PAN NATIONAL GAS SALES, INC.

ERA DOCKET NO. 87-32-LNG

APPENDIX B-1

LNG Purchase Agreement,
dated April 26, 1987,
between Sonatrading Amsterdam B.V.
and Trunkline LNG Company

LNG PURCHASE AGREEMENT

between

SONATRADING AMSTERDAM B.V.

as Seller

and

TRUNKLINE LNG COMPANY

as Buyer

Dated April 26, 1987

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LNG PURCHASE AGREEMENT, dated 26 April, 1987, between SONATRADING AMSTERDAM B.V. ("Seller"), a Netherlands company all of the capital stock of which is owned by SONATRACH, and TRUNKLINE LNG COMPANY ("Buyer"), a Delaware corporation, all of the capital stock of which is owned by Panhandle Eastern Corporation, a Delaware corporation.

The parties hereto agree as follows:

ARTICLE I

<u>Definitions</u>

The terms or expressions below shall have the following meanings in this Agreement:

"Bar": One bar is equal to 14.504 pounds per square inch; one millibar is equal to one one-thousandth of a bar.

"British Thermal Unit" and "Btu": The amount of heat necessary to raise from 58.5°F to 59.5°F the temperature of one avoirdupois pound of pure water at an absolute pressure of 14.73 pounds per square inch absolute (psia). One million Btu's is referred to as 1 MMBtu. All references to Btu's shall be considered as references to Btu's of GHV.

"Calorie": The quantity of heat necessary to raise one gram of water under a pressure of 1.01325 Bars from 14.5°C to 15.5°C.

"Contract Year": The period beginning on the

Effective Date and ending at 8 a.m. Greenwich Mean Time

("GMT") on the first day of the first full calendar year

following the Effective Date, and each period thereafter

beginning at 8 a.m. GMT on the first day of each calendar

year during the term hereof and ending at 8 a.m. GMT on the

first day of the following calendar year.

"day": A period of 24 consecutive hours, commencing at 8 a.m. GMT on any calendar day and ending at 8 a.m. GMT on the next calendar day, except with respect to activities to be conducted in the United States (including without limitation the sending of any notices or documents, or the transfer of any funds, from or in the United States), where United States Central Time shall be substituted for GMT.

"Effective Date": The meaning given in Article II.

"Gross Heating Value (GHV)": The quantity of heat produced by the combustion in air under constant pressure of one cubic meter of anhydrous gas, the air being at the same temperature and the same pressure as the gas, after the cooling of the products of combustion to the initial temperature of the gas and the air and after condensation of the water created by the combustion. Appropriate corrections will be made if the initial conditions of the air and the gas do not equal 0°C and 1.01325 Bars.

"LIBOR": The average interest rate per annum (rounded up to the nearest one sixteenth of one percent)

offered from time to time by prime banks in the London interbank market for three-month eurodollar deposits in amounts of \$1,000,000, as certified by Citibank N.A. (London).

"Liquefied Natural Gas" and "LNG": Natural Gas in a liquid state at or below its point of boiling and at or near atmospheric pressure.

"Loading Point": The flange located at the connection of the permanent loading pipe system of the LNG tanker with the loading arm of the facilities at the port of loading at Arzew, or such other safe port in Algeria as Seller may from time to time either by reason of exceptional operating conditions affecting SONATRACH or with the consent of Buyer (such consent not to be unreasonably withheld) substitute for Arzew.

"month": The period beginning at 8:00 o'clock GMT on the first day of a calendar month and ending at 8:00 o'clock GMT on the first day of the next succeeding calendar month, except with respect to activities to be conducted in the United States (including without limitation the sending of notices or documents, or the transfer of funds, from or in the United States) where United States Central Time shall be substituted for GMT.

"Natural Gas": Any saturated hydrocarbon or mixture of saturated hydrocarbons consisting essentially of methane and other combustible and non-combustible gases in a gaseous state and which is extracted from the subsoil in its natural state, separately or together with liquid hydrocarbons.

"Normal Cubic Meter (Nm³)": The quantity of natural gas occupying a volume of one cubic meter at a temperature of 0°C and at a pressure of 1.01325 Bars.

"Panhandle": Panhandle Eastern Corporation, a Delaware corporation.

"Sales Price" and "SP": For any month, the amount obtained by ascertaining in connection with each transaction with any customer in respect of which transaction an offer substantially in the form of Annex A hereto has been submitted by Buyer to, and accepted by, Seller:

- (a) the amount in MMBtu's of Tailgate Deliveries in that month to that customer in respect of that transaction; and
- (b) the total amount in U.S. dollars arrived at by multiplying the amount in (a) above by the price per MMBtu's applicable to that transaction with that customer which was used by Buyer in calculating the LNG price f.o.b. Algerian port specified in the document substantially in the form of Annex A in respect of that transaction, or by (if higher) the price per MMBtu's of such Tailgate Deliveries actually payable by that customer;

and by then dividing the aggregate of the amounts calculated under (b) above in respect of all such customers by the aggregate of the amounts calculated under (a) above in

respect of all such customers, <u>provided</u> that the Sales Price (and SP) shall be equal to an amount agreed upon by Seller and Buyer (i) for any period of less than a month beginning with the Effective Date and ending with the last day of the month in which the Effective Date falls; (ii) for each of the first two months following the Effective Date in which Seller shall deliver LNG to Buyer hereunder; and (iii) for any month during which there are no such Tailgate Deliveries in respect of any such transaction.

"SONATRACH": L'Entreprise Nationale pour la Recherche, la Production, le Transport, la Transformation et la Commercialisation des Hydrocarbures (SONATRACH), an Algerian entreprise nationale.

"Tailgate": The tailgate of Buyer's regasification facility at Lake Charles, Louisiana.

