



THE STATE  
of **ALASKA**  
GOVERNOR SEAN PARNELL

Department of Natural Resources

DIVISION of Oil & Gas  
Anchorage Office

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May 1, 2014

Mr. Damon Kade  
Furie Operating Alaska, LLC  
1029 West 3rd Avenue, Suite 500  
Anchorage, AK 99501

**RE: LO/CI 13-003, Furie's Kitchen Lights Unit Offshore Platform, Unit Plan of Operations Approval**

Dear Mr. Kade:

The Division of Oil and Gas received a Unit Plan of Operations (Plan) application on February 27, 2014 requesting approval for developing and transporting gas in the Corsair block of the Kitchen Lights Unit (KLU) located approximately 10 miles northwest of Boulder Point, near Nikiski, in Cook Inlet, Alaska. This Plan, along with approvals from other state and federal agencies, is necessary for Furie to carry out platform installation, the laying of the pipelines and the construction of the onshore facilities necessary for natural gas production and development of the KLU. Please find the attached Manager's Decision approving the Plan.

This approval does not constitute certification of any property right or land status claimed by the applicant nor does it relieve the applicant of responsibility to obtain approvals or permits from other persons or governmental agencies that may also be required. All stipulations contained in the original lease and subsequent approvals remain in full force and effect.

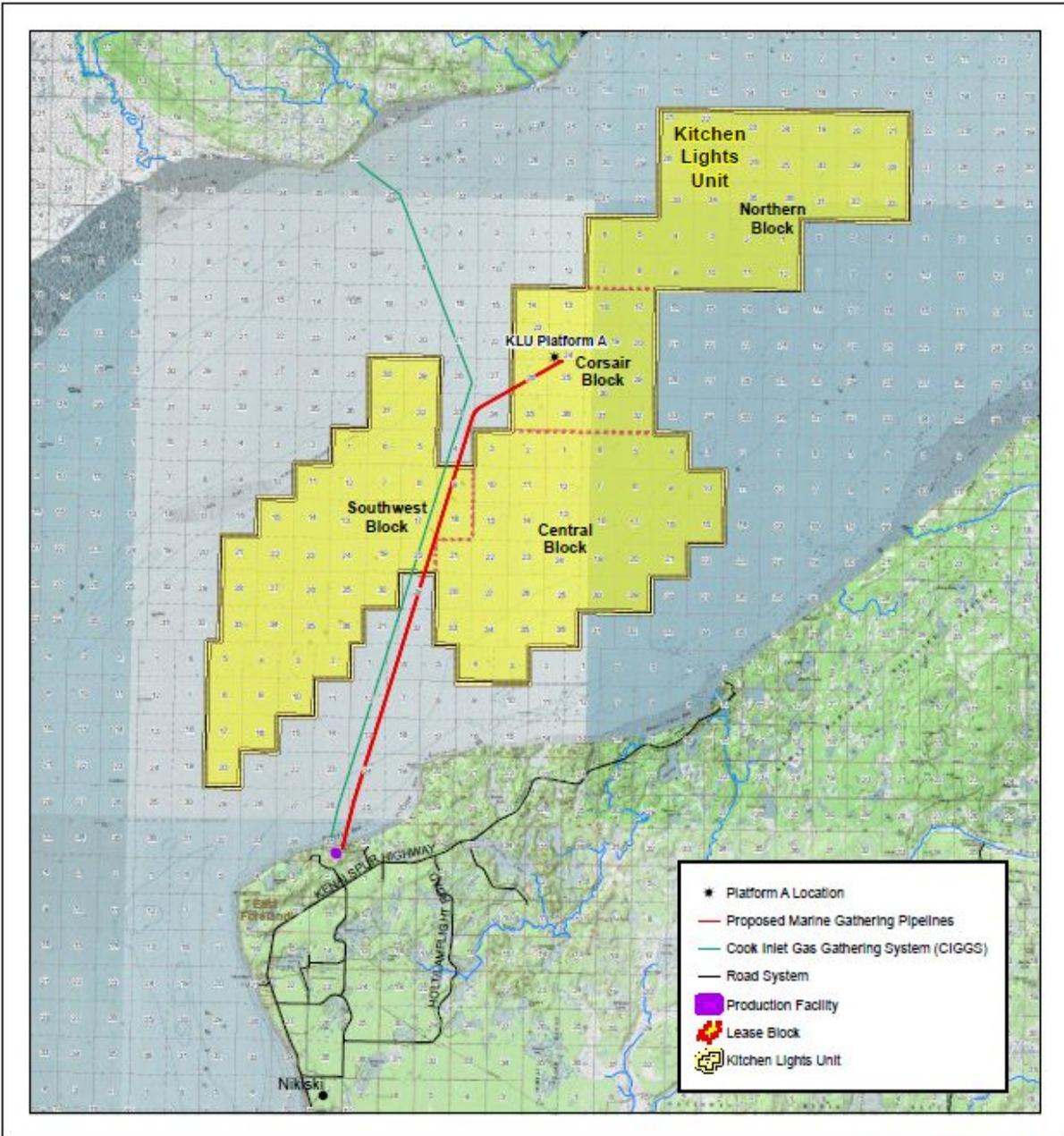
Sincerely,

A handwritten signature in blue ink that reads "Kim Kruse".

Kim Kruse  
Petroleum Land Manager  
Division of Oil and Gas Permitting

Enclosure: LO/CI 13-003, Kitchen Lights Unit, Offshore Platform, Unit Plan of Operations Approval

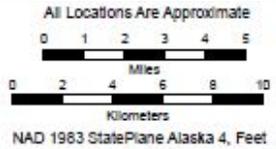
ecc: Henry Brooks, Eric Moore; DNR  
David de Gruyter, Allison Iversen; SPCO  
Betty Schorr, Sharon Morgan, Fathima Siddeek, Gerry Brown; ADEC  
Marie Megan, William Morris; ADF&G  
Kyle Smith, Tom Barrett, Corazon Manaois, Jeanne Frazier; DO&G  
Julie Denison, KPB  
Bradley Evans; Chugach Electric Association



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<b>FURIE OPERATING ALASKA KITCHEN LIGHTS UNIT LEASE BLOCKS COOK INLET, ALASKA</b>			
<b>JACOBS</b>	DATE: 29 APR 2014	PROJECT MANAGER: T. HEIKKILA	FIGURE NO: 1

**STATE OF ALASKA DEPARTMENT OF NATURAL RESOURCES  
Division of Oil and Gas**

**Furie Operating Alaska, LLC  
LO/CI 13-003  
Kitchen Lights Unit  
Offshore Platform  
Unit Plan of Operations Decision  
Phased Development and Transportation Decision**

**I. INTRODUCTION AND DECISION SUMMARY**

On June 17, 2013 Furie Operating Alaska, LLC (Furie) submitted a request for approval of a Unit Plan of Operations (Plan), a revised Plan received on December 24, 2013 and subsequent revised plan (after agency review) on February 27, 2014, for the natural gas platform for development of the Kitchen Lights Unit (KLU). The KLU is approximately 10 miles north of Boulder Point, Alaska near Nikiski. Approval of this Plan, along with approvals from other state and federal agencies (Agencies), is necessary for Furie to carry out platform installation, the laying of the pipelines and the construction of the onshore facilities necessary for natural gas production and development. Any further development is subject to further DNR review and approval.

