



United States
Environmental Protection
Agency

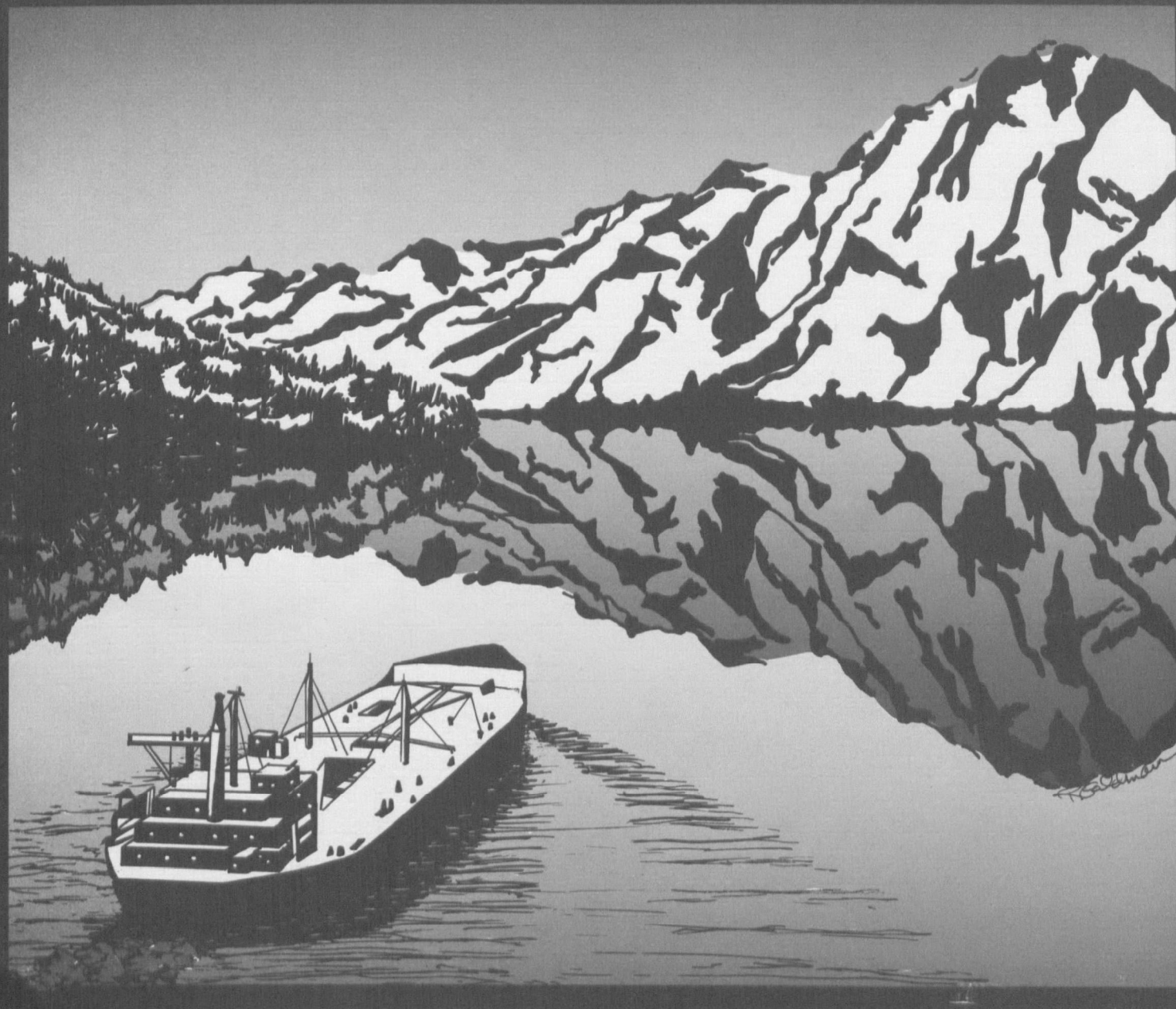
Region 10
1200 Sixth Avenue
Seattle WA 98101

EPA-10-AK-Valdez-NPDES-79
December 1979
EPA 910/9-79-064

Draft

Environmental Impact Statement

Alaska Petrochemical Company Refining and Petrochemical Facility Valdez, Alaska



DRAFT
ENVIRONMENTAL IMPACT STATEMENT

Alaska Petrochemical Company
Refinery and Petrochemical Facility
Valdez, Alaska

ATTACHMENT B

U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION X

1200 SIXTH AVENUE
SEATTLE, WASHINGTON 98101

DEC 11 1979



REPLY TO
ATTN OF: M/S 443

To: All Interested Government Agencies, Public Officials, Public Groups and Citizens

Pursuant to Section 102(2)(c) of the National Environmental Policy Act of 1969 and implementing Federal Regulations, I am forwarding for your review and comment this Draft Environmental Impact Statement (EIS) for the Alaska Petrochemical Company's (ALPETCO) proposed Refinery and Petrochemical Facility in Valdez, Alaska. ALPETCO has applied for a National Pollutant Discharge Elimination System (NPDES) Permit to discharge pollutant to navigable waters pursuant to the provisions of the Clean Water Act (Public Law 95-217). The proposed facility has been determined to be a New Source under Section 306 of the Clean Water Act and hence is subject to the provisions of the National Environmental Policy Act (83 Stat. 852) under Section 511(c) (1) of the Clean Water Act. Pursuant to 40 CFR Part 124.31(d), the draft New Source NPDES permit has been released for concurrent public review with this EIS. Please see the attached Notice for details.

The United States Environmental Protection Agency (EPA) will announce the availability of this document in the Federal Register on Friday, December 7, 1979, initiating a 59-day review and comment period. It is requested that comments on the draft EIS be submitted by 1 February 1980. Comments on the draft EIS should be submitted to Ms. Deborah Kirk, Environmental Evaluation Branch, Mail Stop 443, at the above address. Substantive comments on the draft EIS will be considered in the preparation of the final EIS.

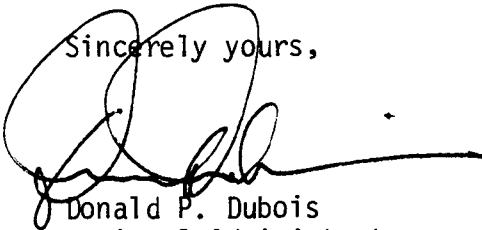
Please note that this draft EIS consists of a Text, Attachments and multiple technical appendices. All technical appendices were not distributed to all agencies and persons. If you need additional copies of the draft EIS or any of its technical appendices, please contact Deborah Kirk at the listed address or telephone (206) 442-4011 or (FTS) 399-4011. All volumes are available for review at the locations noted on the attached Notice.

Public hearings on the draft EIS and the draft New Source NPDES permit will be held in Anchorage, Valdez and Juneau on January 29, 30 and 31, 1980, respectively. Please see the attached Notice for details.

It should be noted that if changes to the proposed project and draft EIS are minor, the final EIS will consist primarily of: 1) a summary, 2) pages with modifications, addition and/or deletions as necessitated by the coordination and review process; and 3) a new coordination section containing comment letters received on the draft EIS with EPA's responses to those comments. Therefore, the draft EIS should be retained since it, along with the final EIS, will provide a full analysis of the environmental issues. The final EIS will be sent only to the agencies and interested parties who request a copy or make substantive comments on the draft.

If you need additional information, please contact Ms. Deborah Kirk at (206) 442-4011 or (FTS) 399-4011.

Sincerely yours,



Donald P. Dubois
Regional Administrator

Attachment

Attachment B

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EPA Permits

MEMORANDUM OF UNDERSTANDING

MEMORANDUM OF UNDERSTANDING
BETWEEN THE
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION X
AND

ALASKA PETROCHEMICAL COMPANY
(The Alpetco Company)

I. INTRODUCTION AND PURPOSE

It has been agreed between the parties hereto that Alaska Petrochemical Company (The Alpetco Company) (the "Applicant") will engage a Consultant for the preparation of an Environmental Impact Statement ("EIS") and other related documents, reports, or evaluations as those matters are defined and applied at 40 C.F.R. Part 6 in connection with the issuance of a National Pollutant Discharge Elimination System permit for construction and operation of a petrochemical facility (the "Project"). The EIS or other related documents must comply with all provisions of the National Environmental Policy act of 1969 ("NEPA"), as amended, and any and all regulations and/or guidance relating to NEPA, together with all local and state laws.

It is the purpose of this Memorandum of Understanding (the "MOU") to establish an understanding between the Applicant and the United States Environmental Protection Agency, Region X ("EPA") regarding the conditions and procedures to be followed in the preparation of the EIS or any other related documents.

II. GENERAL PROVISIONS

1. EPA is ultimately responsible for assuring compliance with the requirements of NEPA.
2. The Applicant will retain the joint-venture firm of CCC/HOK - DOWL* of Anchorage, Alaska (the "Consultant") to provide the supportive expertise, manpower, and technical capabilities required for preparation of the EIS. Any subcontractors retained by the Consultant will be subject to the same responsibilities and restrictions of the MOU as the Consultant.
3. The contract between the Applicant and the Consultant, and any subcontracts thereunder will be consistent with the provisions of this MOU and will specifically incorporate

*Crittenden Cassetta & Cannon/Hellmuth, Obata & Kassabaum -
Dickinson·Oswald·Walch·Lee

the provisions herein which address the conduct of the Consultant. Said contract will provide, and the Applicant hereby represents, except as provided in (3)(a), below, that the Consultant and any subcontractors to be employed by the Consultant do not, and will not, have any financial interests in the planning, design, construction, or operation of the proposed Project except with regard to the preparation of the EIS and/or other environmentally related studies on this project. Further, the contract with the Consultant and the contract of any subcontractor engaged to conduct any work related to this MOU will specifically state that neither the United States nor its officers or agents is a party thereto and accordingly will not be liable in any manner to the Consultants or subcontractors for costs arising out of any termination of the contract(s) or the MOU.