"Tailgate Deliveries": Natural Gas derived from the regasification of LNG, which Natural Gas emanates from or is delivered at the Tailgate and is destined to or for the account of a customer, as measured by Buyer in accordance with generally accepted practices in the industry.

"Thermie": One thousand kilocalories, or one million calories. Two hundred fifty-two Thermies equals one MMBtu.

"Transportation Agreement": The Transportation Agreement, dated the date hereof, between Buyer and SONATRACH, as amended from time to time.

ARTICLE II

Term: Termination

- Except as provided in Article XIII, this Agreement shall become effective on the date on which the conditions set forth in Article XIII shall have been satisfied (the "Effective Date"), and unless earlier terminated as provided in section 2.2 or section 9.4, shall continue in effect until the end of the first Contract Year by which an aggregate quantity of LNG of not less than 3,300,000,000 MMBtu shall have been sold and purchased hereunder since the Effective Date, or until the expiration of 20 Contract Years following the Effective Date (whichever shall first occur), provided that no expiration or termination of this Agreement shall relieve either party hereto from any obligations to the other party incurred or arising prior to the date of such expiration or termination, including all obligations under any offers submitted by Buyer and accepted by Seller in accordance with Article III prior to the date of such expiration or termination.
- 2.2. Termination. Without prejudice to any other right or remedy as may be available to either party hereto, in the event that the Contract of Sale and Purchase of Liquefied Natural Gas (the "LNG Contract"), dated September 17, 1975, between SONATRACH and Panhandle Eastern Pipe Line Company, shall cease to be suspended and the performance

thereof shall be resumed, all in accordance with section 10 of the Settlement Agreement, dated July 21, 1986, among SONATRACH, Panhandle and Buyer, then this Agreement shall automatically terminate on the date performance under the LNG Contract is so resumed; provided that no termination of this Agreement shall relieve either party hereto from any obligations to the other party incurred or arising prior to the date of such termination, including all obligations under any offers submitted by Buyer and accepted by Seller in accordance with Article III prior to the date of such termination.

2.3. Further Sales and Purchases. If this
Agreement shall expire under section 2.1 before an aggregate
quantity of 3,300,000,000 MMBtu of LNG shall have been sold
and purchased hereunder, the parties shall meet together and
seek in good faith to agree upon terms for the sale and
purchase of the shortfall. If this Agreement shall expire
under section 2.1 prior to the expiration of 20 Contract
Years following the Effective Date, the parties shall meet
together and seek in good faith to agree upon terms for
further sales and purchases during the unexpired portion of
such period.

ARTICLE III

Sale and Purchase: Offer and Acceptance: Sales by Buyer

- 3.1. <u>Sale and Purchase</u>. Seller shall sell LNG to Buyer, and Buyer shall purchase LNG from Seller, as provided in this Article III and otherwise upon the terms hereof.
 - 3.2. <u>Submission of Terms</u>. From the Effective Date:
 - shall diligently seek to obtain from customers and potential customers commitments (capable of being satisfied by regasified LNG derived from LNG purchased by Buyer hereunder) on terms and conditions (including price) which in Buyer's reasonable commercial judgment are the most favorable available to Buyer under the prevailing circumstances for the purchase by such customers and potential customers of Natural Gas derived from the regasification of LNG and emanating from or delivered at the Tailgate.
 - obtained, Buyer shall complete and forthwith submit to Seller a document substantially in the form of Annex A, indicating (inter alia) the approximate quantities of LNG which would be required for the production exclusively therefrom of the regasified LNG to which such commitment relates, and the estimated f.o.b. price P which would be

applicable thereto if P were computed in accordance with Article V hereof (taking as SP for the purpose of such computation the price per MMBtu's payable pursuant to that commitment). Where Buyer at the time of submitting such document intends to resort to a specific alternative source of LNG should Seller not accept the offer which, by virtue of section 3.3 hereof, is deemed to have been thereby made, Buyer shall identify such alternative source in such document. Any offer not accepted by Seller in accordance with section 3.3 below need not be resubmitted to Seller, and may be fulfilled with LNG obtained from other sources. The obligations of Buyer under this section 3.2 shall apply with respect to any period only to the extent that, in Buyer's good faith judgment, regasification capacity available at Buyer's Lake Charles facilities permits, and shall not apply

- (i) in respect of any period during which
 Buyer shall be obligated to take delivery from
 Seller hereunder at a rate of not less than 178.6
 million MMBtu of LNG per year;
- (ii) to any commitment in respect of which
 Buyer in good faith judges that its fulfillment
 together with the fulfillment of other commitments
 already the subject of offers accepted by Seller

under section 3.3 would require thereafter aggregate Tailgate Deliveries at an average daily rate exceeding 460,000 MMBtu's per day, provided that, unless Buyer in good faith considers that it would not be practicable to fulfill any such commitment on terms yielding approximately the same financial return to Buyer as if that LNG had been purchased under section 3.3 hereof and shipped in an LNG tanker provided by SONATRACH on the terms of the Transportation Agreement, Buyer will notify Seller of such commitment and the parties shall in good faith seek to agree upon the purchase by Buyer from Seller of the corresponding LNG. If the parties fail to agree no such purchase shall be made. Neither Seller nor Buyer shall be required to continue to seek such agreement for more than 15 days after such notification.

3.3. Offer and Acceptance. Each document substantially in the form of Annex A so submitted to Seller by Buyer shall be deemed to constitute an offer by Buyer to purchase hereunder from Seller on the terms and conditions of this Agreement, for regasification at Buyer's regasification facility at Lake Charles, Louisiana, the approximate quantities of LNG therein specified. Seller shall consider in good faith each such offer so submitted to it and shall

not communicate the content thereof to any person other than SONATRACH which shall keep such offer equally confidential. Any such offer not so accepted in accordance with the terms thereof shall be deemed to have been rejected. If Seller decides to accept such offer, it shall communicate the acceptance to Buyer by telex, telecopier, or equivalent rapid Seller shall in addition forthwith dispatch to Buyer an acceptance in writing substantially in the form of Annex B hereto, but failure by Seller to dispatch such acceptance in writing substantially in the form of Annex B shall not affect Seller's obligations hereunder. Upon the acceptance of such offer in accordance with the terms thereof, Seller shall become obligated to sell and deliver, and Buyer shall be obligated to lift and pay for, that quantity of LNG at the price indicated in Article V and otherwise on the terms of this Agreement.

