

ADL 409027:  
RIGHT OF WAY LEASE  
FOR THE KUPARUK PIPELINE EXTENSION

This pipeline right-of-way serialized ADL 409027 is being reconfirmed this 29<sup>th</sup> day of September 1983 for the purpose of more clearly presenting the lands involved by attaching Exhibit A (revised). This change does not alter the agreement, or its terms or conditions, entered into by the State of Alaska and the Kuparuk Pipeline Company on April 18, 1983.

Offered by the Commissioner of the Department of Natural Resources on behalf of the State of Alaska, having determined pursuant to AS 38.35.100 that a pipeline right-of-way lease may be offered to the applicant which applied on September 22, 1982, for a pipeline right-of-way lease across State lands under AS 38.35 for the Kuparuk Pipeline Extension, Namely:

Kuparuk Pipeline Company

RIGHT-OF-WAY LEASE FOR THE KUPARUK PIPELINE EXTENSION

This lease is entered into as of this 18<sup>th</sup> day of April, 1983, by the State of Alaska (hereafter referred to as the State), acting through the Commissioner of the Department of Natural Resources or his designee (hereafter referred to as the Commissioner), and by the:

KUPARUK PIPELINE COMPANY

(hereafter sometimes referred to as the lessee or the company), and shall take effect on the effective date as hereafter defined.

It is the intent of the parties that, in the performance of this lease, the following principles shall apply:

- (1) In the construction (including, but not limited to, design), operation, maintenance (including, but not limited to, a continuing and reasonable program of preventative maintenance) and termination of the pipeline, lessee shall employ the best practicable technology available and use all practicable means and measures to preserve and protect the environment, as provided in this lease.
- (2) The parties shall protect environmental amenities and values within the practicable bounds of economic and technical feasibility and in accordance with applicable State policies. In so doing, the parties shall take into account, among other considerations, the following:
  - (a) The benefit or detriment to persons, property and the environment that may be anticipated to result from a proposed course of conduct.
- (3) Lessee shall manage, supervise, and implement the construction, operation, maintenance and termination of the pipeline in accordance with the best practicable engineering technology available, particularly with regard to permafrost and seismic areas, to the extent allowed by the state of the art and the development of technology. In the exercise of these functions, lessee consents and shall submit to such review, inspection, and compliance procedures relating to construction, operation, maintenance, and termination of the pipeline as are provided for in this lease and other applicable authorizations.

1. Grant of Right-of-Way

a. Pursuant to the provisions of AS 38.35, the Alaska Right-of-Way Leasing Act, as amended, and for and in consideration of the annual rental fee prescribed in section 3 hereof and the covenants herein contained to be kept and performed on the part of the lessee and subject to the conditions and requirements herein contained, the State hereby grants to the lessee, for the period of limited duration prescribed in section 2 hereof and for

the purpose prescribed in subsection c of this section, a right-of-way (hereafter referred to as the “right-of-way”) for a pipeline with its related facilities (such pipeline and related facilities being hereafter referred to as the “pipeline system”), the width and location thereof being subject to the provisions of subsection d hereof, across, through and upon State land now owned (hereafter sometimes referred to as “State land”, along the general route of the pipeline shown in Exhibit A attached hereto and the related facility site location drawings attached hereto as Exhibit B. The grant made hereby is for:

#### KUPARUK PIPELINE COMPANY

b. This grant is made subject to (i) all applicable laws and regulations of the State of Alaska, and (ii) any valid existing rights in the lands subject to the right-of-way.

c. The right-of-way is granted for the purpose of the construction, operation, maintenance and termination of one oil transportation pipeline consisting in part of one line of 12” diameter pipe and in part of one line of 18” diameter pipe, and its related facilities. Lessee shall not use the right-of-way or the land subject thereto for any other purpose and shall not locate or construct any other pipelines (including looping lines) or other improvements within the right-of-way without prior written approval of the Commissioner. The pipeline must be used for only the transportation of oil, and it must not be used for any other purpose without the prior written approval of the Commissioner, The lessee shall not allow any other person or business entity to use the right-of-way for the purpose set forth in this section. Nothing in this subsection is intended to (i) excuse or preclude lessee from complying with its obligations under section 4 of this lease, or (ii) preclude lessee from employing agents or contractors to effect construction, operation, maintenance or termination of all or any part of the pipeline.

d. (i) During construction of any pipeline after the effective date of this lease and prior to the execution of the release of interests in the right-of-way provided for in paragraph (ii) of this subsection, the width of the right-of-way shall be 450 feet, except that the dimensions of the right-of-way for related facilities shall be as approved by the Commissioner.

d. (ii) No later than one year following the commissioning of any pipeline system, lessee shall execute and deliver to the State, a release of all interest in (1) those portions of the right-of-way for related facilities not required for operation and maintenance of the pipeline after construction, including all construction staging areas, and (2) those portions of the right-of-way exceeding 150 feet in width, except that at such locations where lessee has requested authority from the Commissioner to retain a wider right-of-way and the Commissioner has found and recorded the reasons for his finding that in his judgement a wider right-of-way is necessary to protect the environment or public safety, the width of the right-of-way which lessee retains may exceed 150 feet in width in accordance with the Commissioner’s finding.

e. Within one year following the effective date of this lease, lessee shall survey and provide adequate monumentation as the Commissioner may require to locate and

describe the right-of-way and the lessee shall file: (i) Proof of construction of the pipeline in accordance with the provisions of this lease and the applicable regulations of the Department of Natural Resources; and (ii) a map, or maps or survey, approved by the Commissioner showing the final “as built” location of the completed pipeline, including the final locations of all buried and above ground improvements, the centerline of the right-of way, as definitely located, and, referenced to the centerline, and the boundaries of the right-of-way, as definitely located.

f. All construction activities within the right-of-way after the effective date of this lease must be limited to a construction zone approved by the Commissioner.

2. Duration of Right-of-Way Grant

a. The grant hereby made of the right-of-way shall come to an end and expire on 2 May 2004, 12:00 noon (Alaska Standard Time) unless before that date it is released, abandoned, or otherwise terminated pursuant to the provisions of this lease or of any applicable law or regulation.

b. Upon the expiration of the initial or any subsequent grant of the right-of-way, or its earlier relinquishment, abandonment, or other termination, the provisions of this lease, to the extent applicable, will continue in effect and will be binding on the parties, their successors or assigns, until they have fully performed their respective obligations and liabilities accruing before or on account of the expiration, or the prior termination, of the grant.

c. The Commissioner will upon request of the lessee renew the lease for additional periods up to ten years each, so long as the pipeline is in commercial operation and the lessee is in full compliance with State, Federal and local laws, including but not limited to State law pertaining to regulation and taxation of the pipeline system.

d. Any subsequent conveyance; transfer or other disposition of any right, title, or interest in the State land or any part thereof, burdened by and subservient to this lease, will, to the extent allowed by law, be subject to the right-of-way and the provisions of this lease, including lessee's right to renew the lease under subsection c of this section.

3. Rental

a. Lessee shall pay to the State, annually and in advance, the fair market rental value of the right-of-way based on the appraised fair market value of the land.

b. The initial charge for the first year's rental will be an amount to be determined by the Commissioner before the effective date of this lease. The Commissioner's determination will be based on an appraisal of the fair market value of the land, which meets statutory and regulatory requirements, to be provided by the lessee to the Commissioner no more than 120 days and no less than 30 days before the date this pipeline begins operating as a common carrier.

c. The annual rental payment is subject to adjustment at five-year intervals and charges or adjustments shall be the reappraised fair market rental value of the land.

d. For the year in which portions of the right-of-way are released to the State pursuant to section 1, subsection d, paragraph (ii) of this lease, the State will credit lessee against the payment of future rental for a portion of the rental paid to the State for that year, the amount of the credit to be the portion of rental paid for that year attributable to the lands reconveyed to the State, reduced prorata by the portion of the lease year which had elapsed prior to the reconveyance.

4. Covenants by Lessee

Lessee expressly covenants, in consideration of the rights acquired by it under this right-of-way lease, that:

a. it will assume the status and perform all of its functions undertaken by the lease as a common carrier and accept, convey and transport without discrimination, crude oil delivered to it for transportation from fields in the vicinity of the pipeline throughout its route, on State land obtained under this lease and on other land; lessee will accept, convey and transport crude oil without unjust or unreasonable discrimination in favor of one producer or person, including itself, as against another, but will take the crude oil delivered or offered, without unreasonable discrimination, that the Alaska Public Utilities Commission will, after a full hearing with due notice determine to be reasonable in the performance of its duties as a common carrier;

b. it will interchange crude oil with each like common carrier and provide connections and facilities for the interchange of crude oil at every locality reached by both pipelines when the necessity exists, subject to rates and regulations made by the appropriate State or Federal regulatory agency;

c. it will maintain and preserve books, accounts and records and make those reports that the State may prescribe by regulation or law as necessary and appropriate for the purposes of administering AS 38.35;

d. it will accord at all reasonable times and places to the State and its authorized agents and auditors the right of access to its property and records, or inspection of its property, and of examination and copying of those records;

e. it will provide connections, as determined by the Alaska Public Utilities Commission, under AS 42.06.342, to facilities on the pipeline subject to the lease, on State land, for the purpose of delivering crude oil to persons (including the State and its political subdivisions) contracting for the purchase at wholesale of crude oil transported by the pipeline when required by the public interest;

f. it will, notwithstanding any other provisions, provide connections and interchange facilities at State expense at such places the State considers necessary, if the State determines to take a portion of its royalty or taxes in oil;

g. it will construct and operate the pipeline in accordance with applicable State laws and lawful regulations and orders of the Alaska Public Utilities Commission;

h. it will, at its own expense, during the term of this lease:

(1) maintain the leasehold and pipeline in good repair;

