

Chapter Nine: Mitigation Measures and Other Regulatory Requirements

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Chapter Nine: Mitigation Measures and Other Regulatory Requirements (Lessee Advisories)

AS 38.05.035(e) and the departmental delegation of authority provide the director of the Division of Oil and Gas (“director”), with the authority to impose conditions or limitations, in addition to those imposed by statute, to ensure that a resource disposal is in the state’s best interests. Consequently, to mitigate the potential adverse social and environmental effects of specific lease related activities, DO&G has developed mitigation measures and will condition plans of operation, exploration, or development and other permits based on these mitigation measures.

Lessees must obtain approval of a detailed plan of operations from the director before conducting exploration, development, or production activities. A plan of operations must identify the sites for planned activities and the specific measures, design criteria, construction methods and operational standards to be employed to comply with the restrictions listed below. It must also address any potential geologic hazards that may exist at the site.

These measures were developed after considering terms imposed in earlier competitive lease sales and comments and information submitted by the public, local governments, environmental organizations, and other federal, state, and local agencies. Additional measures will likely be imposed when lessees submit a proposed plan of operations.

Lessees must comply with all applicable local, state and federal codes, statutes and regulations, as amended, as well as all current or future ADNR area plans and recreation rivers plans; and ADF&G game refuge plans, critical habitat area plans, and sanctuary area plans within which a lease area is located. Lease activities must be consistent with the enforceable policies of the Alaska Coastal Management Program, including statewide standards and the enforceable policies of an affected coastal district, as amended.

The director may grant exceptions to these mitigation measures. Exceptions will only be granted upon a showing by the lessee that compliance with the mitigation measure is not practicable or that the lessee will undertake an equal or better alternative to satisfy the intent of the mitigation measure. Requests and justifications for exceptions must be included in the plan of operations. The decision whether to grant an exception will be made during the public review of the plan of operations.

Except as indicated, the mitigation measures do not apply to geophysical exploration on state lands; geophysical exploration activities are governed by 11 AAC 96.

Agency abbreviations are:

Abbreviation	Agency Name
ADF&G	Alaska Department of Fish and Game
ADEC	Alaska Department of Environmental Conservation
ADNR	Alaska Department of Natural Resources
DMLW	Division of Mining, Land, and Water (ADNR)
DO&G	Division of Oil and Gas (ADNR)
NMFS	National Marine Fisheries Service
SHPO	State Historic Preservation Office (ADNR)
USFWS	U.S. Fish and Wildlife Service

A. Mitigation Measures

1. Facilities and Operations

- a) A plan of operations must be submitted and approved before conducting exploration, development or production activities, and must describe the lessee's efforts to minimize impacts on residential, commercial, and recreational areas, Native allotments and subsistence use areas, and adjacent private lands. At the time of application, lessee must submit a copy of the proposed plan of operations to all surface owners whose property will be entered.
- b) Facilities must be designed and operated to minimize sight and sound impacts in areas of high residential, commercial, recreational, and subsistence use and important wildlife habitat. Methods may include providing natural buffers and screening to conceal facilities, sound insulation of facilities, or by using alternative means approved by the director, in consultation with ADF&G.
- c) The siting of onshore facilities, other than roads, docks, utility or pipeline corridors, or terminal facilities will be prohibited within one-half mile of the mean high water of Cook Inlet, except where land use plans classify an area for development, or established usage and use history show development. The siting of facilities other than docks, roads, utility, and pipeline crossings will also be prohibited within 500 feet of all fish bearing streams and waterbodies and 1,500 feet of all current surface drinking water sources. Additionally, to the extent practicable, the siting of facilities will be prohibited within one-half mile of the banks of the main channel of the Harriet, Alexander, Lake, Deep, and Stariski creeks, and the Drift, Big, Kustatan, McArthur, Chuitna, Lewis, Theodore, Beluga, Susitna, Little Susitna, Kenai, Kasilof, Ninilchik, and Anchor rivers. Facilities may be sited within these buffers if the lessee demonstrates to the satisfaction of the director, in consultation with ADF&G, that site locations outside these buffers are not practicable or that a location inside the buffer is environmentally preferred. Road, utility, and pipeline crossings must be consolidated and aligned perpendicular or near perpendicular to watercourses.
- d) Impacts to identified wetlands must be minimized to the satisfaction of the director, in consultation with ADF&G and ADEC. The director will consider whether facilities are sited in the least sensitive areas. Further, all activities within wetlands require permission from the U.S. Army Corps of Engineers (see Lessee Advisories).
- e) Exploration activities must be supported by air service, an existing road system or port facility, ice roads, or by off-road vehicles that do not cause significant damage to the vegetation or ground surface. Construction of temporary drill pads, airstrips, and roads may be allowed. Construction of permanent roads may be allowed upon approval by the director. Unrestricted surface travel may be permitted by the director and DMLW, if an emergency condition exists.
- f) With the exception of drill pads, airstrips, and roads permitted under A1e, exploration facilities must be consolidated, temporary, and must not be constructed of gravel. Use of abandoned gravel structures may be permitted on a case-by-case basis.
- g) Pipelines must utilize existing transportation corridors and be buried where conditions permit. Pipelines and gravel pads must be designed to facilitate the containment and cleanup of spilled fluids. Pipelines, flowlines, and gathering lines must be designed and constructed to assure integrity against climatic conditions and geologic hazards.