3.4. Sales of Natural Gas by Buyer. Nothing herein shall preclude Buyer from selling or delivering regasified LNG from Buyer's facility at Lake Charles, Louisiana, to such customer(s), and upon such terms, as Buyer shall in its absolute discretion consider appropriate.

ARTICLE IV

Quality

The Liquefied Natural Gas delivered by Seller to Buyer shall have in its gaseous state:

- (a) a Gross Heating Value between $9,640 \text{ kcal/Nm}^3$ and $10,650 \text{ kcal/Nm}^3$;
- (b) constituent elements varying within the following percentage limits (in molecular percentage):

Nitrogen (N_2) between 0.20 and 1.40 Methane (C_1) between 85.65 and 96.60 Ethane (C_2) between 3.20 and 8.50 Propane (C_3) between 0.00 and 3.00 Isobutane (iC_4) between 0.00 and 0.52 Normal butane (nC_4) between 0.00 and 0.70 Pentanes Plus (C_5+) between 0.00 and 0.23;

- (c) an H₂S content not to exceed 0.50 parts per million in volume;
- (d) a total sulfur content of at most 30
 mg/Nm³;
- (e) a mercaptan sulfur content not exceeding 2.30 mq/Nm^3 ; and
- (f) no harmful contaminants such as $\mathrm{H}_2\mathrm{O}$, CO_2 and Hg .

The above specifications shall be verified in accordance with the provisions of Article XII.

ARTICLE V

Price

For any month during which there shall be completed any loading of any LNG tanker with LNG delivered by Seller hereunder the price ("P") in U.S. Dollars per MMBtu of such LNG so delivered f.o.b. Algerian port shall be computed as follows:

- (i) if SP for such month is less than \$5.00:
 - $P = 0.6324 \times SP$
- (ii) if SP for such month is equal to or greater than \$5.00:

 $P = (0.6532 \times SP) - 0.0923$

ARTICLE VI

Invoicing and Payment

less than 7 days in advance of each month after the Effective Date in the course of which Buyer anticipates that there will be deliveries of LNG hereunder, Buyer shall notify Seller by telex of Buyer's best good faith estimate of the price P for that month, identifying each element in such estimate. Promptly following the completion of each loading of LNG purchased hereunder Seller shall send to Buyer a telex substantially in the form of Annex C hereto and shall at the same time cause to be dispatched to Buyer all data and

documents necessary to determine the quantity of LNG in MMBTu's so loaded (including all measurements and calculations in respect thereof made pursuant to Article XII and a non-negotiable, non-transferable, cargo receipt substantially in the form of Annex A to the Transportation Agreement in respect of the LNG so loaded) together with a provisional invoice for the amount set forth in the final paragraph of this section 6.1. Buyer shall make to Seller a payment on account for such LNG of that amount in immediately available funds, by wire transfer to Seller's account in a United States bank specified by Seller, on or before (x) the twenty-first day following the completion of such loading or (y) the seventh day following the date of receipt by Buyer of the documents related to such loading, whichever shall occur later ("the Due Date"), provided that Buyer shall at all times have outstanding an irrevocable commitment to Seller of a first-class bank in the United States in form and substance reasonably satisfactory to Seller to pay Seller on the Due Date an amount of U.S. Dollars equal to each such payment on account together with any interest accrued thereon against presentation of written advice by Seller that there has been a failure by Buyer to pay the same in such manner to such account by such Due Date. In the event that it shall become unduly onerous for Buyer to have such a bank commitment outstanding, Buyer may so inform Seller

by notice. In such event, Buyer shall not be obligated to have such a commitment outstanding in respect of any loadings occurring after the date on which such notice was given and shall make such payment on account for each loading by wire transfer to the aforementioned account not later than the seventh day following the date of receipt by Buyer of the documents relating to such loading.

The amount so payable on account shall be equal to:

- (a) the product of (i) the quantity of LNG in MMBtu's loaded as specified in the aforementioned cargo receipt, and (ii) the price ("P") as estimated by Buyer and notified to Seller in accordance with this section 6.1 for the month in which such loading was completed; plus or minus
- (b) any amount required to be added to or subtracted from the foregoing product under section 6.3.
- of the monthly statement furnished by Buyer under section 6.4, Seller shall prepare and send to Buyer an invoice in U.S. dollars for the aggregate quantity of LNG purchased hereunder, the loading of which was completed during the month covered by such monthly statement. The amount invoiced shall be equal to the product of (a) the price P for such month, and (b) such aggregate quantity in MMBtu's, less the payments on account

received by Seller under section 6.1 with respect to the shipments of LNG covered by such invoice. Any such invoice may also include all amounts owed by Buyer in respect of LNG supplied in or before the month covered by such monthly statement for cooldowns or gas trials.

Payment. In the event that the invoice sent by Seller under section 6.2 shows a net amount owed to Buyer, such amount shall be subtracted from the product referred to in section 6.1(a) in computing the amount or amounts payable by Buyer under section 6.1 in respect of the shipment or shipments next following the date of receipt by Buyer of such invoice, in such a manner as to amortize as rapidly as possible the amount of such credit. In the event that the invoice shows a net amount owed to Seller, all or any part of such amount remaining unpaid shall be added to the product referred to in section 6.1(a) in computing the amount payable by Buyer under section 6.1 with respect to the shipment next following the date of receipt by Buyer of such invoice. If the amount shown in any invoice as a net amount owed to Buyer or to Seller has not been paid in full as provided in this section 6.3 within fifteen days following the date of receipt by Buyer of such invoice, then the party owing that net amount remaining unpaid shall

United States bank as the other party shall have specified by notice. If and for so long as Buyer shall be in default in respect of any obligation upon Buyer under this Article VI Seller shall be under no obligation to make any further shipment(s) of LNG to Buyer hereunder. Upon the amount of any payment under this Article VI which is in default the defaulting party shall pay interest at a rate of 1 percent per annum over LIBOR from the last date due until the date of payment.