- a. The Applicant will direct the Consultant to provide EPA, within 30 days of execution of the MOU, a "Statement of Financial Interests" (the "SOFI") outlining ownership of stock, bonds, or other legal interests in the Applicant, by the Consultant, its officers, those other employees who will be assigned to work on this EIS, and any subcontractors or employees thereof assigned to the Project. The SOFI will also list any previous contracts, and total amounts of each, between the Applicant and the Consultant and subcontractor.
 - b. Within 30 days of the date of submission of the SOFI, EPA will determine what measures, if any, are necessary to be taken to insure the objectivity of the EIS, and the Applicant agrees to insure that such measures are taken.
4. The contract between the Applicant and the Consultant will require the satisfactory and timely performance and completion of work with the final responsibility for ensuring timely performance and completion of work to rest with EPA. A Draft EIS shall be submitted to EPA with a target date of 18 October 1979 and a Final EIS as expeditiously as possible thereafter. Further, the Applicant will ensure coordination of effort and exchange of information related to the planning, design, and construction of

the Project, as they relate to the preparation of the EIS among the Applicant's in-house staff, EPA representatives, the Consultant and other consultants employed by the Consultant for the development of the EIS.

5. Both the Applicant and EPA will:
 - a. Review all substantive phases of the EIS preparation.
 - b. Designate representatives to review all EIS work as it is developed and completed.
 - c. Have their respective representatives attend regular meetings with federal, state, regional, and local agencies for the purpose of increasing communication and receiving comments, as same may be required by law, in preparation of the EIS.
 - d. Ensure coordination of effort and exchange of information.
6. All costs incurred in connection with the employment of the Consultant or any other entity participating in the preparation of the EIS under contract with the Applicant will be the sole responsibility of the Applicant and the Applicant agrees to hold harmless and indemnify EPA with respect to any and all claims, demands, causes of action, and the like which may arise from the performance of the consulting contract or any other services or purchases of materials utilized for the preparation of the EIS. This agreement does not apply to lawsuits in which EPA is a defendant on the issue of the adequacy of the Final EIS. In this situation the EPA will defend the EIS at its expense. The Applicant and/or its consultants/contractors shall, however, cooperate in the defense and provide witnesses where appropriate.

III. PROCEDURES

1. EPA in consultation with the Applicant and the Consultant will finalize a Plan of Study ("POS") which establishes the scope of work, schedule, etc., (scope of work previously agreed upon by Applicant, EPA and the State of Alaska Department of Environmental Conservation ("DEC")) required of the Consultant in

preparation of the EIS. In general, the POS shall be based upon a detailed description of all work to be performed, the persons performing each task, the estimated work hours required for each task, and the schedule for performing each task. In particular, the POS shall be based upon (1) a description of the facilities to be constructed, including a site plan (2) the Company's analysis of alternate sites (3) an identification and quantification of all waste streams (4) a description of all proposed waste treatment and disposal processes (5) a description of the refinery and petrochemical plant process which identifies the major steps and the sequence in which they occur (6) an estimate of the quantities of raw materials and energy to be used in constructing and operating the facility (7) a description of the construction methods to be used (8) a proposed construction schedule (9) any other items which the Applicant or Consultant feel are necessary to be included in the POS. The information will be supplied by the Applicant.

2. The Consultant will be responsible for submitting a draft POS to EPA and the Applicant. The POS will be finalized by EPA in consultation with the Applicant and the Consultant.
3. The POS and the scope of work may be amended by EPA from time to time as the project proceeds, but any amendments which require the expenditure of additional funds by the Applicant must be agreed to by the Applicant.
4. Any and all work performed by the Consultant in preparation of the EIS will be submitted directly to EPA by the Consultant. Simultaneously, the Consultant will furnish copies of its work to the Applicant, but in no case will the Applicant review, modify, or edit the Consultant's work prior to submission to EPA, or be provided the opportunity to do so. The Applicant will provide copies of the Consultant's work to DEC in a timely manner.
5. EPA reserves the right to review periodically and modify the work of the Consultant to insure that EPA's requirements under NEPA are satisfied. The Consultant will submit a monthly progress report to EPA and the Applicant. This report will address the present status of each task, any problems encountered, any recommendations for modifications to the POS, and any changes made in

personnel or methodology. As each portion of any draft or final document is completed, the responsible EPA official will review such portion and those tasks completed thereunder and be given an opportunity to approve, modify, or comment thereon or direct further work with regard to such portion or tasks. Approval of any portion of the plan is contingent upon approval of the final plan in its entirety. Such directions or comments will be made by EPA in a timely manner. The Consultant shall incorporate the EPA comments into the text of the relevant documents. Final drafts of any documents will be submitted, as prepared, to EPA and the Applicant for review and to EPA for approval.

6. In all instances involving questions as to the content or relevance of any material (including all data, analyses, and conclusions) prepared by the Consultant, EPA will make the final determination on the inclusion or deletion of any such material in documents produced for the EIS; provided however, that where permitted by NEPA regulations governing the preparation of an EIS, the Applicant or the Consultant may supplement by addendum any material included or excluded by direction of EPA from the text of any given report.
7. The Applicant will direct the Consultant to provide, to the extent requested by EPA, access and review of all procedures and underlying data used by the Consultant in developing any and all reports, including, but not limited to, field reports, subcontractor reports, and interviews with concerned private and public parties, whether or not such information may be reflected in a draft or final report submitted to EPA.
8. To coordinate the EIS preparation, joint meetings between the Applicant, EPA, and the Consultant will be held. DEC will be notified and invited to participate in these meetings. However, EPA reserves the right to work directly with the Consultant for purposes of assuring objectivity in preparing reports or for assuring expeditious communications. When meetings or conversations between EPA and the Consultant occur without the participation of the Applicant, the Consultant will furnish written documentation to the Applicant on these events, with a copy to EPA. Likewise, should meetings or conversations concerning the preparation of

the EIS between the Applicant and the Consultant occur without the participation of EPA, the Consultant will furnish written documentation to EPA reporting on all matters discussed relating to these events. The Applicant shall not direct the modification, exclusion or inclusion of any data, evaluations, or other material pertinent to the preparation of the EIS. EPA further reserves the right to consult directly with other federal, state, and local officials during EIS preparation to assure compliance with NEPA.

9. The Applicant will ensure the full cooperation of the Consultant and any other subcontractors with respect to participating in any public workshops, hearings, meetings, and the like, as required by EPA to foster public familiarity or participation with respect to the assessment of impacts related to the subject project.
10. With respect to all reports and documents, including draft and final copies of the EIS, the Applicant will be responsible for the costs of stenographic, clerical, graphics, layout, printing, and the like, and the Applicant will be solely responsible for the aforesaid costs in preparing and providing to EPA twenty (20) copies of both an EIS draft and final report, to include one "camera ready" copy sufficient for reproduction and distribution.
11. Upon completion of the draft EIS, EPA will be responsible for organizing and conducting any public hearing under 40 C.F.R. Part 6. EPA will also be the recipient of all comments during the draft EIS review and comment period. This period (at least 45 days) will be initiated when the EPA's Office of Federal Activities in Washington, D.C. publishes the "Draft EIS Notice of Availability" in the Federal Register.
12. At the close of the draft EIS review and comment period, EPA will identify the issues and comments submitted which will require response in the final EIS. EPA will direct those comments to the Consultant for preparation of proposed responses. The Consultant will furnish proposed responses to EPA and the Applicant for review. EPA may modify the proposed responses as it determines necessary.

Upon completion of any such responses, EPA will provide same to the Applicant and to the Consultant for inclusion in the final EIS. The Consultant will make editorial changes to the text of the draft EIS, as necessary, and as directed by EPA.

IV. TERMINATION

1. Either party to the MOU may terminate this agreement upon 30 days advance written notice to the other party.
2. In the event of a termination of the MOU or the consulting contract, it is agreed as follows:
 - a. The Applicant will assure that copies of all documentation, reports, analyses, data, etc., developed by the Consultant are delivered to EPA.
 - b. EPA will assume the responsibility for preparing the EIS should an EIS be required.
 - c. The Applicant will hold harmless EPA, its officers, agents, and employees, from any claims, demands, causes of action and the like, which may arise from such a termination and will indemnify EPA, its officers, agents, and employees for any losses arising there from (other than administrative or legal costs of EPA itself).

V. DISPUTES RESOLUTION

1. If, after a good faith effort by representatives of both parties, a dispute arising as a result of this Memorandum of Understanding cannot be resolved, the Regional Administrator may require written or oral arguments to be presented on the issue.
2. After presentation of the arguments, the Regional Administrator will render a final decision. This decision shall be binding on the parties.

VI. MODIFICATION

The MOU may be modified by the parties hereto only by a mutually agreed upon written amendment.

