenue) that appears to be located within a 66 foot wide section line easement where proposed for development by Hilcorp. The expansion of the existing roadway appears to be located outside of the existing lease or unit boundaries associated with LO/CI 15-003, and so does not appear to be addressed by that authorization. DNR DMLW SCRO can authorize this off-lease construction via letter ('section line easement development letter'), if requested by the applicant.

Applicant's Response:
Personnel at the Hilcorp land department are in the process of securing the necessary permissions. Hilcorp anticipates no complications.

Division's Response:
The Division received a copy of the email from Mr. Sowerwine on September 11, 2015, regarding the approval letter signed by Mr. Eric Moore for ADL 232284 – Development of section line easements.

Public Notice:

Public notice of the Plan and opportunity to comment was published in ADN and Peninsula Clarion on September 10, 2015, with a deadline for comments on October 10, 2015 at 4:30 pm Alaska time. Two public commenters submitted timely comments:

1. Ms. Tricia Waggoner, September 15, 2015.

The expansion of Hilcorp drill sites on the Kenai Peninsula is creating noise problems for residents living near the operating sites, specifically Ms. Waggoner. She has been dealing with noise issues from the Paxton pad north of Ninilchik for two years. Since the Kenai borough doesn't currently have noise ordinances, she asks that DNR consider impacts from noise during pad construction, drilling and operations... …in light of all the other recent new production facilities.

Applicant's Response:

The Happy Valley Middle project is not expected to generate project construction, drilling, or operation noise at the property of Ms. Waggoner. The start of the project site, or the end of the public road connecting Happy Valley Middle proposed project, is approximately 12 miles from Ms. Waggoner's property.

Hilcorp explores, develops, and operates oil and gas prospects and properties. Hilcorp operations are conducted in a manner to reasonably minimize the impacts to surrounding parcels and landowners. Hilcorp understands that they have an obligation to their lessors to undertake development with attention to mitigating potential disturbances. Soundproofing and other efforts have been made to minimize operating noise in residential areas around the Ninilchik vicinity. The Happy Valley Middle project is located within undeveloped state land, and operating sounds from the Happy Valley Middle project are not likely to be heard by the closest private landowners or by the commenting landowner.

Division's Response:

Hilcorp proposed project is located 3 miles from the nearest neighbor. Recent noise concerns expressed to the Division by Ms. Waggoner were related to a facility located approximately 0.5 miles from her property. The project is not anticipated to create operating sounds that will affect Ms. Waggoner's property. Hilcorp has demonstrated efforts to mitigate past noise conflicts with affected parties. If during operations the conflicts arise the Division may amend the application to address those conflicts.

2. Ms. Roberta Highland, President of Kachemak Bay Conservation Society (KBCS), October 4, 2015.

Fracking

KBCS Comment: Hilcorp should be required to disclose whether fracking will be used to extract gas from the proposed site. Fracking methods are the subject of current research into groundwater contamination and other geological effects. Some states have banned fracking because of these concerns.

Applicant's Response:

The proposed exploratory drilling at Happy Valley Middle Pad does not include hydraulic fracturing during this planned exploration. Exploration results will be used to determine future development plans. Future plans will not be defined until exploration results are reviewed. Future development will comply with regulations including AOGCC regulation of subsurface activities. If hydraulic fracturing is requested at a later date, Hilcorp will seek approval from AOGCC under applicable regulations (20 AAC 25.283).

Division's Response:
The AOGCC has jurisdiction over the use of hydraulic fracturing in the exploration and development of oil and gas under AS 31.05, the Alaska Oil and Gas Conservation Act, and the related regulations, Chapter 20 AAC 25 of the Alaska Administrative Code.

Water Requirements and Treatment - Produced Water Handling
KBCS Comment: Hilcorp states that no produced water tank is proposed with this exploration project, but a drilling fluids tank is proposed with rig activities (Sec VIII.3). This statement is incongruous with the use of 100 bbls of freshwater per day. Hilcorp should be required to explain in detail how it will handle this water volume during the exploration process. Hilcorp should be required to provide specific and detailed information about the size of the proposed drilling fluids tank and spill prevention modifications for the tank. Hilcorp should be required to describe in detail the complete disposal process for drilling fluids to include routes to final disposal.