The State of Alaska, Department of Natural Resources (DNR) Division of Oil and Gas (Division) provided public notice on February 28, 2014, with the period for public comment closing March 28, 2014. One comment was received as is discussed below in *Comments on the Scope of Review* in section A.

The DNR Commissioner has delegated authority for approvals of Unit Plan of Operations activities to the Division under Department Order: 003 in accordance with Alaska Statute 38.05 and 11 AAC 83.346. As set forth below, the Division has determined that the proposed Plan provides sufficient information to determine surface use requirements and direct impacts and includes the statements, maps, and drawings required by 11 AAC 83.346. The Division has also considered the criteria set forth in 11 AAC 83.303. Considering the relevant regulatory criteria and the contents of the proposed Plan, the Division finds that approving the Plan is in the best interests of the State.

**II. DECISION CRITERIA**

Furie must secure approval of this Plan before it can undertake any operations in all or part of the unit area (11 AAC 83.346(a)). A Unit Plan of Operations must provide for full payment of damages to the surface owner, provide sufficient information for the Division to determine the surface use requirements and direct impacts, and 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; and (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(c)-(d)). If approving the Plan, the Division may require amendments that it determines are necessary to protect the State's interests (11 AAC 83.346(e)).

In determining whether to approve the Plan and which amendments are necessary, the Division considers the criteria set forth in 11 AAC 83.303 (11 AAC 83.303(c)). This criteria consists of: (1) the public interest, considering the interests of conserving natural resources through unit development; (2) conservation of all natural resources; (3) prevention of economic and physical waste; (4) the protection of all parties, including the State; (5) environmental costs and benefits of unitized development; (6) the geological and engineering characteristics of the potential hydrocarbon accumulation or reservoir; (7) prior exploration activities in the unit area; (8) the plan of development; (9) economic costs and benefits to the State; and (10) any other relevant factors necessary or advisable to protect the public interest, including mitigation measures (11 AAC 83.303(a)-(b)).

The people of Alaska have an interest in both the conservation of natural resources for human use and development of the state's oil and gas resources to maximize the economic and physical recovery of the resources (AS 38.05.180(a)(1)). 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 and transportation activity (AS 38.05.180(a)(2)).

### **III. PROPOSED OPERATIONS**

#### **A. Plan Area**

The proposed project will be constructed on the following State of Alaska (State) owned lands:

##### Seward Meridian

Section 24, Township 10 North, Range 11 West at approximately 18 miles North of the town site of Kenai and 16 miles South of the village of Tyonek at 60° 56' 04" N and 151° 09' 06" W longitude.

Accordingly, this Plan authorizes operations on the surface of the part of the unit area consisting of the following state oil and gas lease: ADL 389197.

#### **B. Summary of Proposed Operations**

Furie's proposed operations would begin the Development and Transportation phases of the referenced project. Furie proposes to install and operate a new offshore natural gas platform and subsea natural gas gathering pipelines at the Kitchen Lights Unit (KLU) in Cook Inlet, Alaska. The primary purpose of the natural gas platform is to produce and transport natural gas from KLU well(s) through two marine gathering pipelines to an onshore production facility to deliver natural gas to market. The KLU is initially expected to produce up to 200 million standard cubic feet per day for delivery to the south-central Alaska gas distribution system. This decision will evaluate the fixed platform (allowing extraction of natural gas from the reservoir area) separately from the subsea pipelines and onshore production facility. The Division of Mining Land and Water (DMLW) will separately review an application for a private non-exclusive easement under ADL 231758 for a pipeline(s) to transport gas to market. The proposed onshore production facility is in proximity to neighboring Nikiski, Alaska and projected to be built on an undeveloped parcel of land owned by Furie. Furie claims that the projected gas from the

reservoir area will provide natural gas for utility companies who provide heat and electricity to Southcentral Alaska and to the industrial end users in Alaska's "Railbelt" region.

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

## **1. Drilling**

Furie will drill development wells by cantilevering a jack-up rig over the fixed platform. Well tubulars will pass through the caisson to the seafloor. The caisson will be held in place by piles driven approximately 120 feet into the seabed.

## **2. Facilities and Infrastructure**

The Kitchen Lights Unit is located approximately 10 miles northwest of Boulder Point, near Nikiski, in Cook Inlet, Alaska. The Furie gas platform will be a monopod designed platform with a single 18-foot-diameter caisson supporting the main deck and various skids. Development of the KLU resource is expected to result in the production of up to 30 billion cubic feet of gas per year, with initial production coming from the No. 3 well, but with the possibility of up to six wells being drilled to maximize gas recovery. The configuration of the fixed platform facility will include: two gas powered generators of 200 kilowatt (kW) each, test separator, methanol injection skid, main deck, helideck, air compressor, utility water pump, vent scrubber, utility gas scrubber/filter skid, potable water storage tanks (two) at 5,000-gallon a piece, sewage treatment center, crane and pedestal, diesel pedestal and well control headers and manifold. The main deck will accommodate a platform workover rig during platform operations and additional well-servicing and well completion activities. Should new reservoirs be discovered in the future, the need for additional platform(s) and pipeline(s) will be evaluated at that time (Proposed Plan Section 5.1).

### **a. Platform**

The natural gas platform (KLU Platform A), which will have a surface area of approximately .3 acres, is being constructed in Corpus Christi, Texas and will be readied for shipment to Alaska and installed in Cook Inlet Alaska. The platform is engineered to withstand Cook Inlet's extreme ice, seismic events and severe storms with no damage, and abnormal events with minimal damage (no loss of life or pollution). The platform will be designed to the International Organization for Standardization (ISO) standard for natural gas arctic offshore structures (ISO 19906:2010) and the American Petroleum Institute (API) Recommended Practice (RP) for Planning Designing and Constructing Fixed Offshore Platforms – Working Stress Design (WSD) (RP-WSD). The proposed infrastructure will include the items discussed above in Section 2, "*Facilities and Infrastructure.*"

### **b. Access**

KLU Platform A will be accessed by helicopter or vessel support services. The proposed platform will have restricted access in the immediate area surrounding the platform. It is anticipated that the helicopter will make an average of one flight per day to the platform;

however, during crew change-outs and high activity periods, there may be as many as four trips per day. Helicopter operations will generally be conducted out of the Kenai, Alaska Municipal Airport.

#### **IV. CONSIDERATION OF PLAN OF OPERATIONS REQUIREMENTS.**

##### **A. Plan Completeness**

A proposed plan of operations 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; and (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)).

##### **1. Sequence and Schedule**

Furie's proposed Plan provides a table of the proposed project schedule and operations through 2014 (Proposed Plan Section 5.0). This schedule satisfies the requirement to provide a sequence and schedule of operations (11 AAC 83.346(d)(1)). Additionally, the Initial Plan of Development (POD) approved on January 30, 2014 approves Furie to carry out the following development activities during the 2014 POD period:

- Produce natural gas from the Sterling and Beluga formations penetrated by the KLU #3 well.
- Installation of a monopod-style platform, which will be constructed off-site and barged to the KLU #3 well site in 2014.
- One of two proposed marine gathering lines (under DMLW easement application ADL 231758) will also be installed and completed by the end September 2014.
- The gathering line will connect to the onshore production facility, which will include separation and dehydration capabilities, and be completed by the end of October 2014.
- The January 30, 2014 POD proposes to achieve first production from the KLU by late 2014.