- eighteenth day following the end of each month, Buyer shall prepare and deliver to Seller a statement showing the Sales Price for such month and including in reasonable detail the basis for the calculation thereof. Such statement shall include in particular the aggregate quantities of Tailgate Deliveries delivered in such month, the customers concerned, and the respective prices payable by them for such deliveries.
- representatives shall be entitled from time to time at their expense to inspect Buyer's books and records upon reasonable notice during normal working hours for the purpose of verifying sales and deliveries to customers and computing the amounts payable under this Agreement.

ARTICLE VII

Transfer of Title; Risk of Loss or Damage

All risks in respect of LNG shipped hereunder shall pass to Buyer at the Loading Point. Title to such LNG shall pass to Buyer immediately outside the territorial waters of Algeria.

ARTICLE VIII

Assignment

Neither this Agreement nor any of the rights, duties or obligations of either party hereunder may be transferred or assigned by such party, without the prior written consent of the other party, except that Buyer may assign this Agreement to any wholly owned subsidiary of Panhandle and Seller may assign this agreement to any wholly owned subsidiary of SONATRACH, provided that no such assignment shall relieve Buyer or Seller of its obligations hereunder, and provided further that, before effecting any such assignment to a wholly owned subsidiary, the assigning party shall give to the other party not less than 30 days' notice in writing of its intention so to do (with particulars of the proposed assignee and terms of assignment) and shall in good faith consider any representations which such other party may wish to make in respect thereof.

ARTICLE IX

Force Majeure, etc.

- <u>Definition</u>. "Force Majeure" means any event or condition, whether affecting Buyer, Seller or any other person, which has prevented or may reasonably be expected to prevent either party hereto from performing any obligation hereunder, in whole or in part, if such event or condition is beyond the reasonable or prudent control, forecasting or planning, and not the result of willful or negligent action or a lack of reasonable diligence, of the party hereto (the "Non-Performing Party") relying thereon as justification for not performing any such obligation. The foregoing provisions shall not be construed to require that the Non-Performing Party observe a higher standard of conduct than that required by the usual and customary standards of the industry, as a condition to claiming the existence of Force Majeure. Such events or conditions shall include but shall not be limited to circumstances of the following kind:
 - (a) (i) an act of God or government, epidemic, landslide, lightning, earthquake, fire, explosion, accident, storm, flood or similar occurrence, an act of the public enemy, war, blockade, insurrection, riot, civil disturbance or similar occurrence, or (ii)

- a strike, lockout, or similar industrial or labor action;
- (b) the failure to obtain, or suspension, termination, adverse modification, interruption or failure of renewal of any permit, license, consent, authorization or approval; and
- (c) circumstances preventing Seller or Buyer from supplying LNG or regasified LNG, as the case may be, including serious accidental damage to operations or equipment affecting the Natural Gas production facilities in the field, transportation by pipeline, treatment, liquefaction, storage, and loading operations in Algeria; transportation by LNG tankers; and unloading, storage, regasification and pipeline transportation in the United States.
- 9.2. Excuse of Performance. Each party hereto shall be excused for its failure or delay in performance of any obligation hereunder to the extent that compliance therewith is prevented by Force Majeure. Notwithstanding the foregoing, Buyer shall in any event make payment in accordance with Article VI hereof of the price ("P") for all LNG delivered by Seller hereunder as to which the risk has passed to Buyer.
- 9.3. Notice. As soon as practicable following the occurrence of Force Majeure the party affected thereby

shall give notice to the other party by the most rapid means available, describing such Force Majeure and stating such party's best estimate of the duration thereof and the effect thereof on the performance of this Agreement and shall keep such other party reasonably advised as to the status of such Force Majeure and the progress of such party's efforts to overcome the same.

- 9.4. Resumption of Performance. In the event performance hereof shall be prevented in whole or in part by Force Majeure, the parties shall take all reasonable and appropriate measures to bring about conditions permitting the resumption of the normal performance of this Agreement as soon as possible. In the event that performance hereof shall be substantially prevented by Force Majeure for more than 24 consecutive months either party may, without prejudice to all other rights arising out of such circumstances, terminate this Agreement by 30 days written notice to the other.
- 9.5 Reduction or Cessation of Deliveries. If in respect of any transaction between Buyer and any customer for the sale and purchase of regasified LNG, in relation to which Seller is obligated to sell LNG to Buyer under section 3.3 hereunder, there shall arise:
 - (a) a failure or refusal of such customer, in breach or repudiation of such transaction, to take delivery of or to make payment in full for any such regasified LNG;

- (b) a bankruptcy or insolvency of any such customer; or
- (c) a reasonable likelihood, in Buyer's good faith judgment, that the occurrence of one of the foregoing events is imminent;

Buyer may by reason thereof reduce or stop deliveries to such customer of regasified LNG from the Tailgate, and if in consequence, so long as such deliveries shall not be made, Buyer fails to accept or lift all or any of such quantities of LNG as would have been required in order to produce at the Tailgate the quantities of regasified LNG not so delivered, Buyer shall have no liability whatsoever to Seller or SONATRACH in respect of such failure exceeding 60% of the amount by which the value of all monies or other consideration recovered from such customer by way of damages or otherwise in respect of any of the matters set forth under (a), (b), or (c) above exceeds the costs (including, without limitation, legal fees and expenses) disbursed by Buyer in effecting such recovery.