Applicant's Response:
Hilcorp does not intend to build a produced water handling system as part of this proposed exploration project. Produced water is generated during hydrocarbon producing activities, for instance a mixture or emulsion of natural gas and water is removed from a reservoir. If this exploration project moves to production development, then project design, plans and approvals would include produced water handling.

Water is used during exploration to build drilling fluids. During exploration activities, Hilcorp will use approximately 100 bbls of freshwater per day to build drilling fluids to facilitate drilling activities. As indicated in Section VIII.4 of the Plan of Operations, returned drilling fluids will be transported for injection at the Kenai Gas Field, Grind and Inject Facility under the approved AOGCC injection order and ADEC solid waste permit. Section VIII.3 of our Plan of Operations application is revised to state the following:

Diesel fuel intended for refueling equipment will be stored within a 5,000 gallon tank. In addition, methanol, used for freeze protection, may be stored within a 450 gallon tote. Drilling operations will be conducted in accordance with existing state and federal spill prevention and contingency plans.

Spill prevention practices such as daily visual inspections of tanks, lines, and secondary containment areas, certified inspections of regulated tanks, and spill prevention and response training for personnel will be conducted. Spill response materials such as sorbents and oily waste bags are available on location at all times. Site activities are covered by Spill Prevention Control and Countermeasures (SPCC) regulations and plans. The drilling company has a rig specific SPCC Plan that personnel follow to comply with requirements for hydrocarbon tanks and fuel transfers.

The drilling fluids will be reused downhole when possible. When drilling fluids returned from downhole can no longer be used, then they will be transported to the Kenai Gas Field Grind and Inject Facility.

Division's Response:
Comment and response noted.

Water Requirements and Treatment - Temporary Water Usage Permit
KBCS Comment: Hilcorp projects use of 100 bbls of freshwater per day and proposes to permit and drill an onsite well (Section VIII.5 and Mitigation A.2.c). Alternatively, Hilcorp will truck in water from one or more additional Alaska DNR-permitted sites. Hilcorp should be required to provide information that a permit for the onsite well has been applied for and will reasonably be issued. Hilcorp should be required to identify specifically the alternative sources of water needed if a well is insufficient.

Applicant's Response:
Hilcorp has applied for a Temporary Water Use Authorization (TWUA) with DNR, Water Management Unit (TWUA A2015-95). Mr. Henry Brooks with DNR is the contact for Hilcorp's TWUA application.

Division's Response:
The management of water quantity is under the jurisdiction of the Alaska DNR, DMLW Water Section. Hilcorp is required to obtain and comply with all permitting requirements, which may include obtaining a temporary water use permit for use of state waters.

KBCS Comment: Water withdrawal concerns from public comment. Information regarding the effect on nearby aquifers and streambeds should be provided. While Hilcorp states that the drill site is adequately distant form Stariski and Clam Creeks, the site may be within .5 miles of the drainage areas of these creeks and removal of huge amounts of groundwater could affect waterflow to the creeks.

Applicant's Response:
Happy Valley Middle Pad TWUA case number is A2015-95. This is a request for permit with water usage up to 80,000 gallons per day. If a person receives water rights for their residential well, the right is for up to 5,000 gallons of water per day. The permitted water usage for this exploration location is similar to the permitted water usage of a residential area with 16 homes on water wells.

Division's Response:
The management of water quantity is under the jurisdiction of the Alaska DNR, DMLW Water Section.

Wetland and Water Concerns, Future Development Plans
KBCS Comment: AS 38.05.035(h) allows the Director to consider possible future effects of the current permit application. While the proposed drilling site is apparently the requisite distance from streams (Mitigation measure A.1.c), Hilcorp states that if drilling is successful it will construct a 5.6 mile buried pipeline south to connect to an existing Enstar pipeline (Section VIII.6 and Mitigation A.1.g). The area to the south and west of the proposed drilling pad is anadromous river and wetlands area (Mitigation A.1.g). Hilcorp should be required to describe the exact path of the potential underground pipeline to allow the Director to assess potential impacts to surrounding rivers and wetlands. Such potential impacts, if negative, should justify rejection of the current application. Any approval of the current application should be accompanied by the condition that future pipeline construction will not cross wetlands or anadramous waterways.