In areas with above ground placement, pipelines must be designed, sited, and constructed to allow for the free movement of wildlife. Where practicable, pipelines must be located on the upslope side of roadways and construction pads, unless DMLW determines that an alternative site is environmentally acceptable.

- h) Pipelines that must cross marine waters will be constructed beneath the marine waters using directional drilling techniques, unless the director, in consultation with ADF&G 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.
- i) Gravel mining sites required for exploration and development activities will be restricted to the minimum necessary to develop the field efficiently and to minimize environmental damage. Gravel mine sites required for exploration activities must not be located within an active floodplain of a watercourse unless DMLW, after consultation with ADF&G, determines that there is no practicable alternative, or that a floodplain site would be compatible with fish and wildlife habitat after mining operations are completed and the site is closed.

2. Habitat, Fish, and Wildlife

- a) Detonation of explosives will be prohibited in open water areas of fish bearing streams and lakes. Explosives must not be detonated beneath, or in close proximity to, fish-bearing streams and lakes if the detonation of the explosive produces a pressure rise in the water body of greater than 2.7 pounds per-square-inch, or unless the water body, including its substrate, is solidly frozen. Detonation of explosives within or in close proximity to a fish spawning bed during the early stages of egg incubation must not produce a peak particle velocity greater than 0.5 inches per second. Blasting criteria have been developed by ADF&G and are available from ADF&G upon request. The location of known fish bearing waters within the project area can be obtained from ADF&G.
- b) Compaction or removal of snow cover overlying fish bearing water bodies is prohibited except for approved crossings. If ice thickness is not sufficient to facilitate a crossing, ice and/or snow bridges may be required.
- c) Removal of water from fishbearing rivers, streams and natural lakes shall be subject to prior written approval by DMLW and ADF&G. Water intake pipes used to remove water from fish bearing waterbodies must be surrounded by a screened enclosure to prevent fish entrainment and impingement. Screen mesh size shall be no greater than 1 mm (0.04 inches), unless another size has been approved by ADF&G. The maximum water velocity at the surface of the screen enclosure may be no greater than 0.4 feet per second, unless an alternative velocity has been approved by ADF&G. Screen material must be corrosion resistant, and must be adequately supported to prevent excessive sagging which could result in unusable intake surface. The intake structure must be designed and installed to avoid excessive fouling from floating debris, and a minimum of eight square feet of effective wetted screen surface must be provided for each multiple of a 450-gallon per minute (one cubic foot per second) pumping rate. The pump intake opening must be placed equidistant from all effective wetted screen surfaces.
- d) Surface entry will be prohibited in parcels that are within the Kenai River Special Management Area.

Surface entry, other than access, will be prohibited on state lands within the Kenai National Wildlife refuge.