The proposed Unit Plan of Operations provides Furie with the surface use approval to implement the requirements of the January 30, 2014 KLU POD allowing for production from the unit in 2014.

##### **2. Projected Use**

The proposed Plan describes the location and design of the facilities and equipment necessary to conduct the proposed operations, including wells, placement of pipelines, processing facilities, and support infrastructure (Proposed Plan Sections 3.0-4.0). These descriptions satisfy the requirement to provide a statement of the projected use requirements (11 AAC 83.346(d)(2)).

### **3. Plans for Rehabilitation**

Furie's Plan states that at the end of the field life, all facilities on state oil and gas leases will be dismantled, removed, and restored in accordance with the Lease and Unit Agreement. Additionally, Furie's Plan states that once the field is no longer producing, the Platform removal may occur at the end of production activities or be delayed to coordinate with removal of other platforms in the Cook Inlet. If removal of the platform is required at the time of abandonment, Furie proposes one scenario for platform removal that would entail: a) cementing and capping the wells below the mudline/seafloor; b) removal of the fixed and modular deck components of the platform by a derrick barge and transportation offsite; c) severing the eight pilings that support the caisson structure below the mudline/seafloor; and d) floating the caisson structure and towing it off location. Under this scenario, after completion of abandonment, there would be no part of the platform remaining above the mudline/seafloor (Proposed Plan Section 5.1.2). In accordance with the leases, DNR will determine rehabilitation requirements at the time the leases are surrendered.

### **4. Operating Procedures**

The proposed Plan describes Furie's KLU project components, construction plans, schedules, and procedures designed and sited to minimize impacts to the surrounding environment (Proposed Plan Sections 6.0-10.2.3 and Appendix A-C). These procedures include surveillance and inspection of facilities, minimization and proper disposal of waste, environmental and safety training programs for personnel, adoption of mitigation measures directed at environmental protection, measures to mitigate wildlife disturbances (specifically moose and bears for the onshore pad), subsistence resources, and measures to protect community values and lifestyles in the Cook Inlet region and Kenai Peninsula. These operating procedure descriptions satisfy the requirement to provide a statement of operating procedures to prevent or minimize adverse effects (11 AAC 83.346(d)(4)).

#### **B. Sufficiency of Information**

The proposed Plan must provide sufficient information for the Division to determine the surface use requirements and impacts directly associated with the proposed operations (11 AAC 83.346(d)). The schedule of operations, projected use requirements, plan for rehabilitation, and description of operating procedures cited above provide the Division with sufficient information of how, where, and to what degree Furie plans to use the surface area and how this use will impact the area. The proposed Plan thus contains sufficient information to assess the surface use and impacts.

#### **C. Full Payment of Damages to the Surface Owner**

The State of Alaska owns the surface estate of the oil and gas leases covered by the proposed Plan. For the State, a lessee provides for payment of damages by posting a bond, and remains liable for full damages under the lease. Furie has a Statewide Oil and Gas Bond in the amount of \$500,000 and continuing liability under the lease, and thus has provided for full payment of damages prior to starting operations (11 AAC 83.346(c)).

## **V. CONSIDERATION OF 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 gas production facility development plans, necessary for maximizing recovery of the gas resources. Additionally, development under this Plan will 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).

The public's broader interests in conservation and concurrent use of other natural resources are addressed below.

### **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 Unit 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.

The KLU is broken up into four exploration blocks. The proposed platform, subsea pipelines, and onshore production facility will provide the infrastructure for developing and transporting gas in the Corsair block of the unit (see attached map). Furie may amend the Plan in the future, but in general this Plan sets forth the basic scope of development for the gas project in this block. The proposed platform will potentially produce gas from multiple wells in the Corsair block, creating less impact than multiple platforms on different leases within the block. Exploration is continuing in the other unit blocks. Development in the other blocks would require additional infrastructure.

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 9-1 – 9-8). As discussed above, the Plan also includes operating procedures to prevent or minimize adverse effects, including effects on the environment, wildlife, and subsistence resources.

### **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)). Economic waste can result if wells are drilled in excess of the number necessary for the efficient recovery of the oil and gas in place. In the proposed Plan, Furie is currently seeking approval to produce from one well, six as a maximum, to begin with; if additional wells are required they will be drilled based on knowledge of the reservoir at the time. Physical waste, among other things, includes the inefficient, excessive, or improper use of, or unnecessary dissipation of, reservoir energy. Issues of economic and physical waste are carefully considered during Unitization.

### **D. Protection of All Parties, 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. The other parties with an interest in the oil and gas resources are the working interest owners and Furie, as unit operator.

Without approval of a plan of operations, Furie cannot develop the Natural Gas Platform facility, and the State cannot recover royalties from that development. The Plan thus protects the State's and working interest owners' interests in developing the resources.

### **E. Environmental Costs and Benefits**

The Division has considered the environmental costs and benefits of unitized development through this Plan, in particular in the Corsair block (11 AAC 83.303(b)(1)). Though this Plan addresses the fixed platform in particular, the Division has considered the environmental costs and benefits in the context of the entire proposed development. The January 30, 2014 POD proposes to achieve first production from the KLU by late 2014.

In general, developing as a unit is more efficient and thus decreases the environmental impact. This proposed Plan furthers this efficiency by localizing infrastructure at the natural gas platform, which will produce natural gas from the Sterling and Beluga Formations in the Corsair block of the KLU.

The development and transportation activities will impact the immediate environment in the KLU project area. Impacts during construction are as follows; vessel use, pipeline installation, pile driving and placement of the natural gas platform. The impacts during operations include drilling, maintenance on the fixed platform and on-going monitoring of marine pipelines. A summary of the proposed minimization measures to protect habitat, fish, and wildlife are

incorporated into this Plan limiting the impacts from facilities and operations (Proposed Plan Section 6.1 and Table 6-1), along with, The Cook Inlet Mitigation Measures, (2009 Cook Inlet Final Finding at 9-2 – 9-3, and 9-6).

There is risk that the development and transportation activities will result in a leak or spill. The Plan includes measures to provide training for spill prevention and reporting in the event of a spill to mitigate further damage (Proposed Plan Appendix C).

There is some risk to wildlife that use the development and transportation area for habitat or migration. ADFG raised a number of specific concerns with potential impacts to wildlife. Those concerns and Furie's responses and accommodations are discussed in Section VI, below, and were considered by the Division in review of environmental costs and benefits. 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 9-3 – 9-5). The proposed Plan includes additional measures to mitigate the impact to wildlife, specifically sensitive species (Proposed Plan Section 6.0). The Plan also includes operating procedures to prevent or minimize adverse effects, including effects on the environment, wildlife, and subsistence resources (Proposed Plan Section 6.1 and Table 6-1).

#### **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)). The geological and engineering characteristics are not relevant to a decision to approve a plan of operations to carry out the development plans discussed in the Plan for an already approved unit.

#### **G. Prior Exploration Activities and Geological and Engineering Characteristics**

The Division has considered prior exploration activities in the Plan area. Furie has drilled three exploration wells and a sidetrack well in the Corsair block (see attached map) since Furie's drilling in the unit began in 2011. Furie has also begun drilling an exploration well (the KLU #4 well) in the North block of the KLU in 2013.