Applicant's Response:
Hilcorp will comply with all state and federal regulatory requirements related to working within wetlands. Earlier this year, Hilcorp submitted a Section 404 permit application to the USACE (Permit POA-2015-225), which included a wetland delineation and functional assessment for the area. ADEC has issued a 401 Certificate of Reasonable Assurance for placement of dredged and/or fill material (POA-2015-233).

If the project moves forward to development and hydrocarbon production, an additional USACE wetlands approval and associated ADEC approvals will be requested.

Division's Response:
The Division outlines that this Plan is for proposed exploration activities and will provide assessment of oil and gas resources in the project area. This decision does not approve development operations. If exploration is successful and Hilcorp proposes to develop the resources in this area, additional review processes will occur.

The intent of mitigation measure A.1.g is to protect the natural resources of the state from accidental pipeline discharges and facilitate the containment and cleanup of spilled fluids.

Gravel Source
KBCS Comment: Hilcorp states that approximately 2,971 cy of fill will be placed in approximately 0.92 acres of wetlands for its Happy Creek and wetland crossing projects (Section VIII.8). Hilcorp should be required to disclose the source of the fill to be used in construction projects. Hilcorp should be required to show that the fill will be free of contaminants and invasive species.

Applicant's Response:
Although Hilcorp has not yet issued a contract for the purchase of materials or construction services, all gravel for this project will be clean gravel sourced from local vendors in compliance with applicable local, state and federal regulations. Winter construction precludes the availability of certified weed-free gravel; however utilizing local suppliers will minimize haul distances and reduce potential for introduction of new invasive species.

Hilcorp will use local seed sources in the revegetation activity, and this is a condition of ADFG, Fish Habitat permit FH 15-V-0293.

Division's Response:
ADFG, Invasive Species Program manages the impacts from invasive species.

Spill and Contamination Concerns
KBCS Comment: Mitigation Section 4 includes requirements regarding fuel, hazardous substances, and waste. Requirements to address potential blowouts at the drill site comprise a glaring omission in the application requirements. Hilcorp should be required to explain how it is prepared to handle such an event and its effects on the surrounding environment.

Applicant's Response:
Well control requirements during drilling operations are regulated by the AOGCC. Hilcorp works with the AOGCC to ensure all drilling operations are conducted in compliance with 20 AAC 25.527 and 20 AAC 25.033-35.

Division's Response:
ADEC reviews the contingency plans of all Cook Inlet operators on an ongoing basis to ensure that state response planning standards can be met throughout the region.

KBCS Comment: Hilcorp states there will be a 5,000 gallon diesel fuel tank, a 450 gallon tote for methanol and a drilling fluids tank. The distance of the drill site to nearby streams is apparently within application specifications and some steps are taken to contain potential spills (Mitigation A.1.c). Hilcorp should be required to file a schedule for regular tank inspection and spill response practice exercises for the drill site and any roadways to be used in construction or waste removal.

Applicant's Response:
Drilling operations will be conducted in accordance with existing state and federal spill prevention and contingency plans. The SPCC plan and associated Environmental Protection Agency (EPA) regulations document these activities. Spill prevention practices such as daily visual inspections of tanks, lines, and secondary containment areas, certified inspections of regulated tanks, and spill prevention and response training for personnel will be conducted. Spill response materials such as sorbents and oily waste bags are available on location throughout the project duration.

Division's Response:
Hilcorp must comply with all applicable local, state and federal codes, statutes and regulations. Pursuant to AS 46.04.030, Hilcorp is required to have an approved oil discharge prevention and contingency plan (C-Plan) before commencing operations. The plan must include a response action plan to describe how a spill response would occur, a prevention plan to describe the spill prevention measures taken at the facility, and supplemental information to provide background and verification information.