Lessees are prohibited from placing drilling rigs and lease-related facilities and structures within an area near the Kenai River composed of: all land within Section 36 in T6N, R11W that is located south of a line drawn from the protracted NE corner to the protracted SW corner of the section; all land within the western half of Section 31 in T6N, R10W and Section 6 in T5N, R10W; and all land within Section 1 in T5N, R11W.

- e) Surface entry into the critical waterfowl habitat along the Kasilof River is prohibited. Directional drilling from adjacent sites may be allowed.
- f) Surface entry will be prohibited within one-quarter mile of trumpeter swan nesting sites between April 1 and August 31. The siting of permanent facilities, including roads, material sites, storage areas, powerlines, and above ground pipelines will be prohibited within one-quarter mile of known nesting sites. Trumpeter swan nesting sites will be identified by ADF&G at the request of the lessee.
- g) The director, in consultation with ADF&G, shall restrict or modify lease related activities if scientific evidence documents the presence of Steller's eiders from the Alaska breeding population in the lease area and it is determined that oil and gas exploration and development will impact them or their over-wintering habitat in the near-shore waters of Cook Inlet.
- h) The director, in consultation with ADF&G, may impose seasonal restrictions on activities located in and adjacent to important waterfowl and shorebird habitat during the plan of operations approval stage.

Bears

- i) Lessees are required to prepare and implement a human-bear interaction plan designed to minimize conflicts between bears and humans. The plan shall include measures to:
 - i. minimize attraction of bears to facility sites, including garbage and food waste;
 - ii. organize layout of buildings and work areas to minimize interactions between humans and bears such as including the use of electric fencing;
 - iii. warn personnel of bears near or on facilities and the proper actions to take;
 - iv. if authorized, deter bears from the drill site;
 - v. provide contingencies in the event bears do not leave the site;
 - vi. provide for proper storage and disposal of materials that may be toxic to bears; and
 - vii. document and communicate the sighting of bears onsite or in the immediate area to all shift employees.
- j) Before commencement of any activities, lessees shall consult with ADF&G to identify the locations of known bear den sites that are occupied in the season of proposed activities. Exploration and development activities started between November 15 and March 31 may not be conducted within one-half mile of known occupied brown bear dens, unless alternative mitigation measures are approved by the ADF&G. A lessee who encounters an occupied den not previously identified by ADF&G must report it to the Division of Wildlife Conservation, ADF&G, within 24 hours. Mobile activities shall avoid such discovered occupied dens by one-half mile unless alternative mitigation measures are approved by DO&G with concurrence from ADF&G. Non-mobile facilities will not be required to be relocated.
- k) Recognizing the importance of sufficient vegetative cover and access by Kenai Peninsula brown bears feeding at streams, the director, in consultation with ADF&G, may require lessees to locate exploration and development facilities beyond the 500-foot buffer along anadromous streams during the plan of operations approval stage, except as provided in A1c.

Caribou

- l) Surface entry within the core calving area of the Kenai Lowlands Caribou Herd is prohibited, except that surface entry for seismic exploration will be allowed from October 16 to March 31.
- m) Exploration and development activities will be restricted or prohibited between April 1 and October 15 within the core summer habitat of the Kenai Lowlands Caribou Herd, except that maintenance and operation of production wells will be allowed year-round. Permanent roads, or facilities other than production wells, will also be restricted or prohibited within this area.

Facilities within the core summer habitat of the Kenai Lowlands Caribou Herd that require year-round access must be located in forested areas, where practical.

- n) Pipelines must be buried within the core summer habitat of the Kenai Lowlands Caribou Herd.
- o) The director, in consultation with ADF&G, may impose seasonal restrictions on activities located in, or requiring travel through or overflight of, important moose or caribou calving and wintering areas during the plan of operations approval stage.