#### **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 Initial POD approved on January 30, 2014 approves and requires Furie to carry out a development schedule that will enable unit production in 2014. Specific commitments are discussed above, in Section IV.A.1., "*Sequence and Schedule.*"

#### **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 of operations, Furie will be unable to proceed with developing the

natural gas platform, which will cost the State the economic benefit of the royalties, as well as other economic benefits that flow from 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 (1) the mitigation measures that will apply to this Plan; and (2) the existence of approvals of other aspects of the natural gas platform development by different state and federal agencies.

### **1. Mitigation Measures**

In approving a plan of operations, 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 Mitigation Measures. Furie 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 Mitigation Measures.

All plan of operations applicants must complete a mitigation measure analysis form demonstrating that each mitigation measure is satisfied or inapplicable to its proposed plan, or that the applicant is seeking an exception. The Cook Inlet 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 (2009 Cook Inlet Final Finding at 9-1).

Furie completed the mitigation measure analysis for the Cook Inlet Areawide lease mitigation measures, and seeks exceptions or confirmation of compliance with the mitigation measures discussed below.

In addition, the Division accepts the mitigation measure analysis provided by Furie and the mitigation measures are incorporated with the following exceptions.

#### **a. Exception to Mitigation Measures A.1.h pipelines crossing marine waters**

Furie seeks an exception to the following mitigation measure:

Pipelines that must cross marine waters will be constructed beneath the marine waters using directional drilling techniques, unless the director, in consultation with ADFG and the local borough and Coastal Resource Service Areas, approves an alternative method based on technical, environmental, and economic justification. Offshore pipelines must be located and constructed to prevent obstruction to marine navigation and fishing operations.

Furie sent the Division and ADFG a letter on February 20, 2014 explaining that it is not practicable to bury the offshore pipeline in accordance with mitigation measure A.1.h. Below is

Furie's rationale from the letter dated February 20, 2014 for the request of granting an exception to mitigation measure A.1.h.

*"Furie has requested an exception to mitigation measure A.1.h to allow the marine pipeline to sit on the floor of the inlet rather than being buried beneath the sea floor. As noted in Furie's response to the mitigation measure, the near-shore portion of the pipelines will be installed under the seafloor and under the bluff using horizontal directional drilling (HDD). Current HDD technology does not allow installation of the entire 16-mile pipeline using HDD techniques. Therefore, installing the pipeline subsurface would require digging a trench in the sea floor, laying the pipe, and backfilling the trench. Trenching would generate additional environmental effects, particularly turbidity. For these reasons, the typical and historic subsea pipeline installation in the Cook Inlet has been to lay the pipelines directly on the seabed.*

The Division finds that Furie has shown rationale that equally satisfy the intent of this mitigation measure. Furie's proposal offers the smallest possible extent or degree of environmental impacts for the placement of the subsea pipeline installation in the immediate area inside the KLU unit boundary surrounding the KLU Platform A to satisfy the intent of the mitigation measure. The intent of this measure is to prevent disruptions to commercial fishermen in Cook Inlet and prevent marine navigational hazards. An overarching intent of all mitigation measures is to minimize adverse impacts of oil and gas activities. Furie emphasizes in the proposed Plan (described in Appendix A Mitigation Measure Analysis for measure A.1.h) *"Current HDD technology does not allow installation of the entire 16-mile pipeline using HDD techniques. Trenching would generate additional environmental effects. For these reasons, the typical and historic subsea pipeline installation in the Cook Inlet has been to lay the pipelines directly on the seabed. The location of the pipeline, in close proximity to the existing CIGGS pipeline, which is also directly on top of the seabed, will obstruct neither marine navigation nor fishing operations. Since the CIGGS pipeline was installed in the 1970s, there has been no report of interference between the pipeline and fishing activities"*. Currently burying pipelines in Cook Inlet is not the customary practice for industry and burying this pipeline would pose negative impacts, increasing environmental impacts and harm to nearby submerged land and bodies of water. Furie's requested exception avoids the increased impact of burying the pipeline. Furie's requested exception also minimizes the risk of interference with fishing and marine navigation and therefore satisfies the intent of this mitigation measure.

The Division therefore grants an exception to this mitigation measure to allow for installation of the subsea pipelines to lay directly on the seabed floor as approved under this particular Plan as set forth in the Plan. This exception does not apply to activities that Furie may propose in future or amended plans of operations.

**b. Exception to Mitigation Measures A.4.b Fuel, Hazardous Substances, and Waste**

Furie seeks an exception to the following mitigation measure:

Containers with an aggregate storage capacity of greater than 55 gallons which contain fuel or hazardous substances shall not be stored within 100 feet of a waterbody, or within 1,500 feet of a current surface drinking water source.

Furie states that it needs an exemption for the reason that the location of fixed platform is over water and that it is not practicable to meet the setback restrictions as required under the mitigation measure for storage of fuel and hazardous substances. Furie proposes to locate the necessary “day use fuel” in secondary containment on the platform in a 125 percent capacity liner of the total volume of fuel vessel storage. Furie additionally states that all vessels and structures will be equipped with spill kits and absorbent material to allow immediate containment and cleanup of spills. Considering the location of Plan activities and infrastructure, the Division agrees that it is not practicable to locate all fuel and hazardous substances more than 100 feet from bodies of water. The intent of this mitigation measure is to protect water quality, fish, and habitat. Furie’s plans for secondary containment of these tanks and vessels offers an equal alternative to protect nearby bodies of water.

The Division therefore grants an exception to this mitigation measure for purposes of locating fuel closer than 100 feet from bodies of water where necessary, provided that Furie locates these tanks in lined containment areas subject to regular visual inspections. This exception does not apply to activities that Furie may propose in future or amended plans of operations.

**c. Exception to Mitigation Measures A.4.j Fuel, Hazardous Substances, and Waste**

Furie seeks an exception to the following mitigation measure:

Wherever practicable, the preferred method for disposal of muds and cuttings from oil and gas activities is by underground injection. Other methods of disposal shall be allowed only upon approval by the director, in consultation with ADEC and ADFG.

Furie states that it needs an exemption to this mitigation measure because drilling a waste injection well at the platform is neither practical nor appropriate. Instead, Furie proposes re-using muds and cuttings rather than disposing of them, and if disposal is necessary to do so outside the KLU area. Thus what Furie proposes is different approach entirely, not simply an alternative disposal method that the Division would approve in consultation with ADEC and ADFG.

The intent of this measure is to dispose of waste in an environmentally responsible way (avoid creating impoundments that could leak drilling muds and cuttings into the environment). Furie will satisfy the intent of this mitigation measure because it will not have an impoundment either at the platform or onshore. Furie considered drilling a waste injection well; however, the quantity of effluent produced by the platform would be relatively small; therefore, it was determined that additional drilling in Cook Inlet for this purpose was unjustified. As Furie points out in the Plan, a larger platform and surface footprint would be required to accommodate an injection well within the platform caisson (the single leg of the platform). By re-using drilling mud after treatment, Furie will reduce the total amount of waste to be disposed of at a disposal/treatment facility, thereby effectively reducing the overall surface footprint of the

project and avoiding impacts to the environment. Re-use of portions of the drilling waste also reduces the total amount of waste.

As a contingency plan, Furie has a contract in place with Cook Inlet Energy, LLC for the disposal of muds and cuttings at the grind and inject facility at the West McArthur Production Facility. Transportation of containerized waste to this facility for injection is an acceptable option for waste disposal.