ARTICLE X

Maritime Transportation

purchased and sold hereunder to be transported and discharged by LNG tankers having a Gross Cargo Capacity (as defined in the Transportation Agreement) of between

120,000 and 135,000 cubic meters, having specifications and characteristics compatible with the facilities at the ports of loading and discharging. Seller shall furnish or cause to be furnished up to three of such tankers and Buyer shall furnish or cause to be furnished up to two of such tankers all on the terms and conditions set forth in the Tanker Utilization Agreement, dated as of the date hereof, among Buyer, Seller, and SONATRACH.

Facilities. Seller shall make available, or cause to be made available, safe port facilities for the loading of LNG purchased hereunder capable of receiving LNG tankers of the following maximum dimensions:

Port facilities shall be such as to permit all maneuvers to be carried out in complete safety within a reasonable time.

- (b) Berthing and Loading Facilities. Seller shall make available or cause to be made available to Buyer at the port of loading in Algeria berthing and loading facilities including:
 - (i) mooring equipment;

- (ii) lighting sufficient to permit docking maneuvers by day or by night in complete safety, to the extent permitted by the port authorities;
- (iii) pipelines to ensure normal stocking of the LNG tanker with bunker fuel;
- (iv) loading arms, pipes and other appropriate facilities permitting the loading of LNG at the average rate of ten thousand m³/hour;
- (v) a vapor return line from the LNG tanker to shore facilities having a diameter sufficient to maintain appropriate operating pressure in the tanks of the LNG tanker and in the storage reservoirs; and
- (vi) a liquid nitrogen loading facility compatible with the LNG tanker.

The facilities described in this section 10.2(b) shall be provided, operated and maintained at no cost to Buyer.

- 10.3. <u>Safety</u>. Loading of LNG shall be carried out in strict conformity with all applicable safety and other similar regulations.
- written notice to Seller of the date and hour of arrival at the port of loading of any LNG tanker providing maritime transportation hereunder as well as of the

estimated quantity of LNG which is to be loaded. Buyer shall send or cause to be sent to Seller the following written designation notices:

- (i) a first designation notice shall be given upon departure from last port of discharge or (if later) at least ninety-six hours prior to the estimated time of arrival, and shall contain an estimated time of arrival;
- (ii) a second designation notice shall be given so as to arrive seventy-two hours prior to the estimated time of arrival;
- (iii) a third designation notice shall be given so as to arrive twenty-four hours prior to the estimated time of arrival; and
- (iv) a final designation notice shall be given so as to arrive five hours prior to the estimated time of arrival at the sea buoy or designated anchorage at the loading port.

As soon as the LNG tanker is berthed alongside the pier and prepared to load its cargo, the Captain of the LNG tanker shall give written notice of ready to receive to Seller or to his representative at any time of the day or night. Provided that the bottom temperature of the tanks of the LNG tanker is not higher than minus one hundred and forty five degrees centigrade, Seller shall then take all appropriate measures within its reasonable

control to permit the loading of the LNG tanker as quickly as possible.

Laytime for loading shall begin to run upon the giving of the notice of ready to receive. Thereafter Seller shall cause the LNG tanker to load as quickly as possible. In respect of all time lost in loading by reason of a failure by Seller to comply with Seller's obligations under this paragraph in respect of any LNG tanker which Buyer has furnished or caused to be furnished, Seller shall pay to Buyer demurrage at the rate of \$30,000 per day and pro rata for less than a day. Demurrage, if any, shall be computed and payable at the end of each consecutive period of 3 months beginning with the Effective Date.

Seller shall make available or cause to be made available LNG for gas trials and cooldown for any LNG tanker transporting LNG purchased hereunder which has a bottom temperature in its tanks prior to loading higher than minus one hundred and forty five degrees centigrade.

Payment for the LNG so supplied shall be the responsibility of Buyer, except as provided below. The cost in U.S. Dollars per MMBtu of the LNG so supplied shall be the price ("P") for the month during which the loading was completed.

Upon discharge of any LNG tanker transporting LNG in connection herewith, which is scheduled to load LNG at the loading port within 30 days following completion of such discharge, Buyer shall retain aboard that LNG tanker (if returning forthwith in ballast to the loading port to load further cargo hereunder) an amount of LNG sufficient to permit such tanker to maintain a temperature no higher than minus one hundred and forty five degrees centigrade at the bottom of the tanks for a period of at least 24 consecutive hours after its arrival at the loading port or (if earlier) after the time when such arrival would have occurred had it proceeded to the loading port with due dispatch. The supply of LNG necessitated by a failure of Buyer so to cause sufficient LNG to be retained aboard shall be the responsibility of Buyer. If any LNG tanker aboard which LNG has been so retained does not load within such 24-hour period for any cause attributable solely to any matter within the reasonable control of Seller. SONATRACH, or the owner or operator of any LNG tanker furnishing services under the Transportation Agreement, the cost of additional LNG thereby rendered necessary and utilized for cooldown of such tanker shall be deemed to be the responsibility of Seller. Subject to (c) below, if any LNG tanker furnishing services in connection herewith needs LNG for cooldown (in addition to the LNG, if any, required to be retained aboard in accordance with the

first sentence of this clause (b)) for any cause attributable to any matter beyond the reasonable control of Seller, SONATRACH, Buyer, and the owner or operator of that LNG tanker, the cost of such additional LNG shall be shared equally between the parties hereto.

obligation of SONATRACH under the Transportation Agreement to bear the cost of LNG furnished thereunder for cooldown purposes (i) upon an LNG tanker's entry into service thereunder, (ii) upon her return to service thereunder after an absence exceeding thirty days' duration attributable to matters within the reasonable control of SONATRACH or of the owner or operator of such LNG tanker, (iii) upon her return from employment other than under the Transportation Agreement, or (iv) (not more than once per Contract Year) upon her return from any ship repair yard after drydocking or maintenance.