Beluga Whales

- p) No permanent or temporary oil and gas exploration or development may occur within High Value/High Sensitivity (Type 1) beluga whale habitat areas, unless it occurs on upland areas (above Mean Higher Water datum). Type 1 habitat areas include the following tracts: 320-334, 391-409, 410, 462, 464-475, 476-481, 483, 484, 485, 486, 493, 494, 497, 498, 522, 524-537, 538, 539, 540, 541, 542, 543, 544, 547-552, 559, 575-577, 579, 581, 582, 585, 586, 590, 593, 594, 598, 616-618, 620-623, 627, 655-658, and 662.
- q) The director will assess oil and gas-related activities within all High Value (Type 2) beluga whale habitat areas on a case-by-case basis. No permanent surface entry or structures are allowed, and temporary activities and structures, for example exploration drilling, will only be allowed between November 1 and April 1 of each year, unless it occurs on upland areas, within the following tracts: 021, 022, 126, 127, 129-132, 161, 162, 175, 177, 211, 218, 257, 301, 302, 373, 376, 377, and 384.
- r) The director will assess oil and gas-related activities within the remaining tracts (Type 3 habitat areas) on a case-by-case basis.

3. Subsistence, and Other Fish and Wildlife Uses

- a) Lease-related use will be restricted when DO&G determines it is necessary to prevent unreasonable conflicts between lease-related activities and subsistence, and commercial, sport, personal use, and educational harvest activities. In enforcing this term DO&G, during review of plans of operation, will consult with other agencies, the affected local borough(s) and the public to identify and avoid potential conflicts. In order to avoid conflicts with subsistence, commercial, sport and educational harvest activities, restrictions may include alternative site selection, requiring directional drilling, seasonal drilling restrictions, and other technologies deemed appropriate by DO&G.

4. Fuel, Hazardous Substances, and Waste

- a) Secondary containment (see definitions) shall be provided for the storage of fuel or hazardous substances.
- b) 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.
- c) During equipment storage or maintenance, the site shall be protected from leaking or dripping fuel and hazardous substances by the placement of drip pans or other surface liners designed to catch and hold fluids under the equipment, or by creating an area for storage or maintenance using an impermeable liner or other suitable containment mechanism.
- d) During fuel or hazardous substance transfer, secondary containment or a surface liner must be placed under all container or vehicle fuel tank inlet and outlet points, hose connections, and hose ends. 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. Trained personnel shall attend transfer operations at all times.

- e) Vehicle refueling shall not occur within the annual floodplain, except as addressed and approved in the plan of operations. This measure does not apply to water-borne vessels.
- f) All independent fuel and hazardous substance containers shall be marked with the contents and the lessee's or contractor's name using paint or a permanent label.
- g) A freshwater aquifer monitoring well, and quarterly water quality monitoring, may be required down gradient of a permanent above-ground liquid hydrocarbon storage facility.
- h) Waste from operations must be reduced, reused, or recycled to the maximum extent practicable. Garbage and domestic combustibles must be incinerated or disposed of at an approved site in accordance with 18 AAC 60. (See also Section B2, below.)
- i) New solid waste disposal sites will not be approved or located on state property during the exploratory phase. Exceptions may be provided for drilling waste if the facility will comply with the applicable provisions of 18 AAC 60.
- j) 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 ADF&G.

5. Access

- a) Public access to, or use of, the lease area may not be restricted except within the immediate vicinity of drill sites, buildings, and other related facilities. Areas of restricted access must be identified in the plan of operations. Lease facilities and operations shall not be located so as to block access to or along navigable or public waters as defined in AS 38.05.965.

6. Prehistoric, Historic, and Archeological Sites

- a) Before the construction or placement of any gravel, or other structure, road, or facility resulting from exploration, development, or production activities, the lessee must conduct an inventory of prehistoric, historic, and archeological sites within the area affected by an activity. The inventory must include consideration of literature provided by the affected borough and local residents; documentation of oral history regarding prehistoric and historic uses of such sites; evidence of consultation with the Alaska Heritage Resources Survey and the National Register of Historic Places; and site surveys. The inventory must also include a detailed analysis of the effects that might result from the activity.
- b) The inventory of prehistoric, historic, and archeological sites must be submitted to the director, and to DPOR Office of History and Archaeology, who will coordinate with the affected borough for review and comment. If a prehistoric, historic, or archeological site or area could be adversely affected by a lease activity, the director, after consultation with DPOR Office of History and Archaeology and the affected borough, will direct the lessee as to the course of action to take to avoid or minimize adverse effects.
- c) If a site, structure, or object of prehistoric, historic, or archaeological significance is discovered during lease operations, the lessee must report the discovery to the director as soon as possible. The lessee must make reasonable efforts to preserve and protect the discovered site, structure, or object from damage until the director, after consultation with DPOR Office of History and Archaeology and the affected borough, has directed the lessee as to the course of action to take for its preservation.