VII. INTERPRETATION AND INTEGRATION

This MOU is intended to be read and interpreted as an integrated whole.

ALASKA PETROCHEMICAL COMPANY
(The Alpetco Company)

BY 
MANAGER, ENVIRONMENTAL PROGRAMS

Dtd 3 Nov 78

ENVIRONMENTAL PROTECTION AGENCY
REGION 10

BY 
DEPUTY REGIONAL ADMINISTRATOR

Dtd NOV 3 1978

NPDES PERMIT APPLICATION

ALASKA PETROCHEMICAL COMPANY

601 WEST 5TH AVENUE
ANCHORAGE, ALASKA 99501
TELEPHONE 907 272-1517 TELEX 090-25157

September 19, 1979

Michael M. Johnston, Chief
New Source Permit Section
U.S. Environmental Protection Agency
Region X
1200 Sixth Avenue
Seattle, Washington 98101

Attn: Mail Stop 521

Re: NPDES Permit Application No.: AK-002763-4

Dear Mr. Johnston:

Enclosed is the updated NPDES permit application you requested in your letter of July 23, 1979.

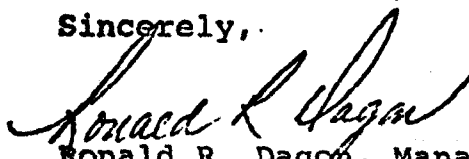
In order to expedite review of this application as you previously suggested, copies are also being furnished to:

Alaska Operations Office, EPA (Anchorage)
Environmental Evaluation Branch, EPA (Seattle)
Alaska Department of Environmental Conservation (Juneau)

As both you and Sylvia Kawabata are well aware, definitive characterization of the final effluent from this facility cannot be made at this time, but this application does represent a best effort. Please feel free to ask for additional information or to provide further input to this office.

Thank you for your previous consideration and interest in this matter. I am certainly looking forward to continuing working with you and all concerned at both the state and federal level in this important area of interest.

Sincerely,



Ronald R. Daggon, Manager
Environmental Programs and Permitting

Enclosure

cc: Alpetco-Houston (Hanzlik, Carmichael)
CE-Lumnus (Irving)
Burr, Pease & Kurtz, Inc. (Sedwick)
Department of Natural Resources, State of Alaska (LeResche)
CCC/HOK-DOWL (Paulson)
Alpetco-Anchorage (Anderson)

FOR AGENCY USE									

Please refer to: AK-002763-4
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATERSTANDARD FORM C - MANUFACTURING AND COMMERCIAL-update from
September 12, 1978

SECTION I. APPLICANT AND FACILITY DESCRIPTION

Unless otherwise specified on this form all items are to be completed. If an item is not applicable indicate 'NA.'

ADDITIONAL INSTRUCTIONS FOR SELECTED ITEMS APPEAR IN SEPARATE INSTRUCTION BOOKLET AS INDICATED. REFER TO BOOKLET BEFORE FILLING OUT THESE ITEMS.

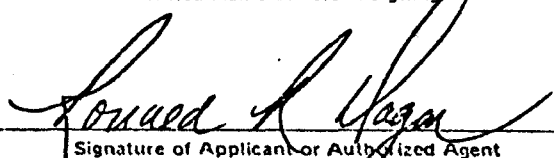
Please Print or Type

1. Legal Name of Applicant (see Instructions)	101	<u>Alaska Petrochemical Company, an Alaskan</u> <u>corporation (hereinafter called "Alpetco")</u>	
2. Mailing Address of Applicant (see Instructions)			
Number & Street	102a	<u>3700 Buffalo Speedway, Suite 806</u>	
City	102b	<u>Houston</u>	
State	102c	<u>Texas</u>	
Zip Code	102d	<u>77098</u>	
3. Applicant's Authorized Agent (see Instructions)			
Name and Title	103a	<u>Ronald R. Dagon</u> <u>Manager, Environmental Programs and Permitting</u>	
Number & Street Address	103b	<u>601 West 5th Ave., Suite 320</u>	
City	103c	<u>Anchorage</u>	
State	103d	<u>Alaska</u>	
Zip Code	103e	<u>99501</u>	
Telephone	103f	<u>907</u>	<u>272-1517</u>
		Area Code	Number
4. Previous Application If a previous application for a National or Federal discharge per- mit has been made, give the date of application. Use numeric designation for date.	104	<u>78</u> <u>9</u> <u>12</u> YR MO DAY	

I certify that I am familiar with the information contained in this application and that to the best of my knowledge and belief such information is true, complete, and accurate.

Ronald R. Dagon

Printed Name of Person Signing



Signature of Applicant or Authorized Agent

102e

Manager, Environmental Programs

Title and Permitting

79 9 19
YR MO DAY

102f

Date Application Signed

18 U.S.C. Section 1001 provides that:

Whoever, in any matter within the jurisdiction of any department or agency of the United States knowingly and wilfully falsifies, conceals or covers up by any trick, scheme, or device a material fact, or makes any false, fictitious or fraudulent statement or representation, or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both.

Received _____
YR MO DAY

B-12

OFFICE: _____ EPA Region Number
_____ State

5. Facility/Activity (see instructions) Give the name, ownership, and physical location of the plant or other operating facility where discharge(s) does or will occur.

Name

Ownership (Public, Private or Both Public and Private)

Check block if Federal Facility and give GSA Inventory Control Number

Location

Street & Number

City

County

State

6. Nature of Business State the nature of the business conducted at the plant or operating facility.

7. Facility Intake Water (see instructions) Indicate water intake volume per day by sources. Estimate average volume per day in thousand gallons per day.

Municipal or private water system

Surface water

Groundwater

Other*

Total Item 7

*If there is intake water from 'other,' specify the source.

8. Facility Water Use Estimate average volume per day in thousand gallons per day for the following types of water usage at the facility. (see instructions)

Noncontact cooling water

Boiler feed water

Process water (including contact cooling water)

Sanitary water

Other*

Total Item 8

*If there are discharges to 'other,' specify.

If there is 'Sanitary' water use, give the number of people served.

FOR AGENCY USE

Alpetco refinery and petrochemical facility

☐ PUB ☒ PRV ☐ DPP

☐ FED

(see separate sheet "Additional information" pg.I-4

Valdez

NA

Alaska

Processing of approximately 150,000 bpd of Alaska North Slope crude oil to produce fuels and petrochemicals.

AGENCY USE



0

thousand gallons per day

0

thousand gallons per day

1,730

thousand gallons per day

5,630

thousand gallons per day

7,360

thousand gallons per day

*ballast water 2,995, treated storm water 1,584, untreated storm water 1,051

0

thousand gallons per day

316

thousand gallons per day

1,384

thousand gallons per day

30

thousand gallons per day

thousand gallons per day

1,730

thousand gallons per day *

*difference between intake water and water use is 5,630 (ballast and storm water)

600

people served

FOR AGENCY USE

9. All Facility Discharges and other Losses; Number and Discharge (see Instructions) Volume Specify the number of discharge points and the volume of water discharged or lost from the facility according to the categories below. Estimate average volume per day in thousand gallons per day.

		Number of Discharge Points	Total Volume Used or Discharged, Thousand Gal/Day	
Surface Water	109a1	1	109a2	7,079 *
Sanitary wastewater transport system	109b1	NA	109b2	30 **
Storm water transport system	109c1		109c2	
Combined sanitary and storm water transport system	109d1		109d2	
Surface impoundment with no effluent	109e1		109e2	
Underground percolation	109f1		109f2	
Well Injection	109g1		109g2	
Waste acceptance firm	109h1		109h2	
Evaporation	109i1	NA	109i2	251
Consumption	109j1		109j2	
Other*	109k1		109k2	
Facility discharges and volume Total Item 9.	109l1		109l2	7,360
*If there are discharges to 'other,' specify.	109m1			

*assume all storm water collected from plant is discharged through single outfall

**via sewer line to the City of Valdez

10. Permits, Licenses and Applications

List all existing, pending or denied permits, licenses and applications related to discharges from this facility (see Instructions).

	Issuing Agency	For Agency Use	Type of Permit or License	ID Number	Date Filed YR/MO/DA	Date Issued YR/MO/DA	Date Denied YR/MO/DA	Expiration Date YR/MO/DA
110	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1.	ADEC		reasonable assurance	DEC-7	79/9/-			
2.	ADEC		waste water disposal	DEC-25	79/9/-			
3.	ADNR		water use	DNR-22	79/9/-			

11. Maps and Drawings

Attach all required maps and drawings to the back of this application.(see Instructions) see 12 below:

12. Additional Information

Item Number	Information
11	Schematic of water flow attached (Figure A)
11	Location map (Figure B)
5	Facility location map (Figure C)

"Additional Information"

The Alpetco facility is to be built on land leased from the City of Valdez; the route of the treated wastewater outfall will also be on land owned and/or controlled by the City of Valdez. A facility location map is provided in Figure C.