- (2) promptly repair or remedy any damage to the leasehold; and
- (3) promptly compensate for any damage to, or destruction of, property for which the lessee is liable, resulting from damage to or destruction of the leasehold of pipeline;

i. it will not transfer, assign, or dispose of in any manner, directly or indirectly, or by transfer of control of the carrier corporation, its interest in a right-of-way lease, or any rights under this lease or the pipeline system subject to this lease to any person (including subsidiaries, parents, and affiliates of the owners), except to the extent that the Commissioner, after consideration of the protection of the public interest (including whether the proposed transferee is fit, willing and able to perform the transportation or other acts proposed in a manner that will reasonably protect the lives, property and general welfare of the people of Alaska) , authorizes. The Commissioner will not unreasonably withhold his consent to the transfer, assignment or disposal;

j. it will file with the Commissioner a written appointment of a named permanent resident of the State to be its registered agent in the State and to receive service of notices, regulations, decisions and orders of the Commissioner; if it fails to appoint an agent for service, service may be made upon the lessee by posting a copy in the office of the Commissioner and filing a copy of it in the Office of the Lieutenant Governor and by mailing a copy to the lessee's last known address;

k. the applicable law of the State will be used in resolving questions of interpretation of the lease;

l. the granting of the right-of-way lease is subject to the express condition that the exercise of the rights and privileges granted under the lease will not unduly interfere with the management, administration, or disposal by the State of the land affected by the lease, and that the lessee agrees and consents to the occupancy and use by the State, its grantees, permittees, or other lessees of any part of the right-of-way not actually occupied or required by the pipeline for the full and safe utilization of the pipeline, for operations incident to land management, administration, or disposal;

m. it will be liable to the State for damages or injury incurred by the State caused by the construction, operation or maintenance of the pipeline and it will indemnify the State for the liabilities or damages; and

n. it will procure and furnish liability and property damage insurance from a company licensed to do business in the State, or furnish other security or undertaking upon the terms and conditions the Commissioner considers necessary if the Commissioner finds that the net assets of the lessee are insufficient to protect the public from damage for which the lessee may be liable arising out of the construction or operation of the pipeline system.

## 5. Guaranty

a. If the Commissioner finds that the net assets of the lessee are insufficient to protect the public from damage for which the lessee may be liable arising out of the construction or operation of the pipeline, the Commissioner may require such lessee to deliver to the Commissioner a valid and unconditional guaranty of the full and timely payment of all liabilities and obligations of the lessee to the State under or in connection with the lease.

b. It is recognized that a proposed guarantor of the lessee may be a corporation (or an individual stockholder thereof), a partnership (or an individual partner thereof), an association that is authorized and empowered to sue and be sued and to hold the title to property in its own name (or an individual associate thereof), a joint stock company that is authorized and empowered to sue and be sued and to hold the title to property in its own name (or any individual participant therein), or a business trust (or any individual settlor thereof), and may or may not directly or indirectly own a legal or beneficial interest in the lessee whose liabilities and obligations are sought to be guaranteed. In the case of multiple guarantors that are acceptable to the Commissioner each shall be severally liable for only its proportionate share of any sum or payment covered by the guaranty.

c. Each guaranty must be satisfactory to the Commissioner in all respects including, without limitation, the form and substance of the guaranty, the financial capability of a proposed guarantor, the availability of such guarantor to service of process, the availability of the assets of such guarantor with respect to the enforcement of judgments against the guarantor, and the number of guarantors that will be necessary to guarantee all of the liabilities and obligations which will be covered by particular guaranty; provided, however, that the Commissioner shall not unreasonably withhold his approval with respect to a guaranty or guarantor.

d. The Commissioner will have the right at any time, and from time to time, to require the substitution and delivery of a new form of guaranty in the event that either an outstanding guaranty is held to be invalid or unenforceable, in whole or in part, by a court of competent jurisdiction or that the controlling law is, by statute or judicial decision, so altered as to impair, prevent or nullify the enforcement or exercise of any right or option of the State under an outstanding guaranty; provided, however, that the outstanding guaranty (to the extent of its validity or enforceability, if any) will continue in full force and effect with respect to any claim, suit, accrued liability or defense thereunder that exists at the time of substitution.

e. Each guaranty must be accompanied by such certificates and opinions of legal counsel as the Commissioner may require to establish its validity. The guaranty must include an appointment of an agent for service of process that is satisfactory to the Commissioner.

## 6. Construction Plans and Quality Assurance

a. With respect to any construction commenced after the effective date of this lease, the lessee shall submit construction (including design) plans, a quality assurance program, and other related documents as required by the Commissioner and through the stipulations attached as Exhibit C for review and approval by the Commissioner before construction.

7. Reservation of Certain Rights to the State

a. The State reserves and will have a continuing and reasonable right of access to any part of the lands (including the subsurface of, and the air space above, such lands) that are subject to this lease, and a continuing and reasonable right of physical entry to any part of the pipeline right-of-way, for inspection or monitoring purposes and for other purpose or reason that is reasonably consistent with any right or obligation of the State under any law or regulation, this lease, or any other agreement, permit or authorization relating in whole or part to all or any part of the pipeline.

b. The right of access and entry reserved in subsection a of this section will extend to and be enjoyed by any contractor of the State, any subcontractors (at any tier) of the contractor and their respective agents and employees, as well as such other persons as may be designated from time to time in writing by the Commissioner.

c. Under AS 38.05.125, the State reserves rights as follows:

"The State hereby expressly saves, excepts and reserves out of the grant hereby made, unto itself, its lessees, successors, and assigns forever, all oils, gases, coal, ores, minerals, fissionable materials, geothermal resources, and fossils of every name, kind or description, and which may be in or upon said lands above described, or any part thereof, and the right to explore the same for such oils, gases f coal, ores, minerals, fissionable materials, geothermal resources, and fossils, and it also hereby expressly saves and reserves out of the grant hereby made, unto itself, its lessees , successors, and assigns forever, the right to enter by itself, its or their agents, attorneys, and servants upon said lands, or any part or parts thereof, at any and all times for the purpose of opening, developing, drilling, and working mines or wells on these or other lands and taking out and removing therefrom all such oils, gases, coal, ores, minerals, fissionable materials, geothermal resources, and fossils, and to that end it further expressly reserves out of the grant hereby made, unto itself, its lessees, successors, and assigns forever, the right by its or their agents, servants and attorneys at any and all times to erect, construct, maintain, and use all such buildings, machinery, roads, pipelines, powerlines, and railroads, sink such shafts, drill such wells, remove such soil, and to remain on said lands or any part thereof for the foregoing purposes and to occupy as much of said lands as may be necessary or convenient for such purposes hereby expressly reserving to itself, its lessees, successors, and assigns,

as aforesaid, generally all rights and power in, to, and over said land, whether herein expressed or not, reasonably necessary or convenient to render beneficial and efficient the complete enjoyment of the property and rights hereby expressly reserved."

d. There is reserved to the State the right to grant additional permits, leases or easements for rights-of-way or other uses to third parties for compatible uses on, or adjacent to, the lands subject to the right-of-way; provided that such grant shall not unreasonably interfere with the rights under this lease. Before the State grants additional right-of-way permits, leases or easements for compatible uses, the State will notify lessee of its intentions and shall consult with lessee before taking final action in that regard.

8. Reimbursement of State Expenses

a. Lessee shall reimburse the State for all reasonable costs incurred by the State in monitoring construction (including but not limited to design review) and termination of all or any part of the pipeline system after the effective date of this lease. The Commissioner will administer this lease to reasonably assure that unnecessary employment of personnel and needless expenditure of funds are avoided.

b. Reimbursement provided for in this section and in section 9 below must be made for each quarter ending on the last day of March, June, September, and December. On or before the 60th day after the close of each quarter, the Commissioner will submit to lessee a written statement of any costs incurred by the State during that quarter which are reimbursable. This statement may be supplemented within days after the end of a fiscal year for costs incurred in that year but by excusable neglect not previously submitted.

c. Lessee will have the right to conduct, at its own expense, reasonable audits by auditors or accountants designated by lessee of the books, records and documents of the State relating to the items on any particular statement that must be submitted in accordance with the procedure outlined in subsection b of this section, at the places where such books, records and documents are usually maintained and at reasonable times; provided, however, that written notice of a desire to conduct such an audit must be given to the Commissioner: (1) at least 15 days prior to such audit; and (2) by not later than the 180th day after the close of the quarter for which the books, records and documents are sought to be audited; and provided, further, that any such audits must be completed within two years after receipt by lessee of the statement containing the items to be audited.

d. Nothing herein requires the State to maintain books, records or documents other than those usually maintained by it, provided such books, records and documents reasonably segregate and identify the costs for which reimbursement is required by this section. Such books, records and documents must be preserved or caused to be preserved for a period of at least two years after the State submits a statement for reimbursement based on such books, records and documents. The auditors or accountants designated by lessee will be given reasonable access to, and the right to copy, at their expense, all such books, records and documents.

e. Lessee shall pay to the State the total amount shown on each statement by not later than the 90th day following the close of the quarter to which the statement relates; provided, however, that if the lessee decides to dispute any item of a statement for reimbursement, lessee on or before the date on which the statement is due and payable, shall give the Commissioner written notice of each item that is disputed, accompanied by a detailed explanation of its objection, or written notice of each item to be audited, and shall pay the State those amounts for the items that are not disputed or are not to be audited. Lessee shall give the Commissioner prompt written notice of the completion of the audit of all items of a statement being audited. On a date fixed by the Commissioner, but not more than 30 days after notice of a disputed statement or after notice of the completion of the audit, the Commissioner and the lessee will meet to discuss and attempt to resolve, all items which are disputed or which have not been resolved by the audit. Any items resolved as being payable to the State must be paid within 30 days after being resolved, together with interest thereon, up to the date of payment at a total annual percentage rate equal to the discount rate of the Federal Reserve Bank for District Twelve (San Francisco) in effect or the original due date of the statement.

f. In addition to the right to audit quarterly statements as provided in subsection c of this section, if lessee believes that unnecessary employment of personnel or needless expenditure of funds has occurred or is likely to occur, lessee may request the approval of the Commissioner for lessee to conduct promptly, and at its own expense, a full and complete audit by auditors or accountants designated by lessee of the books, records and documents to be audited at the location they are usually maintained and at reasonable times. Such requests must be in writing, must specify the matters to be audited and must state the information available to lessee upon which the request is based. The Commissioner shall approve or deny such requests promptly and approval of any such request shall not be unreasonably withheld. Any complaint which lessee may have as a result of such audit must be made to the Commissioner and will be governed by the procedure set forth in subsection e of this section to the extent applicable.