7. Local Hire, Communication, and Training

- a) Lessees are encouraged to employ local and Alaska residents and contractors, to the extent they are available and qualified, for work performed in the lease area. Lessees shall submit, as part of the plan of operations, a proposal detailing the means by which the lessee will comply with the measure. The proposal must include a description of the operator's plans for partnering with local communities to recruit, hire, and train local and Alaska residents and contractors. The lessee is encouraged, in formulating this proposal, to coordinate with employment and training services offered by the State of Alaska and local communities to train and recruit employees from local communities.
- b) A plan of operations application must describe the lessee's past and prospective efforts to communicate with local communities and interested local community groups.
- c) A plan of operations application must include a training program for all personnel including contractors and subcontractors. The program must be designed to inform each person working on the project of environmental, social, and cultural concerns that relate to that person's job. The program must use methods to ensure that personnel understand and use techniques necessary to preserve geological, archeological, and biological resources. In addition, the program must be designed to help personnel increase their sensitivity and understanding of community values, customs, and lifestyles in areas where they will be operating.

8. Definitions

Facilities means any structure, equipment, or improvement to the surface, whether temporary or permanent, including, but not limited to, roads, pads, pits, pipelines, power lines, generators, utilities, airstrips, wells, compressors, drill rigs, camps and buildings.

Hazardous substance means: (A) an element or compound that, when it enters into or on the surface or subsurface land or water of the state, presents an imminent and substantial danger to the public health or welfare, or to fish, animals, vegetation, or any part of the natural habitat in which fish, animals, or wildlife may be found; or (B) a substance defined as a hazardous substance under 42 U.S.C. 9601 - 9657 (Comprehensive Environmental Response, Compensation, and Liability Act of 1980); "hazardous substance" does not include uncontaminated crude oil or uncontaminated refined oil; (AS 46.09.900).

Identified wetlands are those areas that have been identified as wetlands by the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act.¹

Minimize means to reduce adverse impacts to the smallest amount, extent, duration, size, or degree reasonable in light of the environmental, social, or economic costs of further reduction.

Plan of operations means a lease Plan of operations under 11 AAC 83.158 and a unit Plan of operations under 11 AAC 83.346.

Practicable means feasible in light of overall project purposes after considering cost, existing technology, and logistics of compliance with the standard.

Secondary containment means an impermeable diked area or portable impermeable containment structure capable of containing 110 percent of the volume of the largest independent container.

¹ *Wetlands* means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (40 CFR Parts 122.2, 230.3, and 232.2).

Double walled tanks do not qualify as Secondary Containment unless an exception is granted for a particular tank.

Temporary means no more than 12 months.

B. Other Regulatory Requirements (Lessee Advisories)

Lessees must comply with all applicable local, state and federal codes, statutes and regulations, as amended. Lessee advisories alert lessees to additional restrictions that may be imposed at the permitting stage of a proposed project or activity where entities other than DO&G have regulatory, permitting, or management authority.

1. Alaska Department of Natural Resources,

- a) Pursuant to AS 46.40, projects are required to comply with all policies and enforceable standards of the Alaska Coastal Management Program, including the District Coastal Management Plans.
- b) Lessees must include in their seismic permit applications a plan for notifying the public of their activities (11 AAC 96).
- c) Forest clearing for seismic exploration must have prior approval by DO&G in consultation with the Division of Forestry and ADF&G.
- d) Removal of gravel from state land must have prior approval from DMLW. Lessees must submit a material sale application (AS 38.05.110-120, AS 38.05.810, 11 AAC 71.045) as well as a development plan, environmental risk questionnaire, and Alaska Coastal Management Plan questionnaire. Applicants are required on state, federal, municipal, and private land to submit a reclamation plan or letter of intent per AS 27.19.030-050.