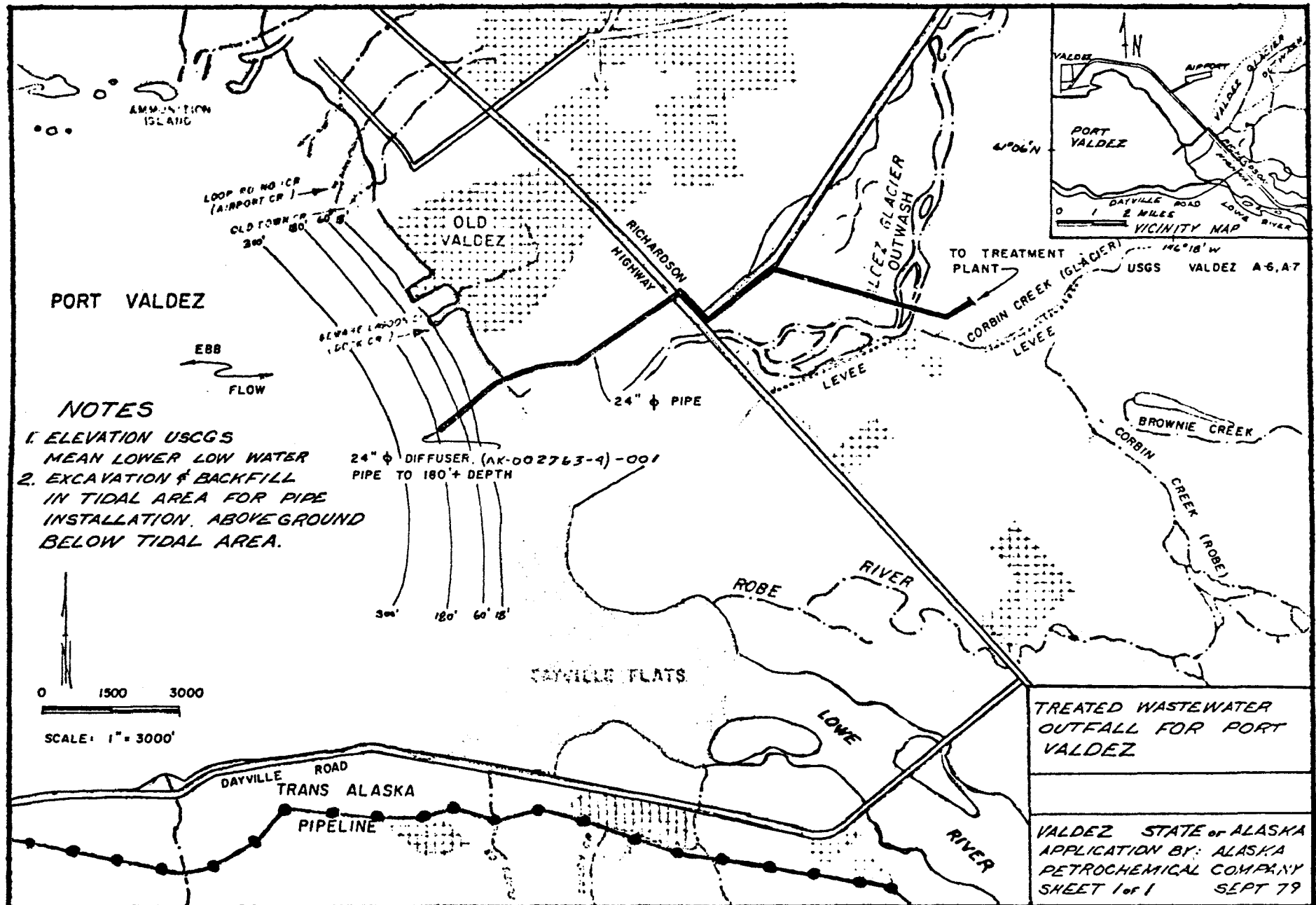


FIGURE B

B-17

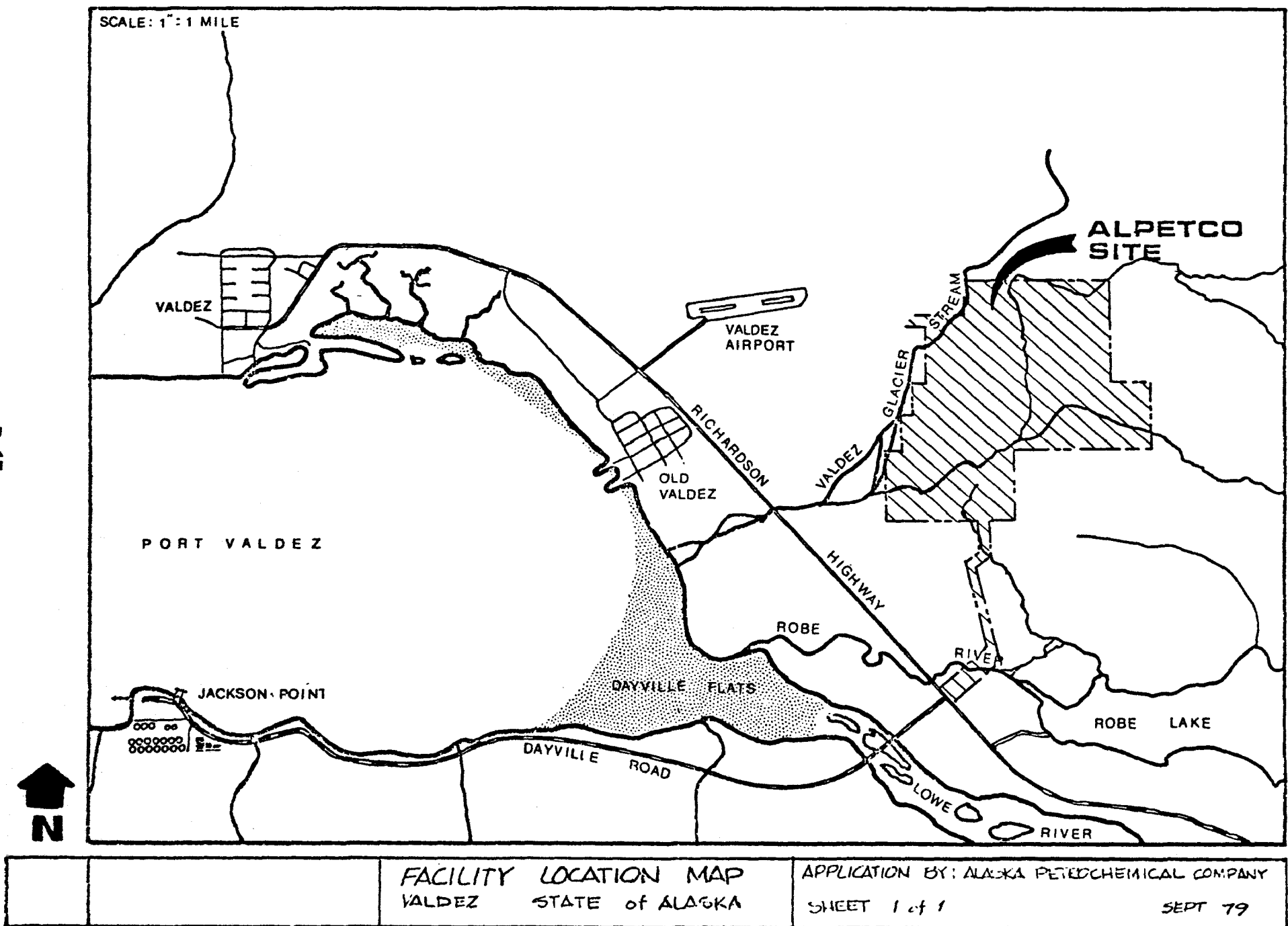


FIGURE C

STANDARD FORM C - MANUFACTURING AND COMMERCIAL

FOR AGENCY USE									

SECTION II. BASIC DISCHARGE DESCRIPTION

Complete this section for each discharge indicated in Section I, Item 9, that is to surface waters. This includes discharges to municipal sewerage systems in which the wastewater does not go through a treatment works prior to being discharged to surface waters. Discharges to wells must be described where there are also discharges to surface waters from this facility. SEPARATE DESCRIPTIONS OF EACH DISCHARGE ARE REQUIRED EVEN IF SEVERAL DISCHARGES ORIGINATE IN THE SAME FACILITY. All values for an existing discharge should be representative of the twelve previous months of operation. If this is a proposed discharge, values should reflect best engineering estimates.

ADDITIONAL INSTRUCTIONS FOR SELECTED ITEMS APPEAR IN SEPARATE INSTRUCTION BOOKLET AS INDICATED. REFER TO BOOKLET BEFORE FILLING OUT THESE ITEMS.

1. Discharge Serial No. and Name

a. Discharge Serial No.
(see instructions)

201a 001

b. Discharge Name
Give name of discharge, if any.
(see instructions)

201b main plant discharge

c. Previous Discharge Serial No.
If previous permit application
was made for this discharge (see
Item 4, Section I), provide previ-
ous discharge serial number.

201c NA

2. Discharge Operating Dates

a. Discharge Began Date If the
discharge described below is in
operation, give the date (within
best estimate) the discharge
began.

202a NA
YR MO

b. Discharge to Begin Date If the
discharge has never occurred but
is planned for some future date,
give the date (within best esti-
mate) the discharge will begin.

202b 83 6
YR MO

c. Discharge to End Date If dis-
charge is scheduled to be discon-
tinued within the next 5 years,
give the date (within best esti-
mate) the discharge will end.

202c NA
YR MO

3. Engineering Report Available

Check if an engineering report is
available to reviewing agency upon
request. (see instructions)

203 ☒ (see separate sheet "Additional information"
pg II-10)4. Discharge Location Name the
political boundaries within which
the point of discharge is located.