The Division has determined that an exception to this mitigation measure is not required. The disposal of muds and cuttings at an above ground storage area inside the unitized leasehold property is not proposed at this location. Since separating out cuttings and re-use of drilling fluids is an appropriate method to reduce drilling waste and since containerized waste will be shipped offsite to a local waste treatment facility in accordance with federal, state, and local waste disposal regulations the measure is satisfied.

This method of disposal might not apply to activities that Furie may propose in future or amended plans of operations.

## **2. Other Conditions of Approval**

To protect the state's interest, the Division finds that it is necessary to amend the Plan to incorporate additional Conditions of Approval. These conditions are included below in Section VIII, "*Findings and Decision.*"

## **3. Approvals By Other State and Federal Agencies**

In reviewing the proposed Plan, the Division considered the fact that Furie will require approvals from different state and federal agencies for other elements of its project. Although mentioned in the Plan, 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.

### **a. Gas Pipeline**

Furie submitted an easement application for the proposed pipeline to the Division of Mining, Land and Water under ADL 231758. The proposed length for the gas pipeline is approximately 16 miles, and is located in Cook Inlet.

### **b. Spill Prevention**

It is noted that KLU Platform A is considered a Tier I facility under the definitions in 40 CFR 112.3(g), as it does not have any single oil-storage containers with a capacity greater than 5,000 gallons. The Spill Prevention, Control, and Countermeasure (SPCC) Plan is applicable to all operations conducted at/on KLU Platform A (Proposed Plan Appendix C).

### c. Cultural Resources

The State of Alaska and Army Corps are operating a cooperative process to ensure compliance with Section 106 of the National Historic Preservation Act (NHPA). Section 106 requires federal agencies to take into account the effects on historic properties.

According to Furie's responses to applicable Cook Inlet Mitigation Measures, an archaeological survey was conducted and a review of the Alaska Heritage Resources Survey database was conducted in 2012. The State Historical Preservation Office (SHPO) stated that a search of the shipwreck database is adequate for the offshore portion of the KLU project. The database did not contain any surveys conducted in the KLU project area. Furie performed a survey of the seafloor in the project area and found no shipwrecks or other cultural resources in the vicinity of the proposed KLU Platform A location. On behalf of Furie, Watson Company, Inc. conducted a high resolution geophysical survey of the KLU #1 reservoir area, in Cook Inlet in April 2011. The survey included collection of high resolution sub bottom, bathymetry, and side-scan sonar data in the vicinity of the proposed KLU Platform A site. The survey did not demonstrate evidence of shipwrecks or other cultural resources in the area.

## VI. CONSULTATION WITH OTHER GOVERNMENT ENTITIES

The Division contacted the following government entities on January 21, 2014 for comment on the Plan: Alaska Department of Fish and Game (ADFG), Alaska Department of Environmental Conservation, Alaska Oil and Gas Conservation Commission (AOGCC) and DNR: State Pipeline Coordinator's Office, Division of Mining Land and Water, Office of Project Management and Permitting, and Division of Oil and Gas. The comment deadline was 4:30 pm on February 5, 2014. On January 30, 2014 ADFG requested an extension and the comment period was extended one week ending 4:30 pm on February 12, 2014. Comments were received by ADFG and AOGCC.

**ADFG Comment 1:** This proposed Plan could interfere with commercial and sport fishing vessels.

**ADFG's recommendation:** *To address commercial and sport fishing concerns, ADFG requests that Furie contact the Upper Cook Inlet commercial and sport fisheries managers Patrick Shields and Samuel Ivey, respectively, prior to April 1, 2014, to avoid interference with commercial and sport fishing operations in the area (Commercial fisheries: pat.shields@alaska.gov, 260-2941; Sport fisheries: samuel.ivey@alaska.gov, 746-6300).*

**Applicant's Response:** As indicated in Furie's response to mitigation measure A.3.a, the proposed production well and offshore KLU Platform A are positioned to avoid commercial fishing use areas. Furie proposes to amend its response to describe the efforts taken to avoid fisheries conflicts, including the following information:

Furie consulted with Division of Habitat staff to determine the locations of set net sites in the project vicinity and obtained maps of commercial fishing areas and regulations. The nearest set net site is  $\frac{3}{4}$  of a mile from the location where the subsurface portion of the pipeline will emerge onto the inlet floor. In addition to geographical distance between Furie's activities and any set net fishing, Furie's activities are temporally separate as well. The first open date for set net

fishing will be Monday, July 10, 2014, after the scheduled date to complete the horizontal directional drilling and subsurface pipeline installation. The nearest drift net fishing is well south of the project area, near the mouth of the Kenai River.

Furie also reduced potential impacts from the pipeline by aligning the pipeline corridor parallel to the existing CIGGS pipeline corridor, as described in Furie's response to mitigation measure A1.h. There have been no reports of the CIGGS pipeline interfering with fishing activities since the pipeline was installed in the 1970s.

Furie will continue to coordinate with Mr. Shields and Mr. Ivey as requested.

**Division Response:** The division met with Furie and ADFG representatives to discuss the submitted comments and agreed that Furie's above response adequately answered ADFG's comment. The nearest drift net fishing boundary is approximately 10 miles south of the KLU Platform A in the central district and set gillnet operations occur in the northern district approximately nine miles from KLU Platform A.

**ADFG Comment 2:** This proposed Plan could interfere with the Tyonek subsistence fishery.

**ADFG's recommendation:** *ADFG requests that Furie establish contact with the Native Village of Tyonek (NVT) regarding the proposed activities in western Cook Inlet. The POO states (page 9-1) that a letter has been distributed to 26 native groups soliciting comments on the plan, but does not specify whether NVT is among them. It is important to note that the Tyonek subsistence salmon fishery occurs north of the proposed offshore platform and that construction activities have the potential to disrupt the migration of salmon intended for the fishery. To allow subsistence fishers in the area to meet their regular annual harvest goals, it is recommended that Furie coordinate with NVT regarding potential impacts to the subsistence fishery. Subsistence fishing is allowed on Tuesdays, Thursdays, and Fridays from 0400 to 2000 hours from May 15 to June 15, and on Saturdays from 0600 to 1800 hours from June 16 to October 15.*

**Applicant's Response:** Furie's permitting process has included ongoing outreach to NVT. NVT was one of the 26 Native groups to which Furie sent a letter regarding its proposed activities in Cook Inlet. Furie has also been in telephone and e-mail contact with Frank Standifer, President of NVT and his assistant regarding Furie's activities. In addition, the U.S. Army Corps of Engineers (USACE) consulted with NVT as part of the federal permitting process for the project. Furie intends to continue community outreach efforts with respect to its activities in Cook Inlet.

As referenced in Furie's response to mitigation measure A.1.b, Furie prepared a Biological Assessment (BA) which was adopted by the USACE and submitted to the National Marine Fisheries Service (NMFS) as part of the consultation process under the Endangered Species Act (ESA). The BA analyzes potential impacts to Essential Fish Habitat and sets forth avoidance and mitigation measures. The USACE authorization requires that the applicant implement the minimization measures specified by NOAA and USFWS to protect species listed under the EAS (summarized in Table 6-1 of the POO), which will also reduce potential disturbance to migrating fish. Ramp-up of pile driving and other mitigations for initiating noise-generating in water work will allow fish and marine mammals to avoid the project area during these activities, with minimal disturbance. Due to the relatively small size of the area potentially affected by the project and the central location of the platform in Cook Inlet, avoidance of the immediate project area is not expected to impede migrating fish. Fish headed to Tyonek are likely to migrate up the

coastline, outside of the project area. As stated in Furie’s response to mitigation measure A2.r., NMFS concurred with USACE that the project is not likely to adversely affect EFH.