2. Alaska Department of Environmental Conservation

- a) Pursuant to AS 46.04.030, lessees are 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.
- b) Pursuant to state regulations administered by ADEC and the Clean Air Act administered by EPA, lessees are required to obtain air quality permits before construction and operation. The permits will include air quality monitoring, modeling, and emission control obligations.
- c) Unless authorized by an ADEC permit, surface discharge of reserve pit fluids and produced waters is prohibited.
- d) Unless authorized by National Pollutant Discharge Elimination System or state permits, disposal of wastewater into freshwater bodies is prohibited.

3. Alaska Department of Fish and Game

- a) Under the provisions of Title 16 of the Alaska Statutes, the measures listed below may be imposed by ADF&G below the ordinary high water mark to protect designated anadromous waterbodies and to ensure the free and efficient passage of fish in all fish-bearing waterbodies. Specific information on the location of anadromous water bodies in and near the area may be obtained from ADF&G.

- i) Alteration of riverbanks may be prohibited.
 - ii) The operation of equipment, excluding boats, in open water areas of rivers and streams may be prohibited.
 - iii) Bridges or non-bottom founded structures may be required for crossing fish spawning and important rearing habitats.
 - iv) Culverts or other stream crossing structures must be designed, installed, and maintained to provide free and efficient passage of fish.
- b) Removal of water from fish-bearing water bodies is subject to the provisions of Regulations for Appropriation and Use of Water (11 AAC 93.035 - 11 AAC 93.147).
 - c) The use of explosives for seismic activities with a velocity of greater than 3000 feet-per-second in marine waters is prohibited.

Game Refuges and Critical Habitat Areas

- d) Management of legislatively designated state game refuges and critical habitat areas is the co-responsibility of ADF&G, per AS 16.20.050-060 and AS 16.20.500-530, and ADNR, per AS 38.05.027. For activities occurring within a refuge or critical habitat area, the lessee will be required to obtain permits from both ADNR and ADF&G. The following requirements are established by, and exceptions may only be granted by, ADF&G.
- e) Five state game refuges (SGR) and four critical habitat areas (CHA) are located within or partially within the Cook Inlet lease sale area: Goose Bay SGR, Palmer Hay Flats SGR, Anchorage Coastal Wildlife Refuge, Susitna Flats SGR, Trading Bay SGR, Redoubt Bay CHA, Kalgin Island CHA, Clam Gulch CHA, and Anchor River and Fritz Creek CHA.

Operations within these refuges and critical habitat areas must comply with the terms and conditions of the lease sale, the regulations contained within 5 AAC 95, and the measures listed below.

- i. Surface entry for drilling and above ground lease-related facilities and structures will be prohibited within the Palmer Hay Flats SGR, Anchorage Coastal Wildlife Refuge, Clam Gulch CHA, Anchor River and Fritz Creek CHA, within the core Tule goose and trumpeter swan nesting and molting corridors along the Big, Kustatan, and McArthur rivers in the Trading Bay SGR and Redoubt Bay CHA, on tidelands and wetlands in the Goose Bay SGR and Kalgin Island CHA and within the primary shorebird area in Susitna Flats SGR, Trading Bay SGR, and Redoubt Bay CHA.

Surface entry may be allowed on uplands within the Goose Bay SGR and Kalgin Island CHA; and surface entry for seismic surveys and similar temporary activities may be allowed in all of these areas, consistent with the Special Area regulations and applicable Special Area management plans. Directional drilling from adjacent sites may be allowed. Similar provisions will be imposed by the DO&G to protect primary shorebird habitat in Redoubt Bay south of the CHA.

- ii) Exploration, development, and major maintenance within important Tule goose and trumpeter swan habitat in Trading Bay SGR, Redoubt Bay CHA, and Susitna Flats SGR, and the primary waterfowl area above mean high tide within the Susitna Flats SGR and Trading Bay SGR will be allowed only between November 1 and March 31, unless an extension is approved by ADF&G and DO&G.