State

204a Alaska

County

204b NA

(if applicable) City or Town

204c Valdez

Agency Use

204d _____

204e _____

204f _____

5. Discharge Point Description

Discharge is into (check one);
(see instructions)

Stream (includes ditches, arroyos,
and other intermittent watercourses)

205a ☐ STR

Lake

☐ LKE

Ocean via Port Valdez

☒ OCE

Municipal Sanitary Wastewater
Transport System

☐ MTS

Municipal Combined Sanitary and
Storm Transport System

☐ MCS

B-18

001

FOR AGENCY USE

Municipal Storm Water Transport System

Well (Injection)

Other

If 'other' is checked, specify

☐ STS☐ WEL☐ OTH

6. Discharge Point — Lat/Long Give the precise location of the point of discharge to the nearest second.

Latitude

Longitude

7. Discharge Receiving Water Name Name the waterway at the point of discharge. (see instructions)

If the discharge is through an outfall that extends beyond the shoreline or is below the mean low water line, complete Item 8.

8. Offshore Discharge

- a. Discharge Distance from Shore
- b. Discharge Depth Below Water Surface

9. Discharge Type and Occurrence

- a. Type of Discharge Check whether the discharge is continuous or intermittent. (see instructions)
- b. Discharge Occurrence Days per Week Enter the average number of days per week (during periods of discharge) this discharge occurs.
- c. Discharge Occurrence — Months If this discharge normally operates (either intermittently, or continuously) on less than a year-around basis (excluding shutdowns for routine maintenance), check the months during the year when the discharge is operating. (see instructions)

Complete Items 10 and 11 if "intermittent" is checked in Item 9.a. Otherwise, proceed to Item 12.

10. Intermittent Discharge Quantity State the average volume per discharge occurrence in thousands of gallons.

11. Intermittent Discharge Duration and Frequency

- a. Intermittent Discharge Duration Per Day State the average number of hours per day the discharge is operating.
- b. Intermittent Discharge Frequency State the average number of discharge occurrences per day during days when discharging.

12. Maximum Flow Period Give the time period in which the maximum flow of this discharge occurs.

205b

206a

206b

207a

207b

208a

208b

209a

209b

209c

210

211a

211b

212

146 DEG 16 MIN 36 SEC

61 DEG 06 MIN 39 SEC

Port Valdez

For Agency Use

Major	Minor	Sub

207c

For Agency Use

303e

1,200 feet from MLLW*

180+ feet MLLW*

*see separate sheet
"additional information"
pg. II-10

☒ (con) Continuous☐ (int) Intermittent

7 days per week

☐ JAN ☐ FEB ☐ MAR ☐ APR☐ MAY ☐ JUN ☐ JUL ☐ AUG☐ SEP ☐ OCT ☐ NOV ☐ DEC

(not seasonal)

_____ thousand gallons per discharge occurrence.

_____ hours per day

_____ discharge occurrences per day

From 6 to 10
mon

001

FOR AGENCY USE									

13. Activity Description Give a narrative description of activity producing this discharge.(see instructions)

213a (see separate sheet "Additional information" pg. II-11)

14. Activity Causing Discharge For each SIC Code which describes the activity causing this discharge, supply the type and maximum amount of either the raw material consumed (Item 14a) or the product produced (Item 14b) in the units specified in Table I of the Instruction Booklet. For SIC Codes not listed in Table I, use raw material or production units normally used for measuring production.(see instructions)

a. Raw Materials

	SIC Code	Name	Maximum Amount/Day	Unit (See Table I)	Shared Discharges (Serial Number)
214a	(1)	(2)	(3)	(4)	(5)
	2911	crude oil	160	S-1	001

b. Products NA

	SIC Code	Name	Maximum Amount/Day	Unit (See Table I)	Shared Discharges (Serial Number)
214b	(1)	(2)	(3)	(4)	(5)

001

FOR AGENCY USE

15. Waste Abatement

- a. Waste Abatement Practices
Describe the waste abatement practices used on this discharge with a brief narrative. (see instructions)

215a

Narrative: (see separate sheet "Additional information"
pg. II-12)

- b. Waste Abatement Codes
Using the codes listed in Table II of the Instruction Booklet, describe the waste abatement processes for this discharge in the order in which they occur if possible.

215b

(1) <u>FSEPAR</u>	(2) <u>ESEGRE</u>	(3) <u>ESURFA</u>
(4) <u>EMERGE</u>	(5) <u>EPUMPS</u>	(6) <u>DREACT</u>
(7) <u>DDOWNG</u>	(8) <u>DHYSIC</u>	(9) <u>RECOVE</u>
(10) <u>RDOWNG</u>	(11) <u>RUSEOR</u>	(12) <u>RECYCL</u>
(13) <u>RHEATR</u>	(14) <u>LOCALS</u>	(15) <u>LEVAPO</u>
(16) <u>LUSEOF</u>	(17) <u>OMONIT</u>	(18) <u>OOTHER</u>
(19) <u>PEQUAL</u>	(20) <u>PSCREE</u>	(21) <u>PSEDIM</u>
(22) <u>PFLOAT</u>	(23) <u>PSKIMC</u>	(24) <u>PSEPAR</u>
(25) <u>PSANDF</u>	(26) <u>CNEUTR</u>	(27) <u>CPHADJ</u>
(28) <u>CFLOCC</u>	(29) <u>BACTIV</u>	(30) <u>BAERAT</u>
(31) <u>BPOLIS</u>	(32) <u>STHICK</u>	(33) <u>SLAG00</u>
(34) <u>SDRYCO</u>	(35) <u>SLANDD</u>	(36) <u>MUNDIS</u>

001

FOR AGENCY USE									

16. Wastewater Characteristics

Check the box beside each constituent which is present in the effluent (discharge water). This determination is to be based on actual analysis or best estimate. (see instructions)

Parameter 216	Present	Parameter 216	Present
Color 00080		Copper 01042	
Aminonia 00610	X	Iron 01045	X
Organic nitrogen 00605		Lead 01051	
Nitrate 00620		Magnesium 00927	X
Nitrite 00615		Manganese 01055	X
Phosphorus 00665	X	Mercury 71900	
Sulfate 00945	X	Molybdenum 01062	
Sulfide 00745		Nickel 01067	X
Sulfite 00740		Selenium 01147	
Bromide 71870		Silver 01077	
Chloride 00940	X	Potassium 00937	X
Cyanide 00720	X	Sodium 00929	X
Fluoride 00951	X	Thallium 01059	
Aluminum 01105	X	Titanium 01152	
Antimony 01097		Tin 01102	
Arsenic 01002		Zinc 01092	
Beryllium 01012		Algicides* 74051	
Barium 01007		Chlorinated organic compounds* 74052	
Boron 01022		Pesticides* 74053	
Cadmium 01027		Oil and grease 00550	X
Calcium 00916	X	Phenols 32730	X
Cobalt 01037		Surfactants 38260	
Chromium 01034		Chlorine 50060	X
Fecal coliform bacteria 74055		Radioactivity* 74050	

*Specify substances, compounds and/or elements in Item 26.

Pesticides (insecticides, fungicides, and rodenticides) must be reported in terms of the acceptable common names specified in *Acceptable Common Names and Chemical Names for the Ingredient Statement on Pesticide Labels*, 2nd Edition, Environmental Protection Agency, Washington, D.C. 20250, June 1972, as required by Subsection 162.7(b) of the Regulations for the Enforcement of the Federal Insecticide, Fungicide, and Rodenticide Act.

001

FOR AGENCY USE

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17. Description of Intake and Discharge

For each of the parameters listed below, enter in the appropriate box the value or code letter answer called for. (see instructions)

In addition, enter the parameter name and code and all required values for any of the following parameters if they were checked in Item 16; ammonia, cyanide, aluminum, arsenic, beryllium, cadmium, chromium, copper, lead, mercury, nickel, selenium, zinc, phenols, oil and grease, and chlorine (residual).

Parameter and Code 217a	Influent		Effluent					
	Untreated Intake Water (Daily Average) (1)	In-Plant Treated Intake Water (Daily Average) (2)	Daily Average (3)	Minimum Value Observed or Expected During Discharge Activity (4)	Maximum Value Observed or Expected During Discharge Activity (5)	Frequency of Analysis (6)	Number of Analyses (7)	Sample Type (8)
Flow* Gallons per day (MGD) 00055 50050	(1) 2.995	(2) 1.730	(4) 7.079	(5) 4.084	(6) 9.530			
pH Units 00400		(3) 6.7		6	9			
Temperature (winter) ° F 74028			Amb	Amb	Amb			
Temperature (summer) ° F 74027			Amb	Amb	Amb			
Biochemical Oxygen Demand (BOD 5-day) mg/l 00310	155		10	10	10			
Chemical Oxygen Demand (COD) mg/l 00340	420		135	NA	250			
Total Suspended (nonfilterable) Solids mg/l 00530	85	(3) <0.2	<5	NA	10			
Specific Conductance micromhos/cm at 25° C 00095		(3) 140		NA	NA			
Settleable Matter (residue) ml/l 00545				NA	NA			

*Other discharges sharing intake flow (serial numbers). (see instructions)

- (1) Ballast water.
- (2) Ground Water
- (3) As per Water Analysis provided by DOWL Engineers on sample - Well B-3.
- (4) Includes Process, Ballast and Stormwater Discharge.
- (5) Stormwater and Process water only.
- (6) Process, Stormwater and Maximum Ballast Water Flow.