The USACE also completed an environmental assessment pursuant to the National Environmental Policy Act (NEPA) which did not identify any issues regarding subsistence fishing. The USACE concluded that no subsistence activities are likely to be adversely affected by the project.

Furie proposes to amend its response to mitigation measure A.1.b to include this information to the extent it is not already set forth in our response.

**Division Response:** The division met with Furie and ADFG representatives to discuss the submitted comments and agreed that Furie’s above response adequately answered ADFG’s comment.

**ADFG Comment 3:** This proposed Plan could cause disturbances to marine mammals.

**ADFG’s recommendation:** *In addition to the mitigation measures identified in the POO (Table 6-1), Please consider the following precautions to minimize disturbances to marine mammals during periods of important life history events:*

*1. Many marine mammals are giving birth and rearing young during May – July and specific locations for these activities cannot be determined; therefore, to avoid disturbances to marine mammals during these months operations should be minimized or temporarily stopped when marine mammals are present.*

*2. To avoid disturbance to harbor seals, ensure construction and maintenance crews do not go onto shore and keep vessels, including personal motorized and non-motorized watercraft and smaller vessels, at least 500 m offshore in townships that contain documented seal haulouts. These include:*

<i>Township</i>	<i>Range</i>	<i>Meridian</i>
3	N 16	W Seward
7	N 14	W Seward
7	N 15	W Seward
7	N 16	W Seward
6	N 16	W Seward
4	N 12	W Seward
5	N 11	W Seward
6	N 14	W Seward

**Applicant’s Response:** Potential disturbance to marine mammals as a result of Furie’s project has been considered. The environmental assessment for the project considered the presence and distribution of gray whales, harbor porpoises, harbor seals, killer whales, and sea otters in the project area in addition to the beluga whales and Steller[’s] sea lions protected by the Endangered Species Act. Mitigation measures proposed during the project for beluga whales and Steller[’s] sea lions, including the ramp up process, would also serve to protect other marine mammals in the area.

Furie conducted exploration drilling operations in the project vicinity during 2011, 2012 and 2013. Trained marine mammal observers on the helicopter and drilling rig during these activities have not observed any marine mammals in the project area and no incidents of disturbance have been recorded. As described in POO Section 8.1.2, those working on the platform and installing the pipeline will receive wildlife awareness and protection training.

No project activities are proposed in areas with documented seal haulouts. Proximity to seal haulouts was evaluated in the environmental assessment, including transportation routes to and from the project area, and no impacts to seal haulout areas are anticipated.

NMFS and USFWS determined that marine mammals protected by the ESA are not likely to be adversely affected by the proposed project, as indicated in Furie’s response to mitigation measures A.2.g and A.2.r.

Furie proposes to amend its response to mitigation measure A.1.b to include the above information.

**Division Response:** The division met with Furie and ADFG representatives to discuss the submitted comments and agreed that Furie’s above response adequately answered ADFG’s comment.

**AOGCC Comment 1:** This proposed plan specifically page 1-5, Table 1-1 is incomplete as it relates to AOGCC “permits, consultations and authorizations”. In addition to the Permit to Drill for each well, there will be applications for sundry approvals related to well construction and operation, potential for spacing exceptions, a custody transfer metering application, and potential for pool rules covering the Kitchen Lights development.

**Applicant’s Response:** Furie acknowledges that Table 1-1 is not exhaustive and anticipates that many other permits/consultation/authorizations may become necessary as each KLU Project phase evolves. Furie will revise Table 1-1.

Alaska Oil and Gas Conservation Commission	Permit(s) to drill, custody transfer meter approval
	Custody transfer meter approval
	Sundry approvals

**Division Response:** The Division received confirmation from AOGCC on 2/26/2014 that Furie’s response addressed comment 1.

**AOGCC Comment 2:** This proposed plan specifically page 3-19, Section 3.1.5.1 needs to describe better drilling-related well control procedures and equipment. Well safety valve systems (actuated wellhead and down hole fail-safe close devices should be discussed). The API designations for the various BOP stacks Furie intends to use should be spelled out; not everyone is going to understand that “SRRA” represents – from bottom up – Shear Rams (S), 2 sets of Pipe Rams (RR), and an Annular Preventer (A). Is this detail really even necessary in lieu of emphasizing the redundancy built into all aspects of the BOPE (closing devices, controls, valves, etc.)?

**Applicant’s Response:** The following text will be added to Section 3.1.5.1: Over the life of the wells, various intervention methods to conduct data acquisition, diagnostic trouble shooting,

stimulation, re-perforating, and mechanical repairs or replacement of down hole equipment will be conducted. Each type of intervention will have secondary well control BOPs appropriate for the intervention i.e. wireline, coiled tubing and jointed pipe. Each unique BOP system is configured and pressure rated and pressure tested to comply with state regulations (29 AAC 25.035 Secondary well control for primary drilling and completion: blowout prevention equipment and diverter requirements, 20 AAC 25.285 Secondary well control for tubing work over operations, 20 AAC 25.286 Well control requirements for workstring service operations, and 20 AAC 25.287 Well control for wireline operations).

Each well placed on production will have redundant safety systems. Each well will have a surface controlled sub-surface safety valve located at a depth below the seafloor and a surface safety valve at the well head; each safety valve will be capable of stopping the well from flowing. Actuation of these valves can be triggered automatically by the fire detection system, or manually by any one of a number of emergency shutdown stations (ESDs) located on the platform or an ESD temporarily attached to the jackup rig or service unit rigged up on the well.

The temporary installation of the ESD station on the service units will be a requirement of the simultaneous operations protocol (SIMOPS). A SIMOPS is being developed which will provide the guiding principles that would allow operation to occur simultaneously between independent activities and which would provide a means to shut-in the production wells in the event of an incident on a well being drilled or serviced.

The text of the POO will be changed to read as follows for BOP:

- Blowout Preventer Stack: Once the surface casing has been set, the appropriate blowout preventer (BOP) stack will be installed on the casing head. A 21 ¼ -inch 2,000 psi or a 20 ¾ -inch 3,000 psi annular BOP stack will be used on the 20-inch casing. The API designation is, from bottom up, SRRA (S designates drilling spool, R designates a single ram, and A designates an annular preventer). On the 13-3/8-inch and 9 5/8 inch casings, a 13-5/8-inch 10,000 psi annular BOP stack will be installed. The API stack designation is RSRRA.

**Division Response:** The Division received confirmation from AOGCC on 2/26/2014 that Furie's response addressed comment 2.

**AOGCC Comment 3:** This proposed plan specifically page 3-20, Section 3.1.5.1, "Blowout Preventer Testing" should indicate that API Recommended Practice 53 has been replaced by Standard 53, effective November 2013.

**Applicant's Response:** The text of the POO will be changed to read as follows for Standard 53: "API Recommended Practice 53" will be replaced with "API Standard 53."

**Division Response:** The Division received confirmation from AOGCC on 2/26/2014 that Furie's response addressed comment 3.