KBCS Comment: Hilcorp indicates that the Tim Rd extension will be used to truck out drilling mud and waste to the Kenai Gas Field, Grind and Inject Facility or waste will be removed through an approved contractor (Sec VIII.4). Hilcorp should be required to include a spill response plan for potential spills during transportation of waste to any injection site that is used. If waste removal is subcontracted, a spill response plan should be required in such contracts and should be filed with the Director. A schedule for regular practice of the response plan should also be submitted prior to permit approval.

Applicant's Response:
Waste will be transported by a contracted company from the drill site to the final disposal facility. Hilcorp requires that all contractors comply with state and federal spill prevention and response regulations. Hilcorp and Hilcorp contractors regularly transport hydrocarbons and related items safely and successfully. Internal documents, training programs, and spill response exercises completed by Hilcorp with ADEC and Cook Inlet Spill Prevention and Response, Inc. (CISPRI) are an integral part of Hilcorp's operations.

Division's Response:
Comment and response noted.

Waste Disposal
KBCS Comment: Hilcorp states that mud and drilling waste may be taken to the Kenai Gas Field and Injection facility or an approved contractor will be used (Section VIII.4). Hilcorp should be required to confirm that the Kenai Gas Field and Injection facility can accommodate its waste materials or the alternate approved contractor should be identified.

Applicant's Response:
Hilcorp intends to transport all eligible waste for final disposal at the Kenai Gas Field, Grind and Inject Facility. The Grind and Inject Facility can accommodate anticipated project disposal requirements.

If an unexpected disruption occurred at the Kenai Gas Field Grind and Inject Facility, Hilcorp would apply for a temporary drilling waste storage permit under ADEC Solid Waste Regulations at 18 AAC 60.430. Then, Hilcorp would move to meet disposal requirements of a facility such the Kenai Borough landfill at Soldotna, possibly Alaska Soil Recycling in Anchorage, or NRC Alaska LLC for out of state disposal.

Division's Response:
Comment and response noted.

Spill and Containment Concerns
KBCS Comment: Mitigation A.4.d requires "Appropriate spill response equipment, sufficient to respond to a spill of up to 5 gallons, must be on hand during any transfer or handling of fuel or hazardous substances." This requirement is inadequate. There will be a 500 gallon fuel tank at the site so it is appropriate that response equipment to handle a much larger spill should be available at all times, not just during fuel transfer.

Applicant's Response:
As described in earlier comments, drilling operations will be conducted in accordance with existing state and federal spill prevention and contingency plans. Spill prevention practices such as daily visual inspections of tanks, lines, and secondary containment areas, certified inspections of regulated tanks, and spill prevention and response training for personnel will be conducted. Spill response materials such as sorbents and oily waste bags are available on location.

Division's Response:
ADEC inspects spill drills and reviews the contingency plans of all Cook Inlet operators on an ongoing basis to ensure that state response planning standards can be met throughout the region.

Other Public Interest Concerns - road maintenance, citizen compensation for inconvenience, and compressor noise
KBCS Comment: Construction of the road, creek culverts, and drill facilities along with transportation of wastes, water, and workforce indicates a high level of traffic on Tim Rd and any other roads involved in the proposed project. Hilcorp should be required to describe all roads that will be involved in its operation-while the drill site may not be near residential areas,