9. Right of the State to Perform

a. If, after 30 days, or in emergencies such shorter periods as will not be unreasonable, following the making of a demand by the Commissioner in the manner provided for giving written notices, lessee or its respective agents, employees, contractors or subcontractors (at any tier), fails or refuses to perform any action required by this lease or by the Commissioner under this lease, the State will have the right, but not the obligation, to perform any or all of such actions at the sole expense of lessee. Before delivery of any such demand, the Commissioner shall confer with the lessee, if practicable to do so regarding the required action or actions that are included in the demand. The Commissioner shall submit to lessee a statement of the expenses reasonably incurred by the State of any required action and the amount shown to be due on each such statement must be paid by lessee. The Commissioner will submit a statement, which outlines the reasonable costs.

10. Duty of Lessee to Prevent or Abate

a. Lessee shall prevent or, if the procedure, activity, event or condition already exists or has occurred, shall abate, as completely as practicable, using the best practicable technology available, any physical or mechanical procedure, activity, event or condition, existing or occurring at any time: (1) that is susceptible to prevention or abatement; (2) that arises out of, or could affect adversely, the construction, operation, maintenance or termination of all or any part of the pipeline; and (3) that causes or threatens to cause (a) a hazard to the safety of workers or to the public health or safety (including but not limited to personal injury or loss of life with respect to any person or persons) or (b) serious harm or damage to the environment (including but not limited to water and air quality, areas of vegetation or timber, fish or other wildlife populations, or their habitats, or any other natural resource).

b. Lessee shall cause its respective agents, employees, contractors and subcontractors (at any tier) to observe and comply with the foregoing provisions of this section.

11. Compliance with Construction Authorization

All construction of the pipeline on State land undertaken by lessee after the effective date of this lease must comply in all respects with the provisions of any construction authorizations that are issued by the Commissioner.

12. Temporary Suspension Orders of the Commissioner

a. The Commissioner may at any time order the temporary suspension of any or all construction, operation, maintenance or termination activities of lessee, its agents, employees, contractors or subcontractors (at any tier) in connection with the pipeline, if

(i) an immediate temporary suspension of such activities is necessary to protect (A) public health or safety (including, but not limited, to, personal injury or loss of life with respect to any person or persons), or (B) the environment from immediate, serious and irreparable harm or damage (including, but not limited to, harm or damage to water and air quality, areas of vegetation, fish or other wildlife populations, or their habitats, or any other natural resource); or

(ii) lessee, its respective agents, employees, contractors or subcontractors (at any tier) are failing or refusing, or have failed or refused, to comply with or observe (A) any provision of this lease necessary to protect public health, safety or the environment, or (B) any order of the Commissioner implementing any such provisions, of this lease or of any agreement, permit or authorization that shall have been duly approved, issued or granted by the Commissioner in connection with all or any part of the pipeline.

b. In the event a temporary suspension order is issued with respect to construction activities of the pipeline or the pipeline system, the order will be issued by the Commissioner at the site of any activity, to a field representative of the lessee and will specify:

- (1) the specific construction activity or activities which must be stopped;
- (2) the reason for issuance of the order, including a description of the serious and immediate problem which requires the cessation of a particular construction activity;
- (3) the name of the designated field representative of the Commissioner issuing the order;
- (4) the name of the designated field representative of the lessee to whom the order is issued; and
- (5) the time and date of the order, and the site of the construction activity at which it is issued.

c. The Commissioner will give lessee such prior notice of any temporary suspension order as he deems practicable. If circumstances permit, the Commissioner will discuss with lessee before issuing the order, appropriate measures to (i) immediately abate or avoid the harm or threatened harm that is the reason for the issuance of the order or (ii) effect compliance with the provision or order, whichever is applicable.

d. After a temporary suspension order has been given by the Commissioner, lessee shall promptly comply with all of the provisions of the order and shall not resume any activity suspended or curtailed thereby except as provided in this lease or under court order.

e. Any temporary suspension order which, in an emergency, is given orally shall be confirmed in writing. Each written order or written confirmation of an order must set forth the reasons for the suspension. Each temporary suspension order must be limited, insofar as is practicable, to the particular area or activity that is or may be affected by the activities or conditions that are the basis of the order. Each order will be effective as of the date and time given, unless it specifies otherwise. Each order will remain in full force and effect until modified or revoked in writing by the Commissioner.

f. Resumption of any suspended activity will be promptly authorized by the Commissioner in writing when he is satisfied that (i) the harm or threatened harm has been abated or remedied, or (ii) lessee has effected, or is ready, willing and able to effect compliance with the provision or order, whichever is applicable.

g. Any temporary suspension order that is given or issued in accordance

with this section will be subject to the provisions of section 14.

13. Requests to Resume

a. If by a temporary suspension order issued pursuant to section 12 of this lease, the Commissioner has ordered the suspension of any activity of lessee, lessee may at any time thereafter file with the Commissioner a request for permission to resume that activity on the ground that the reason for the suspension no longer exists. The request must contain a statement, under oath, of the facts which in lessee's view support the propriety of resumption.

b. The Commissioner shall render a decision, either granting or denying the request, within three days of the date that the request is filed with him. If the Commissioner does not render a decision within that time, the request will be considered denied and the lessee may appeal to the Commissioner as provided in section 14.

14. Appeal Procedure

a. Appeals from temporary suspension orders of the Commissioner and appeals from denials of resumption of suspended activities:

- (i) lessee may appeal directly to the Commissioner for review of (A) any temporary suspension order issued by the Commissioner under section 12 of this lease; and (B) any denial by the Commissioner of a request for resumption of activities suspended under such temporary suspension order. Lessee shall file a notice of appeal for review within 10 days after the effective date of the order or denial being appealed. The notice must set forth with particularity the order or denial being appealed. To perfect an appeal, the lessee shall promptly file with the Commissioner a statement of facts and the law lessee wishes to present to justify modification or reversal of the order or denial. All statements of facts must be under oath;
- (ii) except as provided hereafter in this section, the Commissioner shall decide the appeal within 10 days from the date the Commissioner receives notice from lessee that all statements for review have been submitted. If the Commissioner does not render a decision within that time, the appeal will be considered to have been denied by the Commissioner, and such denial will constitute the final administrative decision of the Commissioner;
- (iii) any decisions of the Commissioner as to any matter arising out of the lease will constitute the final administrative decision of the Commissioner.

- b. Appeals with respect to construction authorizations:
- (i) lessee may appeal to the Commissioner if , with respect to a particular application for a construction authorization (A) the Commissioner has refused to issue the construction authorization within the time prescribed pursuant to the stipulation or (B) the Commissioner has issued a construction authorization not substantially in accord with the application. If the Commissioner has not acted within the prescribed time to either issue or deny the issuance of the construction authorization, such failure to act will be deemed to be a refusal by the Commissioner to issue the construction authorization;
  - (ii) the grounds for such an appeal shall be one or more of the following:
    - (A) the Commissioner has construed the applicable stipulations erroneously; or
    - (B) the Commissioner has imposed arbitrary and capricious requirements to enforce the stipulations; or
    - (C) lessee has made a bona fide effort to meet the requirements of the Commissioner, but with the best practicable technology available, is unable to comply; or
    - (D) by failing to act upon the requested construction authorization within the prescribed time, the Commissioner has been unreasonable;
  - (iii) each appeal under this subsection will be subject to appeal procedure set out in subsection a of this section.

c. As to any other matter relating to construction upon which a decision of the Commissioner is required under this lease, the failure of the Commissioner to render a decision within 10 days after receiving a request for a decision from the lessee will constitute a denial of that request and will constitute the final administrative decision of the Commissioner.

d . As to matters not covered by subsections a, b and c of this section upon which a decision of the Commissioner is required under this lease, the failure of the Commissioner to reach a decision within 30 days after receiving a request for a decision from the lessee will constitute a denial of that request and will constitute the final administrative decision of the Commissioner.

15. Liability of the State

Lessee agrees that neither the State nor any of its officials, employees, agents or contractors will be liable for money damages for any loss caused by lessee, its agents or contractors, by reason of decisions made in respect to the application and administration of this lease; provided, however, this lease will not be interpreted to excuse the State, its officials, employees, agents or contractors from liability for damages or injuries resulting from other acts which are acts of gross negligence or acts of willful misconduct.