Routine maintenance and emergency repairs will be permitted on a year-round basis during the production phase. A detailed plan describing routine maintenance activities to be conducted between April 1 and October 31 must be submitted to ADF&G and DO&G for review and approval.

- iii) Gravel pads and wellheads are the only above ground structures that will be allowed within the primary waterfowl area above mean high tide in the Susitna Flats SGR and the Trading Bay SGR and important Tule goose and trumpeter swan habitat in the Trading Bay SGR, Redoubt Bay CHA and Susitna Flats SGR. Gravel roads will not be allowed in a SGR or CHA during exploration.
- iv) (a) aircraft flying over the primary shorebird habitat within Susitna Flats SGR, Trading Bay SGR and Redoubt Bay CHA should maintain a minimum altitude of 1,500 feet above ground level or a horizontal distance of 1 mile.

(b) Aircraft flying over Goose Bay SGR and Palmer Hay Flats SGR, the primary waterfowl habitat above mean high tide within Susitna Flats and Trading Bay SGR, and the core Tule goose and trumpeter swan molting and nesting corridors in Trading Bay SGR and Redoubt Bay CHA should maintain a minimum altitude of 1,500 feet above ground level or a horizontal distance of 1 mile from April 1 to October 31. Human safety will take precedence over this provision.
- v) Construction, operation, and maintenance activities shall minimize the visual, biological, and physical impacts to the SGR or CHA.
- vi) Surface discharge of produced waters will be prohibited.
- vii) Disposal of drilling mud and cuttings will be allowed only at upland sites approved by the DO&G and ADF&G, after consultation with DMLW and ADEC.
- viii) Facilities must be designed to minimize the risk of spills or fires resulting from vandalism or accidents.

4. Alaska Department of Labor and Workforce Development

- a) The lessee shall facilitate Alaska resident hire monitoring by reporting project wages on a quarterly basis for each individual employed by the lessee in the lease area, through electronic unemployment insurance reporting, and by requiring the same of the lessee's contractors and subcontractors

5. U.S. Army Corps of Engineers

- a) A U.S. Army Corp of Engineers permit is required when work is anticipated on, in, or affects navigable waters or involves wetland-related dredge or fill activities. A Section 10 Permit is required for construction, excavation, or deposition of materials in, over, or under navigable waters, or for any work which would affect the course, location, condition, or capacity of navigable waters (U.S.C. 403). Oil and gas activities requiring this type of permit include, but are not limited to, exploration drilling from a jackup drill rig and installation of a production platform. A Section 404 Permit is required for the discharge of dredged and fill material into waters and wetlands of the United States (33 U.S.C. 1344). The process and concerns are similar for both permits and, at times, both may be required.

6. U.S. Fish and Wildlife Service and National Marine Fisheries Service

- a) The lessee is advised that the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.) protects the following endangered or threatened species and candidate species for listing that may occur in the lease sale area:

Common Name	Status
Fin whale	Endangered
Steller sea lion (western stock)	Endangered
Humpback whale	Endangered
Beluga whale (Cook Inlet stock)	Endangered
Steller's eider (Alaska breeding population)	Threatened

Migratory birds, sea otters, polar bears, and Pacific walrus are managed by the U.S. Fish and Wildlife Service. The National Oceanic and Atmospheric Administration, National Marine Fisheries Service is responsible for management of all other marine mammals.