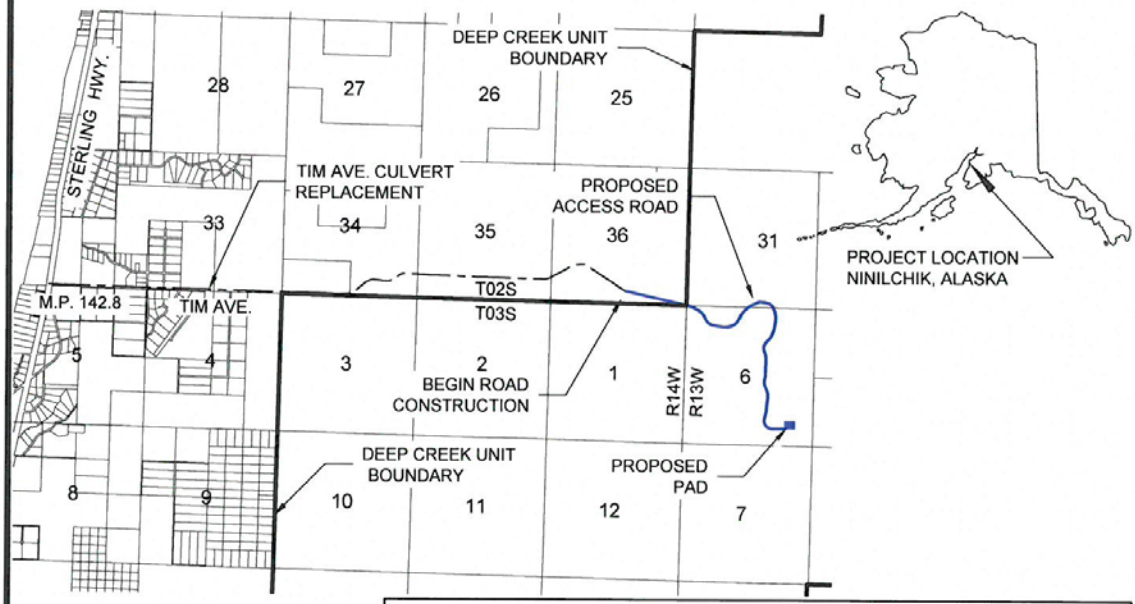
the traffic route for the operation could significantly affect residential areas. Described traffic will require continual road maintenance, which should be paid for by Hilcorp and as such, a commitment should be required. Hilcorp should provide more detailed explanation of effects of dust and road noise along the complete traffic area.

Applicant's Response:
The proposed project includes upgrades and improvements to Tim Road. These improvements are required to mobilize the drill rig, materials and related equipment. Fish passage and culvert flow will be improved. These improvements will provide a direct benefit to the environment and local residents at no additional cost to the public. Hilcorp will maintain private road areas as long as Hilcorp's operations in the DCU require access via Tim Road. The transportation route is summarized in Attachment A below.

<u>Attachment A: Project Transportation Route:</u>

- Starts at the proposed pad as shown in attached figures
- Travels along project route that joins existing Tim Ave
- Travel along Tim Ave. to Sterling Highway Mile Post 142.8
- Travel north along the Sterling Highway to Kasilof
- At the Kasilof area, turn west/left onto Kalifornsky Beach Road
- Travel along Kalifornsky Beach Road to Hilcorp facilities on the east/right side of the road. These facilities are located on an unnamed road between Katmai Ave and Dog Fish Ave.

HILCORP ALASKA, LLC
HAPPY VALLEY MIDDLE
NATURAL GAS EXPLORATION PROJECT



SCALE

0 6000 12000

FEET

VICINITY MAP

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	VICINITY MAP
2	LOCATION MAP
3	GRAVEL ACCESS ROAD PLAN
4	GRAVEL ACCESS ROAD WETLANDS CROSSING & WETLANDS CULVERT SECTIONS
5	GRAVEL ACCESS ROAD STREAM CROSSING CULVERT SECTION & TIM AVE. HAPPY CREEK ARCH PIPE TYPICAL SECTION
6	TIM AVE. WIDENING & ARCH PIPE SECTIONS
7	TIM AVE. WIDENING & ARCH PIPE PLAN
8	GRAVEL ACCESS ROAD WETLANDS IMPACTS (MAP 1 OF 2)
9	GRAVEL ACCESS ROAD WETLANDS IMPACTS (MAP 2 OF 2)
10	GRAVEL ACCESS ROAD STREAM CULVERT PLAN
11	FILL ACREAGES & VOLUMES

McLANE Consulting Inc

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SURVEYING - MAPPING
P.O. BOX 468
SOLDOTNA, AK. 99669
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FAX: (907) 283-3265
WWW.MCLANECG.COM