16. Release of Right-of-Way

a. In connection with the relinquishment, abandonment or other termination before the expiration of the Grant of the Right-of-Way, of any right or interest in the right-of way, or in the use of all or any part of the lands subject to the right-of-way, the lessee holding such right or interest shall promptly execute and deliver to the State, through the Commissioner, a valid instrument of release in recordable form, which must be executed and acknowledged with the same formalities as a deed. The instrument of release must contain, among other things, appropriate recitals, a description of the pertinent rights and interests, and for the benefit of the State and its grantees or assigns, express representations and warranties by the lessee that it is the sole owner and holder of the rights or interests described therein and that such right or interest is free of all liens, equities or claims of any kind requiring or that may require the consent of a third party, claiming in whole or in part by, through or under the lessee, for the valid release or extinguishment thereof, except for such that are owned or claimed by third parties which have joined in the execution of the release. The form and substantive content of each instrument of release must be approved by the Commissioner, but except as otherwise provided for in this subsection, in no event will any such instrument operate to increase the then existing liabilities and obligations of the lessee furnishing the release.

b. Each release must be accompanied by such resolutions and certifications as the Commissioner may require in connection with the power or the authority of the lessee, or of any officer or agent acting on its behalf, to execute, acknowledge or deliver the release.

c. Neither the tender, nor approval and acceptance, of any such release will operate as an estoppel or waiver of any claim or judgment against the lessee or as a relief or discharge, in whole or in part, of the lessee from any of its then existing liabilities or obligations (accrued, contingent or otherwise); and notwithstanding any such tender or delivery, or any approval of the Commissioner if a release contains any provision that operates, or that by implication might operate, to discharge or relieve, in whole or in part, a lessee of and from any of its liabilities or obligations (accrued, contingent or otherwise) or that operates or might operate as an estoppel or waiver of any claim or judgment against the lessee or as a covenant not to sue, such provision will be void insofar as it would have the effect of so discharging or relieving the lessee or operating as an estoppel, waiver or covenant not to sue.

17. Forfeiture of Lease

Failure to begin operation of the pipeline as a common carrier within a reasonable time of the granting of this lease for reasons within the control of the lessee, or failure of the lessee to substantially comply with the terms of the lease will be grounds for forfeiture of the right-of-way interest of the lessee in an action brought by the Commissioner in Superior Court. Before beginning an action for forfeiture of an interest in the right-of-way under this section, the Commissioner shall give the lessee or owner of the interest notice in writing of the alleged default and may not begin the proceeding unless the lessee of the interest has failed to initiate good faith efforts to cure the default within 60 days of the notice of the alleged default.

18. Rights of Third Parties

The parties to this lease do not intend to create any rights under this lease that may be enforced by third parties for their own benefit or for the benefit of others.

19. Waiver not Continuing

The waiver by any party of any breach of any provision of this lease by any other party, whether such waiver is expressed or implied, will not be construed to be a continuing waiver or a waiver of, or consent to, any subsequent or prior breach on the part of such other party, of the same or any other provision of this lease.

20. Remedies Cumulative; Equitable Relief

No remedy conferred by this lease upon or reserved to the State or the lessee is intended to be exclusive of any other remedy provided for by this lease or by law, but each is cumulative and is in addition to every other remedy given in this lease or now or hereafter existing in equity or at law; and the State, in a proper action instituted by it, may seek a decree against the lessee for specific performance and injunctive or other equitable relief, as may be appropriate.

21. Section Headings

The section headings in this lease are for convenience only and have no other significance.

22. Authority to Enter Agreement

The lessee represents and warrants to the State that (A) it is authorized and empowered under the applicable laws of the state of its incorporation and by its charter and by laws to enter into and perform this lease in accordance with its provisions; (B) its board of directors or authorized executive committee has approved and authorized the execution, delivery and performance of this lease insofar as it pertains to the obligations of the lessee;

(C) all corporate and shareholder action that may be necessary to the approval of this lease, and the execution and delivery of this lease by lessee, has been taken; and (D) that all of the foregoing approvals, authorizations and actions are in effect at the time of the execution and delivery of this lease.

23. Exhibits; Incorporation of Certain Documents by Reference; Other Exhibits

The exhibits that are attached to this lease and that are listed below are, by this reference, incorporated into this lease as if they were set out in their entirety:

- (i) a description of the land included in the general route attached as Exhibit A;
- (ii) a description of the related facilities attached as Exhibit B;
- (iii) stipulations for the right-of-way lease for the Kuparuk Pipeline Company, attached as Exhibit C, which are sometimes referred to in this lease as the "stipulations". These provisions are included pursuant to AS 38.35.120(d) which requires terms and conditions that are reasonably necessary to obligate the lessee, to the extent reasonably practicable, to (A) prevent conflicts with other existing uses of the land involving a superior public interest; (B) protect State and private property interests; (C) prevent any significant adverse environmental impact, including but not limited to the erosion of the surface of the land, and damage to fish and wildlife and their habitat; (D) restore and revegetate during the term and at termination of this lease; and (E) protect the interests of individuals living in the general area of the right-of-way who rely on fish, wildlife and biotic resources of the area for subsistence purposes; and
- (iv) a description of the typical future pipeline crossing attached as Exhibit D.

24. Lease not a Waiver of Any State Regulatory Power

This lease and the covenants contained in it will not be interpreted as a limit on the exercise by the State of any power conferred by valid statute or regulation to protect the environment, health, safety, general welfare, lives or property of the people of the State.

25. Binding Effect of Covenants and of Lease; Effective Date

a. The parties acknowledge that all covenants of this lease are required by the Commissioner. By entering into this lease, the lessee is bound by such covenants to the full extent of the power of the State to impose the covenants under its authority as owner of the land or under its police or regulatory powers or otherwise; provided that the right of the lessee to challenge the power of the State to require any of the covenants as owner of the land or under its police or regulatory powers or otherwise is preserved until such time as action to enforce the covenant is taken by the State. Before beginning any such action the Commissioner must give the lessee written notice of intent to enforce, and he will not begin enforcement proceedings unless lessee has failed to initiate good faith efforts to comply with the notice within 30 days of the notice. Compliance with any covenant or with any such notice by the lessee, will not constitute a waiver of its rights to challenge, from time to time, the power of the State to require or to enforce the same or any other covenant in any subsequent action to enforce taken by the State. A judicial finding that any of these covenants is unlawful or invalid will not invalidate this lease or any other covenant of the lease.

b. This lease will become binding upon each party as of the date that the party signs this lease and will become effective as of 12:01 a.m. on the day the lessee begins operating the pipeline as a common carrier (hereafter referred to the “effective date”).

IN WITNESS WHEREOF, the parties have executed this lease as of the date first above written.

## EXHIBIT C STIPULATIONS

### 1. General

#### 1.1 Definitions

The following definitions apply to terms used in these stipulations. They shall also apply to terms used in documents to which these stipulations are attached unless specifically provided other wise in such documents.

1.1.1. “Agency” means the State of Alaska, Department of Natural Resources, and any subdivision thereof.

1.1.2. “Commissioner” means the Commissioner of the Alaska Department of Natural Resources or the officer appointed by the Commissioner with the authority and responsibility of administering a portion or all of the provisions of this lease.

1.1.3. The “Company” means Kuparuk Pipeline Company, its successors and assigns.

1.1.4. “Construction Mode” means the type of construction to be employed, generally with regard to the pipeline.

1.1.5. “Construction Segment” means a portion of the pipeline system, as agreed upon by the company and the Commissioner, that constitutes a complete physical entity or stage, in and of itself, which can be constructed, independently of any other portion, or stage of the pipeline system in a designated area or between two given geographical points.

1.1.6 “Design Criteria” means project criteria (i.e., construction, including design and operational concepts) necessary to delineate the project to be constructed. As a minimum, it includes the following: criteria to be used for the final design and project concepts; evaluation of data used to establish the design criteria; drawings showing functional and technical requirements; reports of all test data compiled during the data collection and design criteria evaluation; standard drawings (if applicable) or drawings to support structural design concepts of each typical facility or structure; proposed construction modes: outline of project specifications; sample computations to support the design; and concepts and bases for project siting.

1.1.7. “Final Design” means completed design documents suitable for bid solicitation, including contract plans and specifications; proposed construction modes; operational requirements necessary to justify designs; design analysis (including calculations for each particular design feature); all functional and engineering criteria; summaries of engineering tests conducted and their results; and other considerations pertinent to design.

1.1.8. “Hazardous Substances” means oil, toxic or hazardous substances (including wastes) as defined by the Department of Environmental Conservation, or as specified in writing by the Commissioner in consultation with the Department of Environmental Conservation’s authorized officers during the review of the company’s oil and hazardous substances control plan.

1.1.9. “Lessee” means Kuparuk Pipeline Company.

1.1.10. “Land Use Permit” means a revocable, nonpossessory privilege to use specified State lands in connection with the preconstruction, construction, operation, maintenance and termination of the pipeline system.

1.1.11. “Construction Authorization” means a written permission to initiate pipeline system construction that is issued in accordance with Stipulation 1.7 et. seq.

1.1.12. “Oil or Crude Oil” includes petroleum oil and other hydrocarbons regardless of gravity which are produced at the wellhead in liquid form and the liquid hydrocarbons known as distillate or condensate recovered or extracted from gas, other than gas commonly know as casinghead gas.

1.1.13. “Pipeline” means all parts of those physical facilities, through which the oil moves, authorized on State lands by the State of Alaska, Department of Natural Resources Right-of-Way Lease No. 409027.

1.1.14. “Pipeline System” means all facilities on State lands, which are constructed or used by the company in connection with the construction, operation, maintenance or termination of the pipeline. It does not include facilities, such as urban administrative offices, which are only indirectly involved in the transportation of oil, nor does it include facilities used by others in the production or gathering of oil.

1.1.15. “Related Facilities” means those structures, devises, improvements and sites on State lands, other than the pipe, the substantially continuous use of which is necessary for the operation and maintenance of the pipeline. Related facilities does not include any equipment upstream of the shipping pumps, nor equipment not owned by the lessee. Related facilities includes, if applicable: supporting structures, air fields, access roads, pumps, valves and other control devices, bridges, culverts and low-water crossings, monitoring and communication devices, retaining walls, berms, dikes, ditches, cuts and fills, including hydraulic and erosion control structures; structures and areas for storing supplies and equipment; cathodic protection devices; and other facilities of a similar nature together with related yards, fences and buildings as the Commissioner, after consultation with the company, will determine to be related facilities.