- b) NMFS, USFWS, and ADF&G will continue annual monitoring efforts to further delineate the presence and distribution of species administered under the ESA and Marine Mammal Protection Act (MMPA). The lessee is advised to annually acquire updated information from these agencies.
- c) The USFWS has determined that oil and gas exploration and development activities within 3 miles seaward or within one-half mile landward of the eastern shore of Cook Inlet, from Clam Gulch to the southern bounds of the lease sale area, are likely to adversely affect (take) Steller's eiders. Each operator is advised to consult with the USFWS well in advance of any activities in this area.
- d) The lessee is advised that off-shore activity (particularly seismic geophysical surveys) may result in the taking of beluga whales and other marine mammals. Such taking is prohibited by the federal MMPA unless otherwise authorized. The incidental taking of marine mammals may be authorized under the MMPA, and each operator should be advised to discuss this matter with NMFS well in advance of any geophysical survey activity.
- e) The lessee is advised that the Cook Inlet beluga whale is listed as a depleted stock under the MMPA. In October 2008, NMFS listed the whale population as endangered under the ESA; critical habitat designations are pending. The lessee is advised to review the Federal Register and contact NMFS for additional information.
- f) The lessee is advised that the Magnuson-Stevens Fishery Conservation and Management Act requires identification of Essential Fish Habitat (EFH) for all species managed under a federal Fisheries Management Plan. Subsequent exploration and/or development activities associated with the lease sale may be subject to consultation under EFH. EFH information, consultation, guidance, and species life history information are available on the NMFS website at <http://www.fakr.noaa.gov/habitat>.
- g) The lessee is advised that the description of the techniques used to drill and conduct seismic operations should be thorough and assess potential effects of fish and their spawning substrate, migratory corridors, and over-wintering areas.
- h) The lessee is advised that the response technologies and geographic response strategies have been prepared for Cook Inlet by state and federal planning teams in which NMFS has

participated. However, the application of these plans in fast-moving Cook Inlet waters, especially during ice-laden times, could prove difficult. Further, mechanical recovery in estuaries, anadromous streams, and adjacent continuous wetlands can potentially disrupt these habitats and degrade water quality conditions. Thus, recovery and containment plans will need to address habitat effects within the site and areas where tidal currents may deposit or entrain spilled product. These assessments are needed before development.

- i) Lessees are advised of the need to comply with the Migratory Bird Treaty Act (MBTA; 16 U.S.C. 703) which is administered by the USFWS. Under the MBTA, it is illegal to "take" migratory birds, their eggs, feathers or nests. "Take" is defined (50 CFR 10.12) to include "pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting." The MBTA does not distinguish between "intentional" and "unintentional" take. Migratory birds include songbirds, waterfowl, shorebirds, and raptors. In Alaska, all native birds except grouse and ptarmigan (which are protected by the State of Alaska) are protected under the MBTA.
- j) In order to ensure compliance with the MBTA, it is recommended that the lessees survey the project area before construction, vegetation clearing, excavation, discharging fill, or other activities which create disturbance, and confirm there are no active migratory bird nests. It is recommended that lessees contact the USFWS for assistance and guidance on survey needs, and other compliance issues under the MBTA. While the Service can recommend methods (such as surveys and timing windows) to avoid unintentional take, responsibility for compliance with the MBTA rests with lessees. In the lease sale area, the USFWS normally recommends that to prevent impacts to nesting migratory birds, no vegetation clearing, fill placement, excavation, or other construction activities be conducted between May 1 and July 15.
- k) Bald eagles are protected under the Bald Eagle Protection Act (16 U.S.C. 668-668c) and the MBTA. Lessees are responsible to ensure their actions do not take bald eagles. The Bald Eagle Protection Act defines "take" to include disturbing birds. A survey for bald eagle nests is necessary before beginning exploration or development activities during the nesting period (March 1 through August 31). Any nests located within one-half mile of the project site must be mapped, and destruction of nest trees or locations is prohibited. If any nests are located within one-half mile of a project site, lessees shall meet with the USFWS before construction to review any site-specific concerns regarding the subject nest. USFWS generally recommends no clearing of vegetation within 330 feet of any nest. No activity should occur within 660 feet of any nests between March 1 and June 1. Between June 1 and August 31, no activity should occur within 660 feet of active eagle nests until after juvenile birds have fledged, unless specifically authorized by the USFWS. While the USFWS can recommend ways to avoid the take of eagles, final accountability lies with the party responsible for the action.

7. Matanuska-Susitna Borough

- a) The lessee is advised that all development in the Point MacKenzie Port Special Use District must comply with Matanuska-Susitna Borough Code Chapter 17.23: Point MacKenzie Port Special Use District.
- b) The lessee is advised that any exploration work on borough-owned tidelands or uplands in the area will require a land use permit from the borough's land management division.