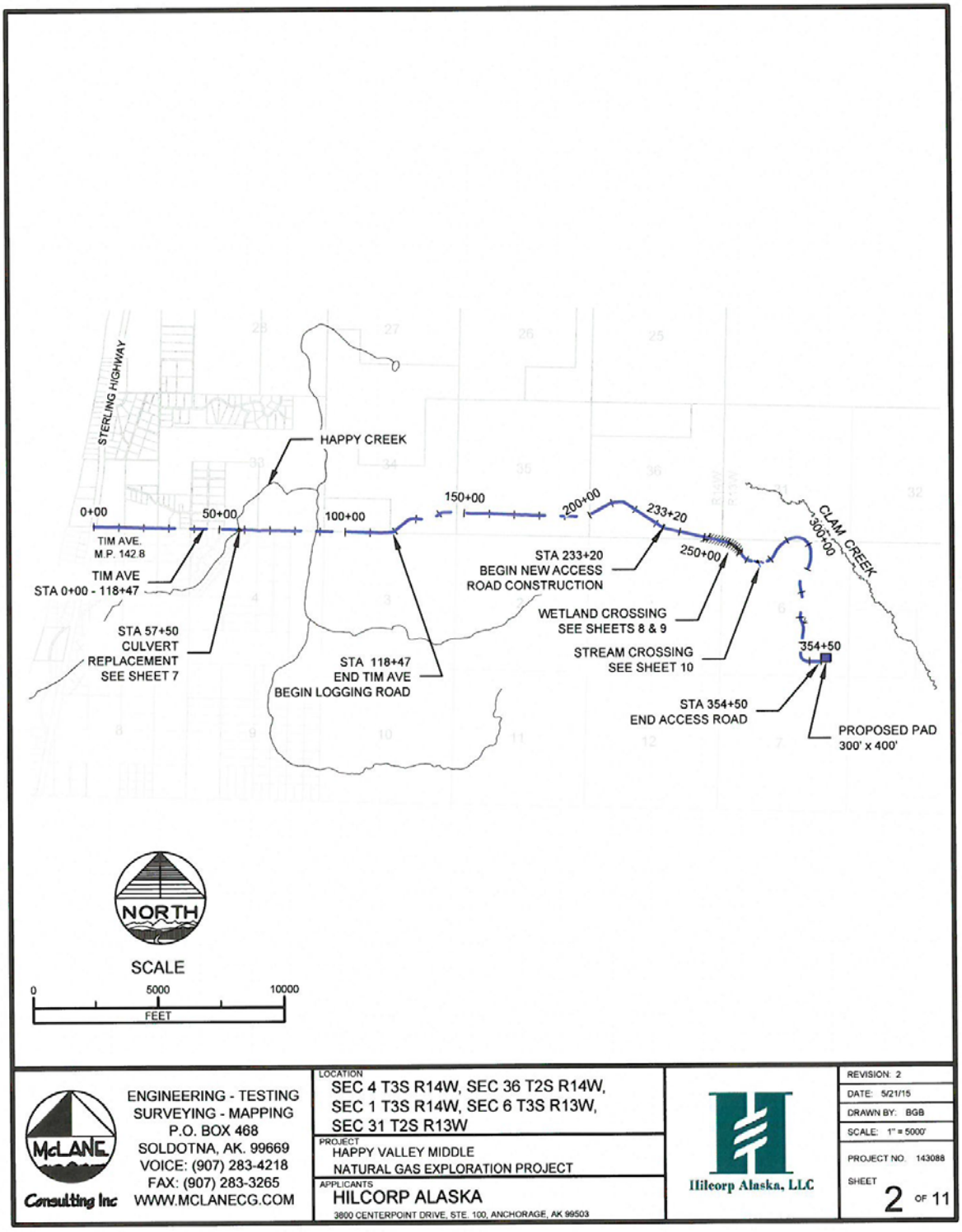
LOCATION
SEC 4 T3S R14W, SEC 36 T2S R14W,
SEC 1 T3S R14W, SEC 6 T3S R13W,
SEC 31 T2S R13W