DISCHARGE SERIAL NUMBER

001

FOR AGENCY USE									

17. (Cont'd.)

Parameter and Code	Influent		Effluent					
	Untreated Intake Water (Daily Average) (1)	In-Plant Treated Intake Water (Daily Average) (2)	Daily Average (3)	Minimum Value Observed or Expected During Discharge Activity (4)	Maximum Value Observed or Expected During Discharge Activity (5)	Frequency of Analysis (6)	Number of Analyses (7)	Sample Type (8)
Ammonia (mg/l)	-	-	~ 7					
Aluminum (mg/l)	-	-	Trace					
Phenols (mg/l)			< 0.02	✓				
Oil & Grease (mg/l)			(0)					
Chlorine (mg/l)			< 0.01					
Nickel (mg/l)			~ 0.5					
Cyanide (mg/l)			~ 0.5					

18. Plant Controls Check if the following plant controls are available for this discharge.

Alternate power source for major pumping facility.

Alarm or emergency procedure for power or equipment failure

Complete item 19 if discharge is from cooling and/or steam water generation and water treatment additives are used.

19. Water Treatment Additives If the discharge is treated with any conditioner, inhibitor, or algicide, answer the following:

a. Name of Material(s)

b. Name and address of manufacturer

c. Quantity (pounds added per million gallons of water treated).

218

☒ APS

☒ ALM

219a

Not yet determined

219b

219c

001

FOR AGENCY USE

d. Chemical composition of these additives (see instructions).

219d

Complete Items 20-25 if there is a thermal discharge (e.g., associated with a steam and/or power generation plant, steel mill, petroleum refinery, or any other manufacturing process) and the total discharge flow is 10 million gallons per day or more. (see instructions)

(thermal discharge not anticipated and total discharge flow is less than 10 mgd)

20. Thermal Discharge Source Check the appropriate item(s) indicating the source of the discharge. (see instructions)

220

Boiler Blowdown

Boiler Chemical Cleaning

Ash Pond Overflow

Boiler Water Treatment — Evaporator Blowdown

Oil or Coal Fired Plants — Effluent from Air Pollution Control Devices

Condense Cooling Water

Cooling Tower Blowdown

Manufacturing Process

Other

☐ BLBD☐ BCCL☐ APOF☐ EPBD☐ OCFP☐ COND☐ CTBD☐ MFPR☐ OTHR

21. Discharge/Receiving Water Temperature Difference

Give the maximum temperature difference between the discharge and receiving waters for summer and winter operating conditions. (see instructions)

Summer

221a

_____ °F.

Winter

221b

_____ °F.

22. Discharge Temperature, Rate of Change Per Hour

222

_____ °F./hour

Give the maximum possible rate of temperature change per hour of discharge under operating conditions. (see instructions)

23. Water Temperature, Percentile Report (Frequency of Occurrence)

In the table below, enter the temperature which is exceeded 10% of the year, 5% of the year, 1% of the year and not at all (maximum yearly temperature). (see instructions)

Frequency of occurrence

a. Intake Water Temperature (Subject to natural changes)

223a

b. Discharge Water Temperature

223b

10%	5%	1%	Maximum
_____ °F	_____ °F	_____ °F	_____ °F
_____ °F	_____ °F	_____ °F	_____ °F

24. Water Intake Velocity (see instructions)

224

_____ feet/sec.

25. Retention Time Give the length of time, in minutes, from start of water temperature rise to discharge of cooling water. (see instructions)

225

_____ minutes

DISCHARGE SERIAL NUMBER

001

FOR AGENCY USE									

26. Additional Information

226

Item

Information

3

Engineering - see separate sheet pg II-10

8

Offshore discharge - see separate sheet pg II-10

13

Activity description - see separate sheet pg II-11

15

Waste abatement practices - see separate sheet pg II-12

"Additional Information"

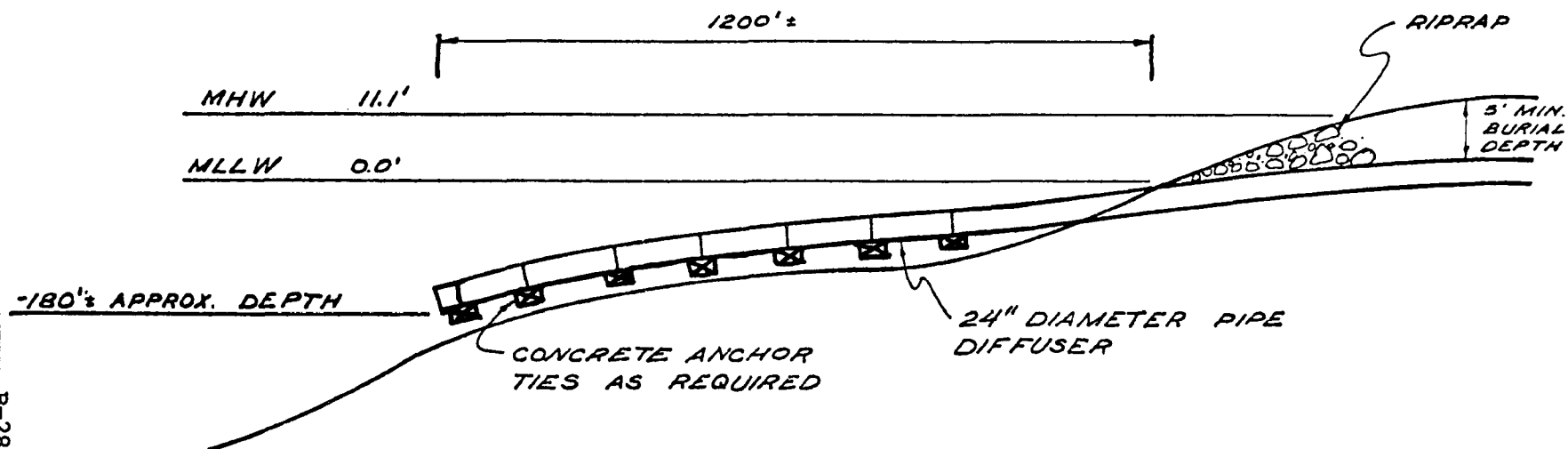
3. Engineering Report Available

While no definitive engineering report exists for this facility at present, the scheme presented represents a best effort from Alpetco, Brown & Root, and CE-Lummus at providing a state-of-the-art, best-control technology conceptual design. The conceptual design has been reviewed by Pace under its scope of work during preparation of the Draft EIS as well as by numerous representatives of CCC/HOK-DOWL and state (ADEC) and federal agencies (EPA).

Additional information as to design criteria and assumptions as well as preliminary cost estimates can be provided upon request.

8. Offshore Discharge

Note the attached drawing illustrating the proposed location and design of the discharge (Figure D).



NOTES

1. INSTALLATION IN TIDAL ZONE WILL BE EXCAVATION, INSTALLATION AND BACKFILL.
2. BELOW TIDAL ZONE THE PIPE AND DIFFUSER WILL BE SUPPORTED ON CONCRETE ANCHORS.
3. ELEVATION USCGS.
4. DRAWING NOT TO SCALE.

TREATED WASTEWATER
OUTFALL TO PORT
VALDEZ

VALDEZ STATE OF ALASKA
APPLICATION BY: ALASKA
PETROCHEMICAL COMPANY
SHEET 1 OF 1 1 SEPT 79

FIGURE D

"Additional Information"

13. Description of Activity

Crude oil from tankage is pumped to the crude distillation unit, which separates the crude oil into various boiling range fractions. The unit consists of two main sections: an atmospheric column where the lighter fractions are separated and a vacuum column where the higher boiling fractions are separated.

Naphtha and lighter components are routed to a saturates gas concentration unit, where the streams are separated into a fuel gas stream, C_3/C_4 stream and naphtha stream. Fuel gas is routed to an amine scrubbing unit where hydrogen sulfide is removed before burning as plant fuel. The C_3/C_4 stream is also denuded of hydrogen sulfide in an amine unit and then mercaptans are extracted in a Merox unit. The C_3 is then separated from the C_4 in a C_3/C_4 splitter.

Naphtha from the gas concentration unit flows to the naphtha hydrotreater for removal of sulfur compounds and nitrogen. Nonreformable isohexane and lighter components are removed in the deisohexanizer. Isopentane is then fractionated from this overhead for blending by use of a deisopentanizer. Deisopentanizer bottoms and low octane components are routed to paraffinic naphtha.

Deisohexanizer bottoms are routed to the continuous reformer, where the octane of the stream is upgraded chiefly by conversion of naphthenes and paraffins to high octane aromatic compounds. As the reaction proceeds, hydrogen is produced and used in hydroprocessing units. During the reforming process, a portion of the feed is converted to butane and lighter components. These are removed in the reformat splitter.

The C_5+ stripper bottoms (reformat) is routed to the reformat splitter. Here the xylene and lighter components are taken overhead and the components heavier than xylene are produced as a bottoms product and routed to gasoline blending. The splitter overhead stream is routed to the Sulfolane unit where the aromatic components (benzene, toluene and xylene) are separated from the non-aromatic components by use of a selective solvent. These non-aromatic components are routed to paraffinic naphtha. The aromatics are routed to a clay treater for removal of trace olefins, and then separated into a benzene, toluene, xylene, and gasoline stream by a series of three conventional fractionators.