1.1.16. “Revegetation” means the establishment of plant cover on disturbed lands through techniques including, but not limited to, seedbed preparation, seeding, planting, fertilizing, mulching and watering.

1.1.17. “Roads” means roads on State lands, other than State or public highways that are constructed or used by the company in connection with the construction, operation, maintenance and termination of the pipeline system.

1.1.18. “State Lands” means State land as defined in AS 38.05.365; public land of the United States selected by the State under Sec. 6 of the Alaska Statehood Act of 1958 (PL 85-508; 72 Sec. 399), as amended; real property of the United States transferred to the State under Secs. 21, 35 and 45 of the Alaska Omnibus Act of 1959 (PL86-70; 73 Sec. 141), as amended; and any interest owned or hereafter acquired by the State in land.

1.1.19. “Waste” means all discarded matter other than construction spoil. It includes, but is not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes and equipment, etc. as defined by AS 46.03.900, 18 AAC 60.130, 18 AAC 72.100 and 18 AAC 75.900.

1.1.20. “Wetlands” means those areas that are inundated or saturated by surface or ground water 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.

## 1.2 Applicability

1.2.1. The following conditions will apply to the design, construction, operation, maintenance and termination of the pipeline system after the effective date of the lease to which this exhibit is attached. With respect to design, construction, operation, maintenance and termination of the pipeline system occurring before the effective date the company shall assume liability for and insure compliance with the design and construction specifications and the operation, maintenance and termination requirements set out in following conditions. Unless clearly inapplicable, the requirements and prohibitions imposed upon the company by these stipulations are also imposed upon the company's agents, employees, contractors and subcontractors, and the employees of each of them.

- (1) The company shall ensure compliance with these stipulations by its agents, employees and contractors (including subcontractors at any level), and the employees of each of them.
- (2) Failure or refusal of the company’s agents, employees, contractors, subcontractors or their employees to comply with these stipulations will be deemed to be the failure or refusal of the company.
- (3) Where appropriate the company shall require its agents, employees, contractors and subcontractors to include these stipulations in all contracts and subcontracts which are entered into by any of them, together with a provision that the other contracting party, together with its agents, employees, contractors and subcontractors, and the

employees of each of them, shall likewise be bound to comply with these stipulations.

1.2.2. Nothing in these stipulations shall be construed as applying to activities of the company that have no relation to the pipeline system.

1.2.3. Nothing in these stipulations shall be construed to affect any right or cause of action that otherwise would be available to the company against any person. The State and the company do not intend to create any rights under these stipulations that may be enforced by third parties for their own benefit or for the benefit of others.

### 1.3 Responsibilities

1.3.1. The company shall comply with these stipulations and lawful orders of the Commissioner implementing these stipulations.

1.3.2. The company shall designate a representative who will be empowered on behalf of the company to communicate with, and to receive and comply with, all communications and orders of the Commissioner. The company shall also designate field representatives who shall be authorized to, and at all times be available to communicate and cooperate with field representatives of the Commissioner. The company shall keep the Commissioner informed of any change of the company's representatives during the construction, operation, maintenance and termination of the pipeline system.

1.3.3. The Commissioner may require the company at any time to furnish any or all data related to design, construction, operation, maintenance and termination activities undertaken in connection with the pipeline system as may be reasonably relevant to the Commissioner's responsibilities and duties in connection with construction, operation, maintenance and termination of the pipeline system; provided, however, the Commissioner shall not release to the public any confidential material which is protected by AS 38.05.035(a)(9)(C), except that which the company has authorized in writing to be released. The company may grant rights in any information which is protected as confidential by this paragraph for a reasonable royalty fee that will cover the cost of reproduction of any such information, plus a pro rata share of the cost of obtaining such information.

1.3.4. The Commissioner may, by written order, require the company to make such modification of the pipeline system as he deems necessary to protect or maintain stability of foundation and other earth materials; protect or maintain integrity of the pipeline system; control or prevent significant damage to the environment (including, but not limited to, fish and wildlife populations and their habitats); or remove hazards to public health and safety, including the activities of its agents, employees, contractors (including subcontractors), and the employees of each of them.

1.3.5. The absence of any comment by the Commissioner on any plan, design, specification or other document which may be filed by the company with the Commissioner will not represent in any way whatever any assent to, approval of or concurrence in such plan, design, specification or other document, or any action proposed therein. Any written approval or instruction by the Commissioner may be relied upon by the company unless and until rescinded in writing. The Commissioner will act in writing upon each submission to him in accordance with the agreed upon schedules developed pursuant to Stipulations 1.6 and 1.7. Any disapproving action by the Commissioner, including any requests for additional information, will state what additional action is necessary to gain approval.

1.3.6. The Commissioner will have a continuing right of access to any part of the pipeline system at any time for inspection or monitoring and for any other purpose or reason that is consistent with his responsibilities. This right may be exercised by the Commissioner and his agents or representatives designated in writing; and contractors and subcontractors of the Commissioner who are performing work related to the pipeline system and who are designated in writing. The Commissioner and the company will agree upon procedures to implement this stipulation, including reasonable advance notification where practicable.

1.3.7. No order or notice given to the company on behalf of the Commissioner will be effective as to the company unless prior written notice of the delegation of authority to issue such an order or notice has been given to the company by the Commissioner.

1.3.8. In the implementation of Stipulation 1.2.1., the Company will furnish all supervisory-level employees with copies of these stipulations and will explain the limitations imposed by these stipulations.

#### 1.4 Communications

1.4.1. The company shall provide a communication capability that ensures the transmission of information required for the safe construction, operation, maintenance and termination of the pipeline system.

1.4.2. During the period of preconstruction, construction and initial operation of the pipeline system, all formal written communications between the company and an agency, involving construction, operation, maintenance or termination of the pipeline system must be transmitted through the Commissioner or as he may direct. However, documents required by statute or agency regulation to be filed with the agency must be filed as so required, provided that a copy (or copies) thereof is concurrently filed with the Commissioner.

1.4.3. Any written notice or communication, including any telegram, relating to any subject, addressed to the Commissioner from the company, will be deemed to have been delivered to and received by the Commissioner when the notice or communication has been delivered either by messenger during normal business hours or by means of registered or certified United States mail, postage prepaid, return receipt requested, to the office of the Commissioner.

1.4.4. Any written order, notice or other written communication, including any telegram relating to any subject, that is addressed to the company from the Commissioner will be deemed to have been delivered to and received by the company when the order, notice or other communication has been delivered either by messenger during normal business hours or by means of registered or certified United States mail, postage prepaid, return receipt requested, to the office of the representative designated by the company pursuant to Stipulation 1.3.2.

1.4.5. All orders or approvals of the Commissioner must be in writing, but in emergencies may be issued orally, with subsequent confirmation in writing as soon as possible thereafter, but no later than 24 hours.

## 1.5 Summary Network Analysis Diagrams

1.5.1. As a part of the design criteria the company shall submit a summary network analysis diagram for the project to the Commissioner for review and approval. As mutually agreed to by the company and the Commissioner the summary network analysis diagram must include all environmental, engineering and construction-related activities and contingencies which reasonably may be anticipated in connection with the project. The summary network analysis diagram must include or address:

- (1) data collection activities;
- (2) submittal and approval activities;
- (3) construction and post construction activities;
- (4) schedule control techniques; and
- (5) other pertinent data.

The summary network analysis diagram must be prepared employing techniques normal to the industry in sufficient detail and scope to permit the Commissioner to determine if the management approach shown or inferred by the network analysis will facilitate the cost effective, environmentally sound and timely construction of the project.

1.5.2. The summary network analysis diagram must be updated to indicate current and planned activities at intervals mutually agreeable to the company and the Commissioner.

## 1.6 Design Criteria, Plans and Programs

1.6.1. The company shall submit design criteria to the Commissioner. It shall also submit comprehensive plans and/or programs (including schedules where appropriate) which must include but not be limited to the following:

- (1) blasting;
- (2) corrosion control;
- (3) cultural resource preservation;
- (4) erosion and sedimentation control;
- (5) material exploration and extraction;

- (6) oil and hazardous substances control, cleanup and disposal;
- (7) overburden and excess material disposal;
- (8) pipeline contingency plan;
- (9) quality assurance/quality control;
- (10) restoration and rehabilitation;
- (11) stream, river and flood plain crossings;
- (12) surveillance and maintenance; and
- (13) wetland construction.

These plans and programs may be combined or submitted in stages, as appropriate. The company and the Commissioner will agree to the scope, content and schedule for submission of the required plans and programs.

1.6.2. The design criteria, including the plans and programs specified in Stipulation 1.6.1., must be approved in writing by the Commissioner and must be complied with by the company.

1.6.3. Additional or supplementary plans may be required in the event that the plans submitted in accordance with Stipulation 1.6.1. do not provide the detailed and/or site specific data required to support the final design required in Stipulation 1.7 and to guide the conduct of the construction, operation, maintenance and termination of the pipeline system.

## 1.7 Construction Authorization

1.7.1. The company shall not initiate any field activity on State lands pursuant to the authorization of which these stipulations are a part without prior specific written permission. Such permission must be either a construction authorization, land use permit or other appropriate written authorization, issued by the Commissioner, as appropriate. Any construction authorization, land use permit or other authorization will permit field activities only as therein expressly stated and only for the particular field activities therein described. A construction authorization, land use permit or other appropriate authorization may contain such site-specific terms and conditions as the Commissioner deems necessary to implement these stipulations and the company will comply with such terms and conditions.