PROJECT
HAPPY VALLEY MIDDLE
NATURAL GAS EXPLORATION PROJECT

APPLICANTS
HILCORP ALASKA
3800 CENTERPOINT DRIVE, STE. 100, ANCHORAGE, AK 99503

Hilcorp Alaska, LLC

REVISION: 2
DATE: 5/21/15
DRAWN BY: BGB
SCALE: 1" = 6000'
PROJECT NO. 143088
SHEET 1 OF 11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M.P. 142.8
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CULVERT
REPLACEMENT
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FEET
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LOCATION
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SEC 1 T3S R14W, SEC 6 T3S R13W,
SEC 31 T2S R13W
PROJECT
HAPPY VALLEY MIDDLE
NATURAL GAS EXPLORATION PROJECT
APPLICANTS
HILCORP ALASKA
3800 CENTERPOINT DRIVE, STE. 100, ANCHORAGE, AK 99503
Hilcorp Alaska, LLC
REVISION: 2
DATE: 5/21/15
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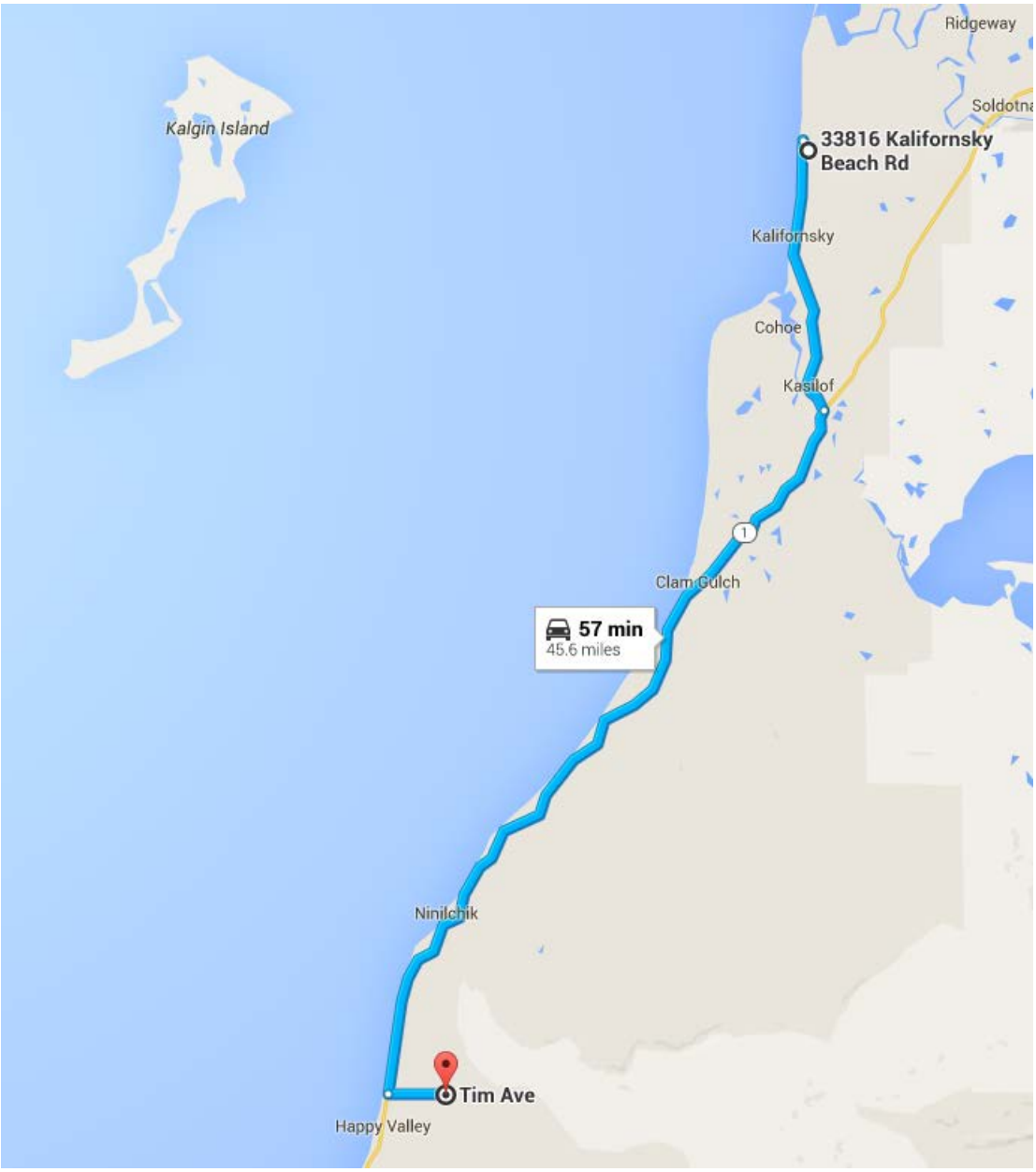
PROJECT NO. 143088
SHEET 2 OF 11