ARTICLE XI

Rhythm of Liftings

Buyer shall give notice by telex to Seller, no
less frequently than monthly and not less than 10 days
before the end of each month, specifying the number of
full and complete cargoes of LNG likely in the opinion of
Buyer to be lifted hereunder during each month of the
three months next following after the date upon which such

notice is given. Following the giving of each such notice, Buyer and Seller shall agree upon and send to SONATRACH a lifting schedule setting forth specific loading dates in respect of the first month of such three-month period. Liftings shall be scheduled at as regular a pace as is reasonably practicable. The parties will consult as may be appropriate from time to time in respect of any modifications of such schedule as may be desired by either of them.

ARTICLE XII

Measurements and Tests

- of LNG delivered at the Loading Point pursuant to this
 Agreement shall be measured in metric units by gauging of
 the liquid in the tanks of the LNG tanker. The Seller
 shall cause the first gauging to be made after the Captain
 of the LNG tanker has given his notice of "ready to
 receive", and prior to starting the loading pumps. A
 second gauging operation shall take place immediately
 after completion of loading. Representatives of Buyer and
 Seller shall have the right to be present at such gaugings.
- (b) Each party shall send or cause to be sent to the other party a certified copy of the gauging standards for each tank of each LNG tanker being furnished by such party, in metric units approved by the Departments of

Instruments and Measurements of Algiers - Paris or of the U.S. Bureau of Standards in Washington (D.C.), as well as correction charts (list, trim, tanks' contraction, etc.). Such standards and charts shall be used throughout the term of this Agreement, except in the case of a physical change in the tanks, in which case new standards and charts shall be used. LNG level measuring devices shall be approved by both Seller and Buyer. Each tank shall be equipped with two level-measuring devices of different types.

- 12.2. <u>Determination of Density</u>. The density of the LNG shall be calculated using the revised Klosek and McKinley method.
- temperature of the LNG contained in the tanks of any LNG tanker shall be the arithmetic average of the temperatures indicated by special thermo-couples or resistance thermometers spaced at various locations from top to bottom of each tank and having an accuracy of plus or minus two-tenths of a degree centigrade. Such temperatures shall be either logged or printed.
- taken with a frequency adequate to assure a representative analysis of the LNG being loaded, at a suitable point between the Loading Point and Seller's storage reservoirs. The sampling device shall be such as to

permit the total and continuous vaporization of a quantity of LNG sufficient for the taking of a gaseous sample representative of the LNG then being delivered. Such samples shall be analyzed by means of a suitable gas chromatograph. The analysis or the average of such analyses shall determine the molecular composition of the LNG. A calibration of the chromatograph utilized shall be performed in the presence of a representative of Buyer before the analysis of the samples taken from each loading. Such calibration shall be effected with the aid of a gaseous mixture having a known composition closely similar to the LNG then being delivered.

- Heating Value of LNG shall be calculated on the basis of its molecular composition and of the molecular weights and the thermies per kilogram of each of its components. The values of physical constants to be used for such calculations are set forth in Annex D hereto. Such values shall be revised by mutual agreement from time to time to conform with those contained in the most current publications of the National Bureau of Standards of the United States or those of any corresponding national institution the standards of which are approved by the Institute of Instruments and Measures of Algeria.
- 12.6. <u>Determination of MMBtu's</u>. The quantity of MMBtu's loaded onto the LNG tankers shall be calculated on

the basis of the following formula:

 $Q = \frac{V \times M \times PC}{252}$

in which:

- Q = the number of MMBtu's loaded
- V = the volume of LNG loaded, in m³, as determined in accordance with section 12.1
- M = the density calculated in accordance with section 12.2 of the LNG in the tanks of the LNG tanker, in kg/m³
- Pc = the GHV of LNG per unit of mass, in thermies/kg,
 as calculated in accordance with section 12.5.
- 12.7. Methods of Operation. (a) Equipment for accurately gauging the level of liquid and liquid temperature in the tanks of the ships shall be supplied, operated and maintained by and at the expense of the parties supplying such LNG tankers. Seller shall cause to be supplied, operated and maintained at its expense all equipment, instruments and devices used for the sampling of and for the determination of the density, quality and composition of the LNG loaded.
- (b) All measurements and all calculations relating to gauging and determination of the density of the LNG, all measurements and all computations relating to the determination and testing of the quality and composition of the LNG shall be performed by Seller. A

representative of Buyer shall have the right to be present, but the absence of a duly summoned representative of Buyer shall not prevent either the carrying out of the measurements or the preparation of the calculations.

- (c) All parties shall have the right to inspect at all times and be present at the calibration of the measuring and testing equipment upon reasonable notice. All testing data, charts, calculations or any other similar information shall be made available to the parties and preserved for a period of not less than three years.
- 12.8. Accuracy of Measurements. (a) The accuracy of the instruments used shall be verified at the request of any party. Such verifications shall be made in the presence of the party requesting verification, in accordance with methods recommended by the manufacturers of the measuring instruments.
- instrument is found to result in errors of one percent or less of loaded LNG, such equipment's previous measurements shall be considered accurate for purposes of delivery calculations and such equipment shall be adjusted forthwith as necessary. If, at the time of verification, a measuring instrument is found to result in errors of more than one percent of LNG loaded, such equipment's previous measurements shall be brought to a zero difference by comparison with calibration results for any period known definitively or agreed to have been affected by such error, and the calculation of deliveries made

during said period shall be corrected accordingly; however, in the event that the period during which such error occurred is not definitively known or agreed upon, corrections shall be made for those quantities delivered during the last half of the period since the date of the last calibration.