Kerosene from the crude units is caustic washed from mercaptan removal and then routed to jet fuel blending.

Diesel and heavy atmospheric gas oil from the crude unit is routed to the hydrocracker where it is cracked into light ends, naphtha and jet fuel in the presence of hydrogen. Light ends are routed to the gas concentration unit; purge hydrogen is routed to fuel gas; jet fuel is routed to blending; naphtha is routed to the naphtha hydrotreater.

Vacuum gas oil from the crude unit is routed to the fluid catalytic cracker feed hydrotreater. This unit removes sulfur and nitrogen compounds and upgrades the feed for improved gasoline production. There is a slight amount of light ends produced in the hydrotreating reaction which is routed to fuel gas. The hydrotreated gas oil then flows to the fluid catalytic cracking unit (FCCU). Here the gas oil is cracked to gasoline and lighter components in the presence of a circulating stream of catalyst. The net products from this unit are fuel gas, C_3/C_4 , gasoline, light cycle oil and decanted oil. These products are separated at the unit by means of a main fractionator and gas concentration unit. Product dispositions are as follows:

C_3/C_4 - C_3/C_4 splitter

Light Cycle Oil - No. 4 Fuel Oil

Decanted Oil - Bunker C

For maximizing gasoline yield there is a recycle of the cycle oil. Before recycle to the reactor, the recycle is hydrotreated for gasoline yield improvement.

The C_3/C_4 (a mixture of propane, propylene, butane and butylene) stream is routed to an amine unit for removal of hydrogen sulfide and then to a Merox unit for mercaptan removal. The stream is then split into a propane/propylene and butane/butylene stream.

The propane/propylene stream is routed to the polymer gasoline unit where propylene (and butylene) is polymerized to gasoline in the presence of a solid phosphoric acid catalyst. This polymer gasoline is subsequently routed to gasoline blending. Unreacted propane is routed to storage and unreacted butane is routed to the HF Alkylation unit.

The butane/butylene stream is routed to a splitter where isobutane and most of the butylenes are separated from normal butane. This stream then flows to the HF Alkylation unit where isobutane reacts with butylenes in the presence of a hydrofluoric acid catalyst (and propylenes) to produce high octane alkylate for gasoline blending.

Bottoms from the vacuum tower in the crude unit is routed to the Flexicoker. Here the material is coked using a fluid process to yield the following:

<u>Disposition</u>	
Fuel Gas	Fuel Gas
C ₃ /C ₄	Polymer Gasoline Unit
Naphtha	Naphtha Hydrotreater
Coker Distillate	Hydrocracker
Coker Gas Oil	FCCU Feed Hydrotreater
Coke	Gasification

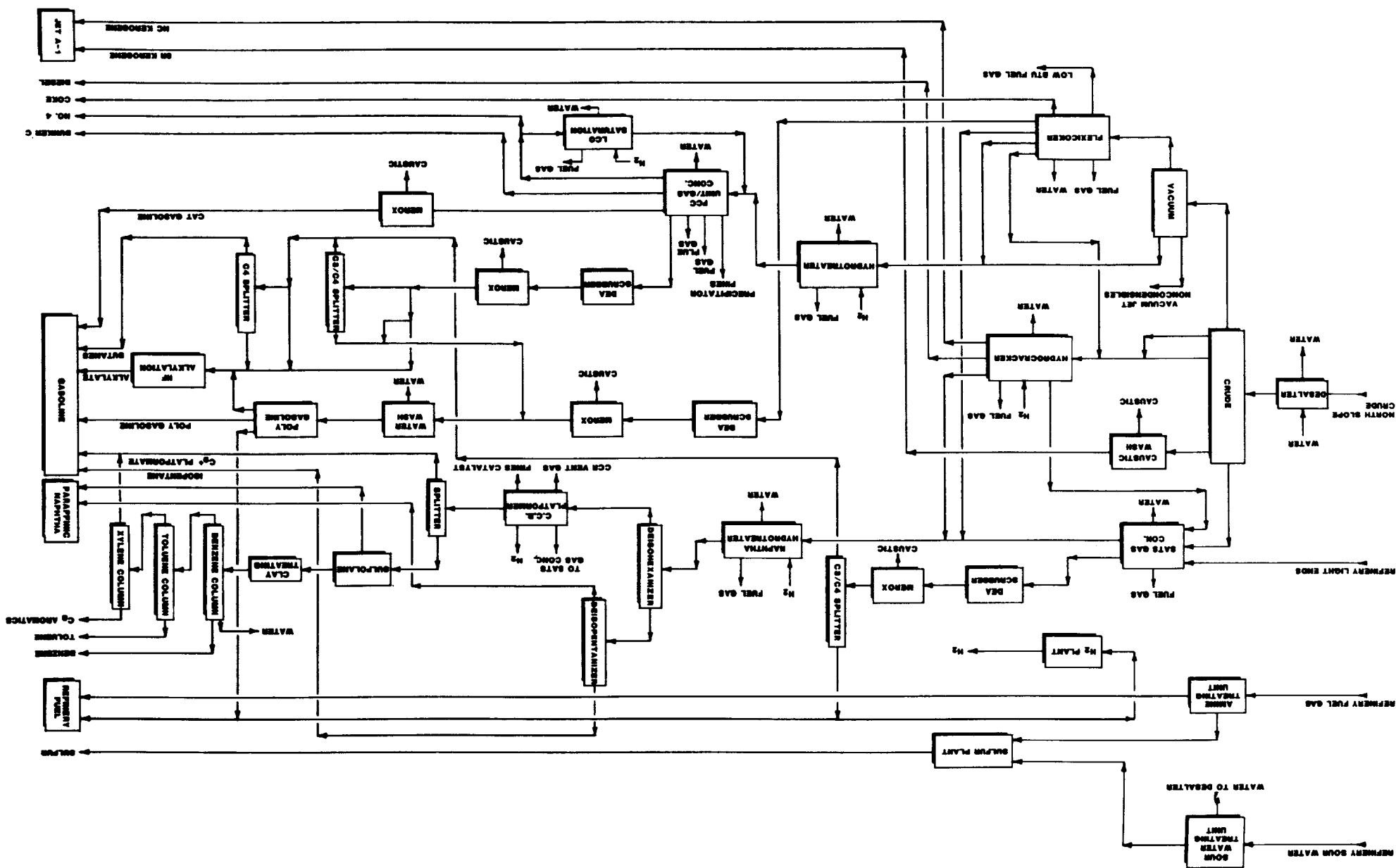
The unit has a fractionator and a gas concentration unit to separate the reactor effluent into these various products.

Coke from the reactor is transported to the gasification section where steam and air are used to produce a low BTU gas which comprises a major portion of the plant fuel requirement.

Hydrogen sulfide-rich amine from several amine contactors is routed to a central regenerator, where the hydrogen sulfide is stripped overhead as acid gas. This acid gas then flows to a sulfur recovery unit where the H₂S is reacted with air to produce elemental sulfur. Tail gas from the sulfur plant is processed in a Beavon/Stretford unit which reduces the concentration of sulfur compounds in the effluent to less than 100 ppm.

Hydrogen sulfide and ammonia-bearing process water streams are sent to a sour water stripper where the ammonia and H₂S are removed. This acid gas is then routed to the sulfur recovery unit.

A process flow diagram for this facility is attached (Figure E).



"Additional Information"

15. Waste Abatement Practices

A schematic diagram of the proposed wastewater treatment system is shown in Figure F; a schematic of "water flow" has been previously shown (Figure A).

Uncontaminated storm water is routed directly to the common outfall. This discharge will be monitored during storm conditions to ensure effluent quality.

Wastewater produced by regenerating the water plant demineralizers contains the same quantities of organic material found in the water supply. The pH of the stream will vary from highly acidic to highly basic depending on the phase of the regeneration cycle. The regenerant wastewater streams are routed to an equalization tank where adequate retention time (24 hours) allows for partial self-neutralization of the stream. Following equalization the stream enters a neutralization tank where pH is controlled to a range of 6 to 9 before discharge.

Wastewater from the hydrogen plant is essentially free of organic contamination. Therefore, this stream is directed to the regenerate equalization tank rather than biological treatment. The buffering capacity of the stream also assists in neutralizing the acid streams.

The boiler blowdown will contain relatively high concentrations of dissolved solids, and depending on the method of operation, some suspended solids. The suspended solids will be primarily inorganic devalent ration salts. These suspended solids will be removed by settling prior to discharge into the equalization tank.

After equalization and neutralization, the treated non-organic waste stream will be monitored and combined with other plant streams prior to discharge. Since organic contaminants will be kept out of this water, and the dissolved solids concentration is completely compatible with the receiving stream, equalization and neutralization represent best available technology for the non-organic waste streams.

The basic treatment concept for oily waste streams consists of oil removal, biological oxidation, and suspended solids removal.