1.7.2. Before applying for a construction authorization for a construction segment, the company shall, in such manner as will be acceptable to the Commissioner, locate and clearly mark on the ground the proposed location of all relevant related facilities and, where applicable, clearing limits and the location of temporary use areas in the proposed work area.

1.7.3. Each application for a construction authorization must be supported by:

- (1) a final design for the construction segment or segments to be covered by the construction authorization with detailed and/or site-specific plans as indicated in Stipulation 1.6.3. and computations supporting the design;

- (2) all applicable reports and results of environmental studies;
- (3) a detailed network analysis diagram for the construction segment or segments including the company's work schedules, applicable permits required by State and Federal agencies, design and review periods, data collection activities and construction sequencing. All requirements stated in Stipulation 1.5.1., with reference to the summary network analysis diagram, will apply equally to the detailed network analysis diagram;
- (4) a map or maps, prepared in such manner as shall be acceptable to the Commissioner, depicting the proposed location of:
  - (a) the boundaries of all associated temporary use areas; and
  - (b) all improvements, buried or above ground, that are to be constructed; and
- (5) justification statements for all proposed design features or activities which may not be in conformance with these stipulations.

1.7.4. Prior to submission of any application for construction authorization the company and the Commissioner will agree to a schedule for the submission, review and approval of such applications and on the scope of information to be contained therein. The schedule must allow the Commissioner 30 days for review of each complete application for a construction authorization unless the Commissioner gives written notice that more time is needed. The schedule may be revised by mutual agreement, if necessary.

1.7.5. The Commissioner shall review each application for a construction authorization and all data submitted in connection therewith in accordance with schedules as agreed upon pursuant to Stipulation 1.7.4.

1.7.6. The Commissioner shall issue a construction authorization only when, in his judgment, applicable final designs and other submissions required by Stipulations 1.6.1., 1.6.3. and 1.7.3. conform to these stipulations.

1.7.7. By written order, following appropriate consultation with the company and when other enforcement actions are inadequate or have not been successful, the Commissioner may revoke or suspend in whole or in part any construction authorization which has been issued when in his judgment unforeseen conditions later arising require alterations in the construction authorization in order to: (1) protect or maintain stability of foundation and earth materials; (2) protect or maintain integrity of the pipeline system; (3) control or prevent significant damage to the environment, including, but not limited to, fish and wildlife populations and their habitats; and (4) remove hazards to public health and safety.

The Commissioner shall expeditiously follow his revocation or suspension order with a more detailed written statement of the reason for the action.

## 1.8 Quality Assurance and Control

1.8.1. The quality assurance and quality control programs must be comprehensive and designed to assure that the applicable requirements of 49 CFR, part 195, and environmental and technical Stipulations will be incorporated in the final design and complied with throughout all phases of construction, operation, maintenance and termination of the pipeline system. The company shall provide for continuous inspection of pipeline construction to ensure compliance with the approved design specifications and these stipulations. The term "continuous inspection" as used in this stipulation means that at least one inspector is observing each pipeline construction operation where pipeline integrity is involved (e.g., the pipe gang, backend welders, weld nondestructive testing, coating and wrapping, bedding, lowering-in, padding and backfill) at all times while that construction is being performed or where pipeline construction operations are proximate to the Kuparuk Pipeline System.

1.8.2. At a minimum, the following must be included in the quality assurance program:

- (1) procedures for the detection and prompt abatement of any actual or potential procedure, activity, event or condition, of a serious nature, that:
  - (a) is susceptible to abatement by the company;
  - (b) could reasonably be expected to arise out of, or affect adversely, design, construction, operation, maintenance or termination of all or any part of the pipeline system; and
  - (c) that at any time may cause or threaten to cause:
    - (1) a hazard to the safety of workers or to public health or safety, including but not limited to personal injury or loss of life of any person;
    - (2) significant damage to the environment, including but not limited to areas of vegetation, fish or other wildlife populations or their habitats, or any other natural resource; or
    - (3) significant damage to the existing private improvements on or in the general vicinity of the right-of-way area;

- (2) procedures for the relocation, repair or replacement of improved or tangible property and the rehabilitation of natural resources (including but not limited to, revegetation, restocking fish or other wildlife populations and reestablishing their habitats) seriously damaged or destroyed if the immediate cause of the damage or destruction results from construction, operation, maintenance or termination of all or any part of the pipeline system;
- (3) methods and procedures for achieving component and subsystems quality through proper design and specification;
- (4) methods for applying quality assurance and quality control criteria in the selection of the company's contractors and subcontractors and contract purchases of materials and services;
- (5) a plan for collecting, recording, storing, retrieving and reviewing data to assure that quality has been attained, including procedures for initiating and maintaining adequate records of inspections, identification of deviations and completion of corrective actions;
- (6) specific methods of detecting deviations from designs, plans, regulations, specifications, stipulations and permits, as the basis for initiating corrective action to preclude or rectify the hazards, harm or damage referenced in sections 1.8.2.(1) and 1.8.2.(2) of these stipulations;
- (7) inspection, test and acceptance of components, subsystems and subassemblies; and
- (8) a plan for conducting surveys and field inspections of all facilities, processes and procedures of the company, its contractors, subcontractors, vendors and suppliers critical to the achievement of quality.

1.8.3. The company (including its agents, employees, contractors and subcontractors, and the employees of each of them) shall comply with the quality assurance and control program as approved and must submit reports to the Commissioner to demonstrate such compliance. Such reports must be submitted quarterly unless otherwise requested by the Commissioner.

## 1.9 Conduct of Operations

1.9.1. The company shall perform pipeline system operations in a safe and workmanlike manner so as to ensure protection of the environment and the safety and integrity of the pipeline and shall at all times employ qualified personnel and maintain equipment sufficient for that purpose. The company shall immediately notify the

Commissioner of any condition, problem, malfunction or other occurrence which in any way threatens the safety or integrity of the pipeline or significant harm to the environment.

#### 1.10 Surveillance and Maintenance

1.10.1. During the construction, operation, maintenance and termination phases of the pipeline system the company shall conduct a surveillance and maintenance program applicable to the arctic environment. At minimum, this program must, with respect to the company's activities, be designed to:

- (1) provide for public health and safety;
- (2) control damage to natural resources;
- (3) control erosion;
- (4) maintain pipeline integrity;
- (5) control damage to public and private property.

The company shall maintain complete and up-to-date records on construction, operation, maintenance and termination activities performed in connection with the pipeline system. Such records must include surveillance data, leak and failure records, necessary operational data, modification records, and such other data as may be required by 49 CFR, Parts 191 and 195 and other applicable Federal laws and regulations.

#### 1.11. Health and Safety

1.11.1. The company shall take measures necessary to protect the health and safety of all persons directly affected by activities performed by the company in the general vicinity of the right-of-way or permit area in connection with construction, operation, maintenance or termination of the pipeline system and shall immediately abate any health or safety hazards. The company shall notify the Commissioner of accidents, which occur in connection with such activities in frequency and detail identical to Occupational Safety and Health Administration reporting requirements.

#### 1.12. Public and Private Improvements

1.12.1. The company shall provide reasonable protection to existing public or private improvements including the Kuparuk Pipeline System on State lands, which may be adversely affected by its activities including the activities of its agents, employees, contractors (including subcontractors) and the employees of each of them during construction, operation, maintenance and termination of the pipeline system. If it is determined that the company has caused damage to such public and private improvements, and if the owner so requires, then the company shall promptly repair or reimburse the owner for reasonable costs in repairing the property to a condition which is satisfactory to the owner but need not exceed its condition prior to damage.

1.13. Survey Monuments

1.13.1. The company shall mark and protect all survey monuments encountered during construction, operation, maintenance and termination of the pipeline system. These monuments are not to be disturbed; however, if disturbance of a monument or any of its accessories becomes necessary, the company will notify the Commissioner in writing before such disturbance occurs, and the Commissioner will provide instructions. A written report to the Commissioner will also be made immediately by the company in the event that any monuments or accessories are inadvertently damaged.

1.13.2. If any public land survey monuments, corners or accessories (excluding geodetic survey monuments) of the United States or survey monuments of others, are destroyed or damaged during the construction, operation, maintenance or termination of the pipeline system, the company shall employ a qualified land surveyor to reestablish or restore same in accordance with the "Manual of Instructions for the Survey of Public Lands" of the Bureau of Land Management and shall record such survey in the appropriate records. Additional requirements for the protection of monuments, corners and bearing trees on State lands may be prescribed by the Commissioner.

1.14 Fire Prevention and Suppression

1.14.1. The company shall promptly notify the Commissioner of any fires on, or which may threaten any portion of, the pipeline system and shall take all measures necessary or appropriate for the prevention and suppression of fires in accordance with applicable law. The company shall comply with the instructions and directions of the Commissioner concerning the use, prevention and suppression of fires on State lands. Use of open fires in connection with construction, operation, maintenance and termination of the pipeline system is prohibited on State land unless authorized in writing by the Commissioner and performed in accordance with 18 AAC 50.030.

1.15 Electronically Operated Devices

1.15.1. The company shall, as necessary, screen, filter or otherwise suppress any electronically operated devices installed as part of the pipeline system which are capable of producing electromagnetic interference radiations so that such devices will not adversely affect the functioning of existing communications systems.

1.16 Termination of Authorization

1.16.1. Upon revocation or termination of the authorization of which these stipulations are a part, the company shall remove all improvements and equipment from the State lands, unless otherwise approved in writing by the Commissioner, and provided that restoration which appropriately can be performed prior to such removal has been completed to the satisfaction of the Commissioner as required by applicable stipulations.

1.17            Regulation of Access

1.17.1.            There shall be free and unrestricted access to and upon roads; except that with the written consent of the Commissioner, the company may regulate or prohibit access and vehicular traffic on roads as required to facilitate operations or to protect the public, wildlife and livestock from hazards associated with operation and maintenance of the pipeline. The company shall provide appropriate warnings, flagmen, barricades and other safety measures when the company is using roads or regulating public access to or upon roads.