- (c) Devices for measuring the level of LNG and temperature in the tanks of the LNG tankers, as well as chromatographs used for the analysis of regasified LNG, shall be devices offering the greatest reliability and the greatest accuracy known at the time of selection. The installation and operation of such equipment shall be carried out according to the manufacturers' specifications.
- 12.9. <u>Calibration</u>. All instruments and gauges used for computing the LNG delivered pursuant to this Agreement shall be calibrated in the following manner:
 - (a) Volume: in cubic meters (m³)
 - (b) Temperature: in degrees centigrade
 - (c) Pressure: on a dual scale calibrated in Bars or millibars on one side and pounds per square inch on the other.
- of the type and the accuracy of measuring instruments and their calibration, the result of a measurement, a sampling, an analysis, a calculation or the method of calculation, shall be referred to the Federal Polytechnical School of Zurich (Technische Hochschule von

Zürich). Any decision of such institution shall be binding on Seller and Buyer. Expenses incurred in connection with the services of such institution shall be borne equally by Seller and Buyer.

ARTICLE XIII

Conditions

- (a) delivery by December 31, 1987, by the competent Algerian authorities, on conditions acceptable to Buyer and Seller, of the required authorizations permitting the sale and export to the United States of America of the LNG which is the subject of this Agreement.
- (b) delivery by December 31, 1987, by the competent United States authorities, on conditions acceptable to Buyer and Seller, of the required authorizations permitting the import and sale in the United States of America of the LNG which is the subject of this Agreement.

Provided, that neither party shall invoke the

non-fulfillment by the respective dates of either or both of the said conditions precedent or contend that this Agreement shall not have entered into effect by reason thereof so long as there exists a reasonable possibility of implementing the project as contemplated herein, both as to form and substance, without substantial modification. The parties shall promptly notify each other of the issuance of relevant authorizations by the competent authorities mentioned above, and of their satisfaction or dissatisfaction therewith.

ARTICLE XIV

<u>Arbitration</u>

Subject to section 12.10 hereof, all disputes between Seller and Buyer arising out of or relating to this Agreement shall be definitively and finally settled by arbitration in Geneva, Switzerland, in accordance with the UNCITRAL Arbitration Rules as from time to time in force by three arbitrators named in accordance with such Rules, provided that the presiding arbitrator shall not be a national of Algeria or of the United States of America. The arbitration shall be conducted in the French and English languages. The appointing authority for the purposes of the said Rules shall be the Secretary-General of the Permanent Court of Arbitration at The Hague. The award of the arbitrators shall be final and binding upon the parties, and may if necessary be enforced by any court

or other competent authority. Save as aforesaid all rights of appeal or recourse to any court of law whatsoever are hereby excluded in relation to any arbitration hereunder and any award made therein.

ARTICLE XV

Disclaimer of Agency, Etc.

This Agreement does not constitute either party the agent, partner or legal representative of the other for any purposes whatsoever, and neither party shall have any express or implied right or authority to assume or to create any obligation or responsibility on behalf of or in the name of the other party.

ARTICLE XVI

Governing Law

This Agreement shall be governed by and construed in accordance with the laws of England.

ARTICLE XVII

Amendments

This Agreement may not be amended, modified or changed except by an instrument in writing signed by Seller and Buyer.

ARTICLE XVIII

<u>Authorizations</u>

Seller and Buyer shall use best efforts to obtain all permits, authorizations and approvals of the competent

authorities in Algeria and the United States of America, respectively, which are required for the performance of the transactions which are the subject of this Agreement and to maintain such authorizations in effect.

ARTICLE XIX

Secrecy

Confidential information or documents which may come to the attention of the parties in connection with the performance of this Agreement may not be used by or communicated to third parties without mutual agreement of the parties, provided that such information or documents:

- (a) may be communicated to lawyers and counsel, accountants, other professional consultants, underwriters or lenders of one of the parties, the party concerned being required to make such communication on a confidential basis, or
- (b) may be communicated to a competent Algerian or United States authority in accordance with the requirements of such authority.

The restriction imposed by this Article shall not apply to information or documents which have fallen into the public domain otherwise than through the act of the party hereto against which such restriction is invoked.

ARTICLE XX

Scope of the Agreement: Other Facilities

- 20.1. Entire Agreement. Except as provided in Article II, this Agreement constitutes the entire agreement between the parties and supersedes all other prior agreements, written or oral, between the parties relating to the subject matter hereof, if and to the extent that they are inconsistent herewith.
- 20.2. Other Facilities. The parties hereto may agree pursuant to Article XVII to make such modifications to this Agreement as may be appropriate to provide for the loading of the LNG sold by Seller to Buyer hereunder at a port located on the Algerian coast, other than Arzew, and for the discharge, storage and regasification of such LNG at a port located on the Gulf Coast or East Coast of the United States, other than Lake Charles, Louisiana.

ARTICLE XXI

Access to Regasification Facilities

Subject to section 3.2(b) and Article IX hereof,
Buyer represents and warrants that it shall have access
throughout the term of this Agreement to sufficient
capacity at its regasification facilities at Lake Charles,
Louisiana to perform all its obligations under this
Agreement.

ARTICLE XXII

Counterparts

This Agreement may be executed in any number of counterparts and each of such counterparts shall be deemed an original. All such counterparts shall together constitute a single instrument. The French and English versions of this Agreement shall be equally authoritative. The French version of this Agreement not having been completed on this date, the parties hereby agree to complete and sign such version as promptly as practicable.