**AOGCC Comment 4:** Should include a paragraph that discusses the drills relating to well control that Furie drilling and workover crews will be performing. API Recommended Practice 59, Section 11 is a guide. Performance testing of BOPE will certainly validate the equipment is functional if needed, but how the crew reacts to well control situations is equally important

**Applicant's Response:** The following text will be added to Section 3.1.5.1: During drilling operations, shut-in drills will be held weekly, per crew, as a minimum. If crew performance is below expectation of the Furie rig supervisor, then additional drills will be conducted until performance expectation is met. The following crew positions, in addition to the Furie Well Site Supervisor, will be certified in well control: Derrick Man, Assistant Driller, Driller, Tour Tool Pusher, Tool Pusher and Offshore Installation Manager. Any individual who is in control of the well will have the authority and responsibility to shut-in the well upon any indication of flow. Authority to reopen the well for continued activity resides solely with the Furie Rig Site Supervisor.

**Division Response:** The Division received confirmation from AOGCC on 2/26/2014 that Furie's response addressed comment 4.

**AOGCC Comment 5:** This proposed plan specifically page 3-19, Section 3.1.5 regarding close proximity and simultaneous operations (Simops) warrant some discussion under this section because of the nature of this development (jack-up mobile offshore drilling unit cantilevered over the wellhead production platform). Included should be discussions about Simops plans that will be developed by Furie and its drilling contractor regarding how producing operations will be secured if a well control event occurs while drilling or working over wells from the jack-up.

**Applicant's Response:** As indicated in response to Comment 2, a SIMOPS is being developed which will provide the guiding principles which would allow operation to occur simultaneously between independent activities and which would provide a means to shut-in the production wells in the event of an incident on the well being drilled or serviced. Text will be added to the POO as indicated in Comment 2.

**Division Response:** The Division received confirmation from AOGCC on 2/26/2014 that Furie's response addressed comment 5.

**AOGCC Comment 6:** This proposed plan specifically page 3-23, Section 3.2.1 needs to include an application from Furie for a sales gas meter. Measurement onshore must be justified as providing an equivalent or improved level of accuracy for AOGCC to grant approval of measurement outside of the property or unit where produced. Refer to 20 AAC 25.228(a), (b), and (j).

**Applicant's Response:** Furie is preparing an application for AOGCC approval of its gas sales meter consistent with the applicable regulations and AOGCC guidance materials.

**Division Response:** The Division received confirmation from AOGCC on 2/26/2014 that Furie's response addressed comment 6.

**AOGCC Comment 7:** This proposed plan specifically page 3-23, Section 3.2.1 AOGCC has not yet received a formal sales gas meter application from Furie for Kitchen Lights Unit. Measurement onshore must be justified as providing an equivalent or improved level of accuracy for AOGCC to grant approval of measurement outside of the property or unit where produced. Refer to 20 AAC 25.228(a), (b), and (j).

Furie does not identify a condensate sales meter yet they have plans for a condensate coalescer, a condensate surge tank, and condensate injection pumps.

**Applicant's Response:** Furie is preparing an application for AOGCC approval of its gas sales meter consistent with the applicable regulations and AOGCC guidance materials. Furie's well test indicated that the reservoir will not produce commercial quantities of condensate. Nonetheless, condensate separation equipment is provided at the onshore facility to ensure that all gas delivered is market quality. Any condensate will be metered and sent to disposal.

The above statements will be added to the POO.

**Division Response:** The Division received confirmation from AOGCC on 2/26/2014 that Furie's response addressed comment 7.

**AOGCC Comment 8:** This proposed plan specifically page 3-25, Section 3.2.4 the last paragraph on page 3-25 and continues onto page 3-26 references condensate as one of the products of produced fluid processing. The condensate must be measured to custody transfer metering standards prior to commingling.

**Applicant's Response:** The statement on page 3-26 will be revised to read "Hydrocarbon condensate from the condensate coalescer will be metered and sent to disposal."

**Division Response:** The Division received confirmation from AOGCC on 2/26/2014 that Furie's response addressed comment 8.

**AOGCC Comment 9:** This proposed plan specifically page 3-27, Process Description diagram, this should be updated to show the custody transfer meters for gas and condensate.

**Applicant's Response:** The figure will be updated as shown in the attached Process Description figure.

**Division Response:** The Division received confirmation from AOGCC on 2/26/2014 that Furie's response addressed comment 9.

**AOGCC Comment 10:** This proposed plan specifically page 3-29, section 3.3; page 7-3, table 7.2; page 7-6, section 7.3.2; page C-2-1, appendix C, section 2.2; page C-5-2, appendix C, section 5.1.1. Each of these sections indicates deck drainage and sump fluids will be combined with the produced fluids flowline for transport to the onshore production processing facility. AOGCC has concerns about this that will need to be addressed in custody transfer meter application.

**Applicant's Response:** Furie has requested authorization to discharge platform deck drainage to Cook Inlet. The POO will be revised to remove the statements that deck drainage will enter the pipeline and instead will indicate that deck drainage will be discharged to Cook Inlet.

**Division Response:** The Division received confirmation from AOGCC on 2/26/2014 that Furie's response addressed comment 10.

**AOGCC Comment 11:** This proposed plan specifically page 8-1, Section 8.1 reference to the Alaska Safety Handbook (BP Exploration (Alaska), Inc., 2006) is an interesting approach. Why is the 2010 version not referenced? What does “Where appropriate” mean in terms of Furie’s adoption of BPXA’s Alaska Safety Handbook. Furie needs to be careful here with this adoption – there are companies that have similarly adopted these “references, standard operating procedures, and workplace best safety practices” only to learn that they were applicable (sometimes approved) for BPXA operations only.

**Applicant’s Response:** The Alaska Safety Handbook referenced should have been the edition printed in 2010, which has been adopted by ConocoPhillips Alaska, ENI Petroleum, ExxonMobil, Pioneer Natural Resources Alaska and Shell Exploration & Appraisal; all of which are North Slope operators.

The statement regarding “where appropriate” means the guidelines will be followed, except in instances where they could not apply. For instance:

- 1) The emergency phone numbers listed are for North Slope facilities and the operators listed above, and do not apply to the Cook Inlet.
- 2) Cold Weather Protection Guidelines for temperatures and wind chills producing a 5-minute frost bite do not apply in the Cook Inlet, the wind chill does not reach -48 degrees.
- 3) Safe driving rules: #13, there is no need to carry arctic survival gear in the Cook Inlet region; #21, rig moves will be over water by barge and not on the road.
- 4) Four-wheeler / Snow machine: Furie’s workers and contractors will not be using these off-road vehicles.
- 5) Foul Weather Contingency Plan: these are designed for the arctic environment and not for urban roads and offshore travel.

Furie will follow the Alaska Safety Handbook until it completes preparation of a Furie Operations Safety Handbook in the same format as the Alaska Safety Handbook.

The POO will be revised to clarify the reference to and use of the Alaska Safety Handbook as described above.

**Division Response:** The Division received confirmation from AOGCC on 2/26/2014 that Furie’s response addressed comment 11.

**AOGCC Comment 12:** This proposed plan specifically page 8-3, Section 8.1 the types training and their sources do not address the type of production operations training that Furie personnel will undergo.

**Applicant’s Response:** The following will be added to Section 8.1.1 of the POO: Each employee will be trained according to their role and responsibilities, which may include the following:

- T2 – Basic Safety Systems certification
- Crane/Rigger
- Safegulf (PEC)
- Defensive Driving
- Skills Verification Tests
- HUET – Water Survival

- Marine Trash and Debris

**Division Response:** The Division received confirmation from AOGCC on 2/26/2014 that Furie's response addressed comment 12.