1.17.2.            The company shall make provisions for suitable permanent crossings for the public at locations and to standards approved in writing by the Commissioner where the right-of-way crosses existing roads, foot-trails, winter trails or other rights-of-way. The company hereby expressly agrees to provide for two public crossings of the pipeline during the construction period. There shall also be one pipeline crossing constructed at a future date, the location and time to be determined by the Commissioner, which crossings must substantially comply with Exhibit D.

1.18            Use of Existing Facilities

1.18.1.            Subject to existing rights vested in other parties the company shall use existing facilities, to the maximum extent feasible, in all construction, operation, maintenance and termination activities associated with the pipeline system.

2            Environmental

2.1.            Environmental Briefings

2.1.1.            The company shall develop and provide environmental briefings for supervisory and field personnel directly related to the project and for field representatives in accordance with the approved environmental briefings required by Stipulation 1.6.1.

2.2            Pollution Control

2.2.1.            General

2.2.1.1.            The company shall construct, operate, maintain and terminate the pipeline system in a manner that will avoid or minimize degradation of air, land and water quality. The company shall comply with applicable air and water quality standards and Federal, State and local laws and regulations relating to pollution control or prevention.

2.2.2.            Water and Land Pollution

2.2.2.1.            Mobile ground equipment must not be operated in lakes, wetlands, streams or rivers unless such operation is approved in writing by the Commissioner.

2.2.2.2.            The temperature of natural surface or ground waters must not be changed significantly by the pipeline system or by any construction related activities unless approved in writing by the Commissioner.

2.2.2.3.            The company shall comply with the standards for thermal pollution in the Alaska Water Quality Standards (18 AAC 70) as approved by the Department of Environmental Conservation.

2.2.3.            Sanitation and Waste Disposal

2.2.3.1.            All hazardous substances and waste generated in construction, operation, maintenance and termination of the pipeline system must be removed or otherwise disposed of in a manner acceptable to the Department of Environmental Conservation. All applicable Federal, State, and local requirements will be incorporated in the plans required in Stipulation 1.6.1.

2.2.4.            Ice Fog

2.2.4.1.            The company shall utilize and operate all facilities and devices used in connection with the pipeline system so as to avoid or minimize ice fog. Facilities and devices which cannot be prevented from producing ice fog shall be located so as not to interfere with airfields, communities or roads.

## 2.3 Erosion and Sedimentation Control

### 2.3.1. General

2.3.1.1. The company shall perform all pipeline system activities so as to minimize disturbance to all surface areas.

2.3.1.1.1 The use of a gravel construction/work pad is limited to times when the pad will adequately protect the surface. During the spring season all activities which may cause rutting of the pad to a depth in excess of 12 inches shall be suspended until the Commissioner has authorized a resumption of activities.

2.3.1.2. The design of the pipeline system shall provide for the control of erosion and sediment production, transport and deposit.

2.3.1.3. Erosion control measures, including the use of erosion control structures, if necessary, must be implemented on State lands in accordance with the plans approved under Stipulation 1.6.1. to limit induced and accelerated erosion, limit sediment production and transport and lessen the possibility of forming new drainage channels. The design of such measures shall be based on the maximum rainfall rate and snowmelt combination reasonably characteristic of the region, the effects of thawing produced by flowing or ponded water on permafrost and the effects of ice. Permanent erosion control structures must be designed to accommodate a 50-year flood.

2.3.1.4. Surface materials suitable for use in restoration that are taken from disturbed areas must be stockpiled and utilized during restoration unless otherwise approved in writing by the Commissioner. Erosion and sediment control practices to be utilized must be determined by the needs of specific sites and, as appropriate, must include but not be limited to revegetation, mulching and placement of mat binders, soil binders, rock or gravel blankets or structures.

### 2.3.2. Crossing of Streams, Rivers, Flood Plains and Wetlands

2.3.2.1. The company shall minimize erosion and sedimentation at stream, river and wetlands crossings and those parts of the pipeline system within floodplains as provided in Stipulation 3.4.

2.3.2.2. Temporary access over streambanks prior to and following construction must be made through use of fill ramps rather than by cutting through streambanks, unless otherwise approved in writing by the Commissioner. The company shall remove such ramps upon termination of seasonal or final use. Ramp materials shall be disposed of in a manner approved in writing by the Commissioner.

### 2.3.3. Excavated Material

2.3.3.1. Excavated material in excess of that required to backfill around any structure, including the pipe, must be disposed of in accordance with the approved overburden and excess material disposal plan required in Stipulation 2.3.1.4.

### 2.4 Fish and Wildlife Protection

2.4.1. The company shall design, construct, operate, maintain and terminate the pipeline system so as to assure free passage and movement of fish in streams designated by the Commissioner. Temporary blockages of fish necessitated by instream activities may be approved. The proposed designs and construction plans must include the time and place that such temporary blockages may occur.

2.4.2. Pump intakes must be screened to prevent harm to fish. Screening specification shall be approved by the Commissioner.

2.4.3. When abandoned, water diversion structures shall be removed or plugged and stabilized unless otherwise approved in writing by the Commissioner.

### 2.4.4. Fish Spawning Beds, Fish Rearing Areas and Overwintering Areas

2.4.4.1. Fish spawning beds means those areas where anadromous and resident fish deposit their eggs.

2.4.4.2. Fish rearing areas means those areas inhabited by fish during any life stage.

2.4.4.3. Over wintering areas means those areas inhabited by fish between freeze up and breakup.

2.4.4.4. The company shall avoid disturbance to those fish spawning beds, fish rearing areas and over wintering areas designated by the Commissioner. However, where disturbances cannot be avoided, proposed modifications and appropriate mitigation measures must be designed by the company and approved in writing by the Commissioner.

2.4.4.5. The company shall protect fish spawning beds, fish rearing areas and over wintering areas from sediment where soil material is expected to be suspended in water as a result of construction activities. Settling basins or other sediment control structures shall be constructed and maintained to intercept such sediment before it reaches rivers, streams, lakes or wetlands.

2.4.4.6. The company shall comply with any site-specific terms and conditions imposed by the Commissioner to protect fish spawning beds, fish rearing areas and over wintering areas from the effects of the company's activities. If material sites are approved adjacent to or in lakes, rivers, streams, wetlands or flood plains the Commissioner may require the company to construct levees or berms or employ other suitable means to protect

fish and fish passage and to protect or minimize sedimentation. The company shall repair damage to such areas caused by construction, operation, maintenance or termination of the pipeline system to the satisfaction of the Commissioner as stated in writing.

2.4.4.7. The company shall not take water from fish spawning beds, fish rearing areas and overwintering areas or waters that directly replenish those areas during critical periods that will be defined by the Commissioner, unless otherwise approved by the Commissioner.

#### 2.4.5. Zones of Restricted Activities

2.4.5.1. Activities of the company in connection with construction, operation, maintenance and termination of the pipeline system in key fish and wildlife areas and in specific areas where threatened or endangered species of animals are found may be restricted by the Commissioner during periods of fish and wildlife breeding, nesting, spawning, lambing and calving activity, over wintering and during major migrations of fish and wildlife. The Commissioner shall provide the company written notice of such restrictive action, at least annually, and so far in advance of such restrictions as is possible, the Commissioner shall furnish the company an updated list of those areas where such actions may be required.

#### 2.4.6. Big Game Movements

2.4.6.1. The company shall design, construct and maintain both the buried and above ground sections of the pipeline so as to assure free passage and movement of big game animals by constructing the pipeline at above ground locations so that there is a 5 foot minimum height clearance at the pile supports unless otherwise authorized by the Commissioner.

#### 2.5.2. Layout of Material Sites, if Required

2.5.2.1. Materials site boundaries must be shaped in such a manner as to blend with surrounding natural land patterns. Regardless of the layout of material sites, primary emphasis shall be placed on prevention of soil erosion, damage to vegetation and destruction of fish and wildlife habitat.

#### 2.6 Disturbance or Use of Natural Waters

2.6.1. All activities of the company in connection with the pipeline system that may create new lakes, drain existing lakes, significantly divert natural drainages and surface runoff, permanently alter stream or ground water hydrology or disturb significant areas of streambeds are prohibited unless such activities along with necessary mitigation measures are approved in writing by the Commissioner.

2.6.2. The company shall not develop or utilize any wells or surface water sources on State lands for the construction, operation, maintenance and termination of the pipeline system without complying with AS 46.15.

2.7 Off Right-of-Way Traffic

2.7.1. The company shall not operate mobile ground equipment on State lands off the right-of-way, and roads, or authorized areas unless approved in writing by the Commissioner or when necessary to prevent immediate harm to any person or property.

2.8 Use of Explosives

2.8.1. The company shall submit a plan for storage and use of explosives, including, but not limited to, blasting techniques, to the Commissioner for approval in accordance with Stipulation 1.6.

2.8.2. No blasting shall be done under water or within one-quarter (1/4) mile of streams or lakes with identified fisheries or wildlife resources without written approval of the Commissioner.

2.8.3. Timing and location of blasting must be approved by the Commissioner.

2.9 Restoration

2.9.1. Upon completion of use, the company shall restore all areas of State lands disturbed by it, in accordance with schedules approved by the Commissioner and approved plans required under Stipulation 1.6. Restoration performed by the company will be approved in writing by the Commissioner.

2.9.2. Restoration includes, where appropriate, erosion and sediment control, revegetation, reestablishment of native species, visual amelioration and stabilization. Unless otherwise directed by the Commissioner, all disturbed areas of State lands must be left in such stabilized condition that erosion will be minimized through the use of adequately designed and constructed waterbars, revegetation and chemical surface control; culverts and bridges must be removed, and slopes shall be restored by the company in a manner satisfactory to the Commissioner.