ARTICLE XXIII

No Intermediaries

This Agreement has been concluded without the assistance or intervention, direct or indirect, of any broker, intermediary, commission agent, business agent or similar party (whether Algerian or non-Algerian). No fee nor any remuneration, commission, repayment or other payment has been made, and is not and will not be due, to any broker, intermediary, commission agent, business agent or similar party (whether Algerian or non-Algerian). The parties undertake to deal directly with each other as to any matter directly or indirectly related to this Agreement. The parties shall not permit, in their relationships with each other or in the relationships of any one of them with any government or administration, the

intervention of any broker, intermediary, commission agent, business agent or similar party (whether Algerian or non-Algerian). Buyer undertakes to indemnify Seller in the event Buyer violates any of the provisions of this Article and Seller undertakes to indemnify Buyer in the event Seller violates any of the provisions of this Article. The parties acknowledge, however, that they have used, and in the future may continue to use, in connection with this Agreement, the services of lawyers, accountants and other technical, maritime, financial and economic experts who have been and will be compensated for professional services actually rendered.

ARTICLE XXIV

Notices

Each notice, request, demand or other communication hereunder shall be in writing and shall be deemed to have been duly given when delivered by hand, or ten days after it is sent by mail, or one day after being sent by telex or telecopier (with receipt confirmed) provided a copy is also sent by mail, addressed as follows (or to such other address as a party may designate by notice to the other):

(a) If to Buyer:

Trunkline LNG Company
3000 Bissonnet Avenue
Houston, Texas 77005
Telecopier: (713) 669-3973
Telex: 763 750, Answerback: TLNG HOU UD
Attention: Chief Executive Officer

(b) If to Seller:

Sonatrading Amsterdam B.V., c/o De Brauw & Westbroek, De Lairessestraat 153, 1075 HK Amsterdam, THE NETHERLANDS Telecopier: (020) 790422 Telex: 10227

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

SONATRADING AMSTERDAM B.V.

By:_

TRUNKLINE LNG COMPANY

By: Danie

ANNEX A

Confidential

Form of Offer

NO.	
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[Date]

Sonatrading Amsterdam B.V. c/o De Brauw & Westbroek, De Lairessestraat 153 1075 HK Amsterdam, The Netherlands

This document is submitted pursuant to Article III of the LNG Purchase Agreement, dated April 26, 1987, ("the Agreement") between Sonatrading Amsterdam B.V. ("Seller") and Trunkline LNG Company ("Buyer").

Subject to all the terms and conditions (including definitions of capitalized terms) of the Agreement, particulars relating to the offer hereby made by Buyer to purchase LNG from Seller are as follows:

- 1. Approximate quantities of LNG to be delivered at port of loading in Algeria:
- 2. Estimated price (or price formula) f.o.b. port of loading in Algeria (the final price f.o.b. port of loading in Algeria will be determined in accordance with Article V of the Agreement):
- 3. Buyer's Customer:
- 4. Approximate delivery period(s):
- 5. Other conditions:

TRUNKLINE	LNG	COMPANY
Ву		

Confidential

Form of Acceptance

Sonatrading Amsterdam B.V., c/o De Brauw & Westbroek, De Lairessestraat 153, 1075 HK Amsterdam The Netherlands

Trunkline LNG Company 3000 Bissonnet Avenue Houston, Texas 77005

Gentlemen:

- 1. This document is delivered pursuant to the LNG Purchase Agreement ("the Agreement") dated 26 April, 1987, between Trunkline LNG Company ("Buyer") and Sonatrading Amsterdam B.V. ("Seller").
- 2. Seller hereby accepts the offer set forth in Buyer's Document No. ___ dated ____, and agrees on the terms of the Agreement to sell and deliver LNG to Buyer accordingly.

SONATRADING AMSTERDAM B.V.

By:

ANNEX C

Form of Loading Report Telex

Trunkline LNG Company
Telex Number 763750
Answerback TLNG HOU UE

Answerback TLNG	HOU UD	
Attention: Chief Ex	ecutive Officer	
1. Cargo Number:		
2. LNG Cargo Compos	ition	
	Component	Mole Percent
	Methane (C1) Ethane (C2) Propane (C3) Iso-Butane (IC 4) N-Butane (NC4) Iso-Pentane (IC5) N-Pentane (NC5) Hexanes Plus (C6+) Nitrogen (N2)	
	Total	•
3. Average Cargo T	emperature:	co
4. Calculated Dens McKinley):	ity (Klosek &	kg/m3
5. Real Gross Heat	ing Value:	KCAL/nM3
6. Cooldown Volume Cooldown Volume		m3 mmbtu
7. Volume on Board	at Initial Gauging:	8
8. Volume on Board	at Final Gauging	3
9. Quantities Load Quantities Load		
	Sonati	rading Amsterdam B.V.
	ву	

ANNEX D

CHARACTERISTICS OF THE COMPONENTS OF NATURAL CAS

AT NORMAL CONDITIONS 0°C/1.01325 BAR

	Molecular Mass kg:kgrol	Molar Volume NMG/kgmol	Molac GW kcal/kgnol	Density kg/Nn3	GAV kcal/Nm3 (real gas)	kcal/kg	critical c temperature %	critical absolute e atmosphéric pressure
Methane CH ₄	16.04	2.38	213,280	0.7167	9,530	13,297	190.7	45.80
Ethane CH6	30.07	22.17	373,7 86	1.3563	16,860	12,431	305.4	48.20
Propare C _H 8	44.09	21.84	531,804	2.0188	24,350	12,062	370.0	42.01
iso-Butane iC4H10	21.82	21.78	687,594	2.6695	31,570	11,831	408.1	36.00
n-Butane nC ₄ H ₁₀	58.12	21.50	689, 290	2.7033	32,060	11,860	425.2	37.47
iso-Pertane iC ₅ H ₁₂	72.15	21.03	844,354	3.4308	40,150	щ,703	461.0	32.9 0
n-Pertane nC ₅ H ₁₂	72.15	20.86	846,916	3.4588	40,600	11,738	469.8	33.31
Hexane nC ₆ H ₁₄	66.20	20.30	1,004,850	4.2463	49,500	11,657	507.9	29.92
Nitrogen N ₂	28.02	22.40		1.2509	i T	ı	126.4	33.53