Ridgeway
Soldotna
Kalgin Island
33816 Kalifornsky Beach Rd
Kalifornsky
Cohoe
Kasilof
1
Clam Gulch
57 min
45.6 miles
Ninilchik
Tim Ave
Happy Valley

Division's Response:
The State of Alaska does not have any traffic noise regulations. It is the DOTPF policy to follow the federal standards for traffic noise prediction requirements, and noise analyses. The federal noise regulations definitions are located at Code of Federal Regulations (CFR), Title 23, Part 772.5.

Concerns related to dust; this comment is beyond the Division's scope of review of the proposed project. If the air quality problems are encountered, ADEC will be notified and appropriate measures will be taken to mitigate the impacts.

KBCS Comment: Hilcorp states that potential production facilities will include produced water tank, line heaters/separators, compressors, gas dehydration module, and generators (Section VIII.2). These facilities can produce sound that can travel several miles in the right conditions. Hilcorp should be required to compensate local residents for inconvenience of drilling and compressor noise as well as increased traffic noise on roadways used for operations. The fact that some noise will be "temporary" (Mitigation measure A.1.b) does not make the impacts on people less important.

Applicant's Response:
Hilcorp works with Alaska DNR to mitigate project-related noise impacts as appropriate. Hilcorp operations are conducted in a manner to reasonably minimize the impacts to surrounding parcels and landowners. Hilcorp understands we have an obligation to our lessors to undertake development with attention to mitigating potential disturbances. Soundproofing and other efforts have been made to minimize operating noise in residential areas around the Ninilchik vicinity.

Division's Response:
Hilcorp's representative notified the Division that they continue to keep community members informed of their planned activities and their effort to minimize noise issues. Hilcorp indicated that they will communicate with any party with noise complaint. If during operations conflicts arise the Division may amend the application to address those conflicts.

Restoration
KBCS Comment: Hilcorp states, "If exploration drilling does not result in producing wells, the access road and pad will be removed and the area restored to the Director's satisfaction" (Mitigation A.1.e). The area should be restored to its original condition!

Applicant's Response:
As Operator of the DCU, Hilcorp is committed to working directly with the DNR and CIRI (co-manager of the DCU) to ensure that proposed activities are implemented in full compliance with applicable lease terms, laws and regulations. At the conclusion of related activities, Hilcorp will reclaim the area in compliance with applicable laws and regulations and at the direction of the state landowner.

Some aspects of this project may not be suitable for restoration by removal at project conclusion. If complete restoration of project activities were required, removal would include enhancements to road and drainage systems (e.g., culvert improvements on Tim Road to improve stream flow and fish passage).

As landowner, the State of Alaska will determine the extent of restoration required if exploration does not encounter commercial quantities of natural gas.

Division's Response:
Hilcorp is required to file Status Reports with the Division twice each year to provide an update on the project. When an activity ceases, and the Completion Report is filed, Hilcorp must comply with all of the requirements of the approval and applicable laws and regulations.