2.9.3. Revegetation of disturbed areas of State lands must be accomplished as soon as practicable in accordance with plans and schedules required under Stipulation 1.6. The results of revegetation must be satisfactory to the Commissioner as stated in writing.

2.9.4. The company shall dispose of all materials from roads, haul ramps, berms, dikes and other earthen structures it has placed on State lands, in accordance with approved restoration plans unless otherwise directed by the Commissioner, provided, however, that the maintenance/access pad is exempted from the requirement if to do so would result in more environmental damage than its retention.

2.9.5. Pending restoration of a disturbed area of State land, the company shall maintain the area in a stabilized condition satisfactory to the Commissioner.

2.9.6. Upon completion of restoration of an area of State land, the company shall remove all equipment and supplies from that area in accordance with approved restoration plans unless otherwise directed by the Commissioner.

2.9.7. The company shall maintain all restored areas of State land in accordance with approved plans required under Stipulation 1.6.

2.10 Reporting, Prevention, Control, Cleanup and Disposal of Oil and Hazardous Substances Discharges

2.10.1. The company shall give notice in accordance with applicable law of any spill, leakage or discharge of oil or other hazardous substances in connection with the construction, operation, maintenance or termination of the pipeline system to:

- (1) the Commissioner ; and
- (2) such other State officials as are required by law to be given such notice.

Any oral notice shall be confirmed in writing as soon as possible.

2.10.2. The company shall submit an oil and hazardous control, cleanup and disposal plan to the Commissioner and the appropriate federal agencies in accordance with Stipulation 1.6.1. The plan shall conform to the requirements of 40 CFR, part 112, and this stipulation and must outline all areas where oil and/or hazardous substances are stored, utilized, transported or distributed. The plan shall include fuel distribution systems, storage and containment plans, leak detection systems, handling procedures, training programs for collection, storage and ultimate disposal of waste oil, cleanup method and disposal sites. The company shall demonstrate its capability and readiness to execute the plan. The Commissioner shall not require company to revise the plan such that it will not comply with 40 CFR, part 112.

2.11 Pipeline Operating Contingency Plan

2.11.1. The company shall submit a pipeline contingency plan to the Commissioner and the appropriate federal agencies in accordance with Stipulation 1.6.1. The plan must conform to the requirements of 49 CFR, Part 195.402, and must outline the steps to be taken in the event of a failure, leak or explosion in the pipeline. The plan must be approved in writing by the Commissioner prior to pipeline startup and the company shall demonstrate its capability and readiness to execute the plan.

2.11.2. The company shall, as appropriate, update the plan and methods of implementation thereof, which must be submitted annually to the Commissioner for his written approval.

2.12            Cultural Resources

2.12.1.        The company shall undertake the affirmative responsibility to identify, protect and preserve cultural, historic, prehistoric and archeological resources that may be impacted by the pipeline system consistent with the National Historic Preservation Act of 1966, as amended, and the implementing procedures of the Advisory Council on Historic Preservation, 36 CFR Part 800.

2.13            Hunting, Fishing and Trapping

2.13.1.        The company shall inform its employees, agents, contractors, subcontractors, and their employees, of applicable laws and regulations relating to hunting, fishing and trapping.

2.14            Small Craft Passage

2.14.1.        The creation of any permanent obstruction to the passage of small craft in streams is prohibited.

3            Technical

3.1.        Pipeline System Standards

3.1.1.     General Standards

3.1.1.1.    All design, including selection of material, and construction, operation, maintenance and termination practices employed with respect to the pipeline system must be in accordance with sound engineering practice and, with regard to the pipeline, must meet or exceed the Department of Transportation Regulations, 49 CFR, Parts 191, "Reports of Leaks," and 195, "Transportation of Liquids by Pipeline."

3.1.1.2     Requirements in addition to those set forth in the above minimum standards may be imposed by the Commissioner as necessary to reflect the impact of arctic environments. The Commissioner will make every effort to identify such additional requirements during the design phase.

3.1.2.     Specific Standards

3.1.2.1.    The pipeline design must provide for mainline block valves (intended to control spills); and additional valves located with the best judgment regarding wildlife habitat, fish habitat and potentially hazardous areas or as may be designated by the Commissioner during the design criteria reviews to accommodate potentially hazardous areas, other facilities and environmental values.

3.1.2.2.    The pipeline design in environmentally sensitive areas designated by the Commissioner must provide for minimum maintenance needs to reduce reentry requirements.

3.1.2.3.    All practicable means must be utilized to minimize injury to the ground organic layer.

3.1.2.4.    Welder qualification tests must be by destructive means, in accordance with Section 3 of API 1104, except that operators of automatic welding equipment may be qualified by radiography. Welder qualification tests for station piping facilities may alternately be in accordance with ASME Boiler and Pressure Vessel Code, Section 9.

3.1.2.5.    All construction, operation, maintenance and termination activities in connection with the pipeline system must be conducted so as to avoid surface modifications and must be planned and executed in such a way that any resulting alteration of permafrost will not jeopardize pipeline integrity and the surrounding environment.

3.1.2.6.    A monitoring program must be developed by the company as part of the surveillance and maintenance plan required by Stipulation 1.10 which must identify any pipeline movement that may affect pipeline integrity, resulting from frost heave or settlement forces. This program, including baseline data, must be finalized and operational prior to transmission of oil through the pipeline.

### 3.1.3. Standards for Roads

3.1.3.1. The company shall submit a layout of each proposed construction/maintenance/access pad for approval by the Commissioner in accordance with Stipulation 1.7.

3.1.3.2. Roads must be constructed to standards suitable for safe operations of equipment at the travel speeds proposed by the company in accordance with Stipulation 3.1.3.3.

3.1.3.3. Design, materials and construction practices employed for construction/maintenance/access pads must be in accordance with safe and proven engineering practice. Construction/maintenance/access pads intended for permanent use must be constructed in accordance with the principles of construction for secondary roads for the arctic environments. Existing roads approved for use by the company that do not meet these standards need not be upgraded, subject to approval of the Commissioner, provided that the basic access requirements imposed by Stipulation 1.18 are satisfied.

3.1.3.4. The maximum allowable grade is 12 percent unless otherwise approved in writing by the Commissioner.

### 3.2 Work Pad

#### 3.2.1. Work Pad Design

3.2.1.1. The work pad must consist of 3 feet of gravel if satisfactory construction can be achieved.

3.2.1.1.1. If a 3-foot thick work pad cannot be properly constructed, alternate design plans must be submitted for review and approval by the Commissioner.

3.2.1.1.2. The work pad maintenance plan for construction and operation of the pipeline must be developed for approval by the Commissioner.

#### 3.2.2. Work Pad Construction

3.2.2.1. A construction plan must be presented for the Commissioner 's approval prior to either the gravel work pad or snow/ice pad construction.

### 3.3 Stream and Flood Plain Crossing

#### 3.3.1. General

3.3.1.1. The pipeline system must be designed so as to both minimize the number of stream and wetland crossings and to include, but not be limited to, consideration of aufeis development, erosion and sedimentation, restriction of natural meander, or alteration of the physical or chemical nature of the water body.

3.3.1.2. The pipeline system must be designed to withstand or accommodate the effects (including runoff, stream and flood plain erosion, meander and hydrologic (including surface and subsurface)) conditions considered characteristic for each hydrologic region. For stream crossings and portions of the pipeline within the flood plain, the following standards will apply to such pipeline design:

3.3.1.2.1. The design flood must be based on the HEC-2 Water Surface Profile Computer Program (723-X6-L202A), Corps of Engineers, unless otherwise approved by the Commissioner;

3.3.1.2.2. For overhead crossings, analysis must be made to ensure that support structures are adequately protected from the effects of scour, channel migration, undercutting, ice forces and degradation of permafrost and other external and internal loads;

3.3.1.2.3. To avoid channelization along the pipe, appropriate design and construction procedures will be included in the plans required in Stipulation 1.6.1 and must be used wherever there is potential for such channelization; and

3.3.1.2.4. Methods of constructing stream crossings must be approved in writing by the Commissioner prior to initiation of field activities.

3.3.1.3. Low water crossings (fords across streams or rivers where any mobile ground equipment is moved on the streambed) must be designed, constructed, maintained and restored to standards approved in writing by the Commissioner.

### 3.3.2. Culverts and Bridges

3.3.2.1. Culverts and bridges necessary for maintenance of the pipeline must be designed at a minimum to accommodate a 50 year flood in accordance with criteria established by the American Association of State Highway Officials and the Federal Highway Administration and endorsed by the State of Alaska Department of Transportation and Public Facilities.

3.3.2.2. Culverts necessary for construction or operation of the pipeline system must be installed a minimum of six inches below the thalweg in fish streams which will be identified by the Commissioner.

### 3.4 Pipeline Corrosion

3.4.1. The company shall provide plans, as required by Stipulation 1.6, for corrosion resistant design and methods for early detection of corrosion in accordance with 49 CFR, part 195. This must include consideration of:

- (1) pipeline material to be used and information on its particular suitability for the environment involved;

- (2) details on the external pipe protection to be provided (coating, wrapping, etc.), including information variations in environmental factors along the pipeline route;
- (3) plans for cathodic protection if necessary or when appropriate including details of impressed current sources and controls to ensure continuous maintenance of adequate protection over the entire surface of the pipe;
- (4) details of plans for monitoring cathodic protection current including spacing of current monitors;
- (5) provision for periodic intensive surveys of trouble spots, regular preventive maintenance surveys and special provisions for abnormal potential patterns, especially those resulting from other pipelines or cables; and
- (6) information on any precautions that may be required to prevent internal corrosion of the pipeline.