**AOGCC Comment 13:** What does Furie's regulatory compliance tracking system consist of and how will it assure compliance with regulatory requirements such as well safety valve system requirements, reporting obligations (e.g., subsequent report of approved sundry operations; well completion reports) and data submittals (e.g., well logs)?

**Applicant's Response:** The following will be added to Section 3.1.5 of the POO: The drilling and operations team maintains well files containing all data to comply with regulatory requirements and data submittals. This team is responsible for obtaining permits to drill and compliance with all aspects of those permits and applicable regulations. As a standard practice, well files are organized to track AOGCC reporting requirements, including sections for well logs, BOP tests, sundry approvals, regulatory compliance, and well completion reports. During the past three years that Furie has operated in Cook Inlet, it has not received any notices of noncompliance with applicable regulatory requirements. Furie is in the process of updating the compliance assurance system it uses for exploration activities to address development and production operations and insure applicable monitoring, record keeping, and reporting requirements are satisfied. This practice and the updated Furie compliance assurance system will be incorporated into the permanent production facility operations. Furie will continue to take the steps necessary to ensure continued regulatory compliance.

**Division Response:** The Division received confirmation from AOGCC on 2/26/2014 that Furie's response addressed comment 13.

**AOGCC Comment 14:** This proposed plan specifically page C-1-6, Table C-1-2 should add emergency contact for AOGCC. Contact procedures are listed in AOGCC regulation 20 AAC 25.205 and Industry Guidance Bulletin 10-01A. Phone numbers and email contacts are given in the Guidance bulletin as is the AOGCC physical address.

**Applicant's Response:** The AOGCC emergency contact information will be included in Table C-1-2

**Division Response:** The Division received confirmation from AOGCC on 2/26/2014 that Furie's response addressed comment 14.

**AOGCC Comment 15:** This proposed plan specifically page C-4-4, Appendix C, Section 4.2.2 This section is an overly simplified explanation of the blowout prevention equipment (BOPE) and its role, lacking important discussion about its pressure rating, certification, multiple levels of redundancy, and frequent performance testing and inspection that demonstrates its functionality and capability.

- Replace "workover drilling operations" with "drilling and workover operations".
- Replace "cut and cap the well" with "contain fluids in the wellbore". Note that shearing pipe in a well control event is the very last response with the blowout prevention equipment installed on the well.

**Applicant's Response:** The POO text will be revised as follows: During any drilling and workover operations, an industry standard blowout prevention device will be provided with the drill assembly. This device will be employed in the event of any wellhead pressure episode to contain fluids in the wellbore, thereby preventing the release of any POL or other liquids that may be contained within the gas or otherwise released from the well.

In addition, the following explanation will be added to Section 4.2.2:

The BOP assembly is a stack of four individual BOPs configured to prevent the escape of pressure from either the annulus between the drill pipe and the casing or the wellbore itself. The BOP is configured for the specific size of the drill pipe and casing being used at that particular interval of the well and has sufficient redundancy as configured to allow replacement of the select component in the event of an extended well control incident. The hydraulic accumulator, which is the source of hydraulic energy for the BOPs, has sufficient stored hydraulic capacity to close all the BOP rams without assistance from the rig's primary power. The BOP is tested at intervals of either 1 or 2 weeks as dictated by regulation 20 AAC 25.035 and tested to pressures as outlined in the permit to drill. The AOGCC will be notified at least 24 hours prior to each BOP test; tests are witnessed at AOGCC's discretion.

**Division Response:** The Division received confirmation from AOGCC on 2/26/2014 that Furie's response addressed comment 14.

**AOGCC Comment 15:** This proposed plan specifically page C-5-2, Appendix C, Section 5.1.1 AOGCC also has requirements for spill reporting (uncontrolled release); refer to regulation 20 AAC 25.205.

**Applicant's Response:** The heading of Section 1.2.2 of the Spill Prevention Control and Countermeasures Plan in Appendix C of the POO will be revised to read, "State of Alaska Regulatory Compliance". A new paragraph will be added under that heading as follows:

The AOGCC also has adopted spill reporting requirements. These requirements, found at 20 AAC 25.205, apply to uncontrolled releases exceeding 10 barrels of oil or 1,000 mscf of gas. In the event of such a release, Furie will comply with these reporting requirements.

**Division Response:** The Division received confirmation from AOGCC on 2/26/2014 that Furie's response addressed comment 15.

## VII. PUBLIC NOTICE AND COMMENTS

Public notice of the Plan was published in the Anchorage Daily News on February 28, 2014 and the Peninsula Clarion on February 28, 2014 with a deadline for comments of March 28, 2014 at 4:30 PM. Additionally, a copy of the notice was posted on DNR's web site and faxes of the public notice were sent to the Kenai, Soldotna, and Kasilof post offices.

The Division received one public comment during the public notice period from Chugach Electric Association Inc. (Chugach).

## **A. Comments on the Scope of Review**

**Comment 1 (Chugach):** Chugach strongly supports this project because Southcentral Alaska utilities greatly need enhanced natural gas supply and deliverability. Fuel security is a huge issue for utilities as gas production from Cook Inlet has declined and prices have increased. Thus, Chugach is supportive of projects that have the potential to increase the available supply and the price competitiveness of the gas market in Southcentral Alaska.

In summary, the local gas supply from the Cook Inlet has been in decline, but explorers, such as Furie, who have the resources to discover and produce additional gas, can reverse this trend. Chugach is encouraged that there is another source of local supply and strongly supports granting the required permits for Furie to construct the fixed platform and associated facilities.

**Division Response:** Comment noted.

## **FINDINGS AND DECISION**

Summary:

Having considered the proposed project and the development and transportation phases and based on the foregoing discussion and consideration of issues, 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. Approval of the Plan begins the development and transportation phase of this project within the KLU Corsair block: ADL's (389196, 389197, 389198, and 389515).
3. Approval of this Plan is in the state's best interest.
4. 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 on natural resources.
5. To protect the state's interest, the Division finds that it is 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.

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

1. 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 Completion Report is filed with the Division. Failure to file in a timely manner may result in revocation of this approval. The completion report shall contain a statement describing clean-up activities conducted, the method of debris disposal, and a narrative description of known incidents of surface damage.
2. 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.

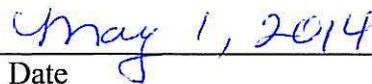
3. Amendments and modifications to this approval require advance notice and must be approved in writing by the Department of Natural Resources.
4. The applicant shall inform and ensure compliance with any and all conditions of this approval by its employees, agents and contractors, including subcontractors at any level.
5. The Commissioner of the Department of Natural Resources 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.
6. Notification. The applicant shall notify the Department of Natural Resources 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 DEC oil spill report number is (800) 478-9300. DNR and DEC shall be supplied with all follow-up incident reports.
7. 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 both electronically and in hard copy.

Based upon the information provided by the applicant, inter-agency review, review of relevant planning documents, statutes and regulations related to this application, and the above findings, the Division hereby approves the Plan. During the term of the Plan, DNR may, at its discretion, conduct periodic inspections to ensure compliance with the Plan and that measures set forth in or incorporated into the Plan are minimizing adverse impacts on natural resources and maximizing the state's interest.



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Kim Kruse  
 Petroleum Land Manager  
 Division of Oil and Gas



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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 Joe Balash, 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](mailto: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.