FOR AGENCY USE									

STANDARD FORM C – MANUFACTURING AND COMMERCIAL

SECTION III. WASTE ABATEMENT REQUIREMENTS & IMPLEMENTATION (CONSTRUCTION) SCHEDULE

This section requires information on any uncompleted implementation schedule which may have been imposed for construction of waste abatement facilities. Such requirements and implementation schedules may have been established by local, State, or Federal agencies or by court action. In addition to completing the following items, a copy of an official implementation schedule should be attached to this application. IF YOU ARE SUBJECT TO SEVERAL DIFFERENT IMPLEMENTATION SCHEDULES, EITHER BECAUSE OF DIFFERENT LEVELS OF AUTHORITY IMPOSING DIFFERENT SCHEDULES (Item 1a.) AND/OR STAGED CONSTRUCTION OF SEPARATE OPERATION UNITS (Item 1c), SUBMIT A SEPARATE SECTION III FOR EACH ONE.

1. Improvements

a. Discharge Serial Number

Affected List the discharge serial numbers, assigned in Section II, that are covered by this implementation schedule.

300

301a

_____, _____, _____
_____, _____, _____

b. Authority Imposing Requirements

Check the appropriate item indicating the authority for implementation schedule. If the identical implementation schedule has been ordered by more than one authority, check the appropriate items. (see Instructions)

Locally developed plan

Areawide Plan

Basic Plan

State approved implementation schedule

Federal approved water quality standards implementation plan.

Federal enforcement procedure or action

State court order

Federal court order

301b

☐ LOC

☐ ARE

☐ BAS

☐ SQS

☐ WQS

☐ ENF

☐ CRT

☐ FED

c. Facility Requirement. Specify the 3-character code of those listed below that best describes in general terms the requirement of the implementation schedule and the applicable six-character abatement code(s) from Table II of the instruction booklet. If more than one schedule applies to the facility because of a staged construction schedule, state the stage of construction being described here with the appropriate general action code. Submit a separate Section III for each stage of construction planned.

301c

3-character
(general)

301d

6-character
(specific)
(see Table II)

FOR AGENCY USE	
SCHED. NO.	_____

Not applicable

New Facility
Modification (no increase in capacity or treatment)
Increase in Capacity
Increase in Treatment Level
Both Increase in Treatment Level and Capacity
Process Change
Elimination of Discharge

NEW
MOD
INC
INT
ICT
PRO
ELI

FOR AGENCY USE									

2. Implementation Schedule and 3. Actual Completion Dates

Provide dates imposed by schedule and any actual dates of completion for Implementation steps listed below. Indicate dates as accurately as possible. (see instructions)

Implementation Steps	2. Schedule (Yr./Mo./Day)		3. Actual Completion (Yr./Mo./Day)	
a. Preliminary plan complete	302a	___/___/___	303a	___/___/___
b. Final plan submission	302b	___/___/___	303b	___/___/___
c. Final plan complete	302c	___/___/___	303c	___/___/___
d. Financing complete & contract awarded	302d	___/___/___	303d	___/___/___
e. Site acquired	302e	___/___/___	303e	___/___/___
f. Begin action (e.g., construction)	302f	___/___/___	303f	___/___/___
g. End action (e.g., construction)	302g	___/___/___	303g	___/___/___
h. Discharge Began	302h	___/___/___	303h	___/___/___
i. Operational level attained	302i	___/___/___	303i	___/___/___

DRAFT NPDES PERMIT

Permit No.: AK-002763-4
Application No.: AK-002763-4

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. §1251 et seq; the "Act"),

Alaska Petrochemical Company, an Alaskan Corporation (hereinafter called "Alpetco")

is authorized to discharge from a facility located near Valdez, Alaska,

to receiving waters named Port Valdez,

in accordance with effluent limitations, monitoring requirements and other conditions set forth hereof.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight (five years from the effective date)

Signed this day of

DRAFT

Director, Enforcement Division

A. EFFLUENT LIMITATIONS, WATER QUALITY CONDITIONS, AND MONITORING REQUIREMENTS

1. During the period beginning at plant start-up and lasting through the expiration date, the permittee is authorized to discharge treated process water, treated ballast water, treated storm water, and untreated clean storm water from the treatment plant through the outfall diffuser system.

a. Such discharges shall be limited and monitored by the permittee as specified below:

1. WASTEWATER TREATMENT PLANT DISCHARGE LIMITATIONS

B-38

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATION</u>	
	<u>Daily Average</u> ^{1/}	<u>Daily Maximum</u> ^{1/}
Biochemical Oxygen Demand (5-day) (BOD ₅) kg(lb)/day	467 + Ballast Water + Storm Water (1041) Allocation ^{2/} Allocation ^{3/}	878 + Ballast Water + Storm Water (1956) Allocation Allocation
Total Suspended Solids (TSS) kg(lb)/day	383 + Ballast Water + Storm Water (838) Allocation Allocation	600 + Ballast Water + Storm Water (1321) Allocation Allocation
Chemical Oxygen Demand (COD) kg(lb)/day	2780 + Ballast Water + Storm Water (6096) Allocation Allocation	5360 + Ballast Water + Storm Water (11,940) Allocation Allocation
Oil & Grease kg(lb)/day	141 + Ballast Water + Storm Water (330) Allocation Allocation	266 + Ballast Water + Storm Water (610) + Allocation Allocation

1/ The Daily Average and Daily Maximum discharge limitations for BOD₅, TSS, COD, and Oil and Grease shall be the summation of the specified numerical limitation plus the Ballast Water and Storm Water Allocations.

2/ Ballast Water Allocations are defined in Part A.1.a.(3).

3/ Storm Water Allocations are defined in Part A.1.a.(4).

1. WASTEWATER TREATMENT PLANT DISCHARGE LIMITATIONS (Continued)

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATION</u>	
	<u>Daily Average</u>	<u>Daily Maximum</u>
Phenolic Compounds kg(lb)/day	3.1 (6.9)	6.37 (14.2)
Ammonia as N kg(lb)/day	431.0 (965)	943.0 (2108)
Sulfide Kg (lb)/day	2.5 (5.6)	5.64 (12.7)
Total Chromium kg (lb)/day	7.7 (17.3)	12.9 (29.5)
Hexavalent Chromium kg (lb)/day	0.48 (1.1)	1.01 (2.4)
Aromatic Hydrocarbons (BTX) mg/l	N.A.	1.00
Cyanide mg/l	N.A.	0.38

2. WASTEWATER TREATMENT PLANT DISCHARGE MONITORING REQUIREMENTS

EFFLUENT CHARACTERISTIC

MONITORING REQUIREMENTS

	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Continuous	Recording
BOD ₅	Daily	24 hour composite
TSS	Daily	24 hour composite
COD	Daily	24 hour composite
Oil and Grease	Daily	24 hour composite
Phenolic Compounds	Daily	24 hour composite
Ammonia as N	Daily	24 hour composite
Sulfide	Daily	24 hour composite
Total Chromium	Daily	24 hour composite
Hexavalent Chromium	Daily	24 hour composite
Cyanide	Daily	24 hour composite
Density	Daily	Not Applicable
Temperature	Daily	Not Applicable
Nickel	2/weekly	24 hour composite
Aromatic Hydrocarbons (BTX)	2/weekly	Grab
Aromatic Hydrocarbons (by GS-MS)	Monthly	Grab
Selenium, Cadmium, Copper, Zinc, Lead	Monthly	24 hour composite
Methylene Chloride	Quarterly	Grab
Trichloroethylene	Quarterly	Grab
Phenanthrene/Anthracene	Quarterly	Grab
1, 1, 2, 2-tetrachloroethane	Quarterly	Grab
parachlorometa cresol	Quarterly	Grab
1, 2-trans-dichloroethylene	Quarterly	Grab
dichlorobromomethane	Quarterly	Grab
N-nitrosodi-n-propylamine	Quarterly	Grab
bis (2-ethylhexyl) phthalate	Quarterly	Grab
Diethyl phthalate	Quarterly	Grab
tetrachloroethylene	Quarterly	Grab

3. TREATED BALLAST WATER ALLOCATION

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATION</u>		<u>MONITORING REQUIREMENTS</u>	
	<u>Daily Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	11,345 m ³ /Day (2,995,000 gpd)	14,800 m ³ /Day (3,900,000 gpd)	Continuous	Recording
BOD ₅	0.026 kg/m ³ (0.21 lb/1000 gal)	0.048 kg/m ³ (0.40 lb/1000 gal)	N/A	
TSS	0.021 kg/m ³ (0.17 lb/1000 gal)	0.033 kg/m ³ (0.27 lb/1000 gal)	N/A	
COD	0.24 kg/m ³ (2.0 lb/1000 gal)	0.47 kg/m ³ (3.9 lb/1000 gal)	N/A	
Oil and Grease	0.008 kg/m ³ (0.067 lb/1000 gal)	0.010 kg/m ³ (0.084 lb/1000 gal)	N/A	

The total daily Ballast Water Allocation in kg/Day or lb/Day for BOD₅, TSS, COD, and Oil and Grease shall be determined by multiplying the appropriate daily average and daily maximum values by the actual daily flow.

4. TREATED STORM WATER ALLOCATION

<u>EFFLUENT CHARACTERISTIC</u>	<u>DISCHARGE LIMITATION</u>		<u>MONITORING REQUIREMENTS</u>	
	<u>Daily Average</u>	<u>Daily Maximum</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	6,000 m ³ /Day (1,584,000 gpd)	14,800 m ³ /Day (3,900,000 gpd)	Continuous	Recording
BOD ₅	0.026 kg/m ³ (0.21 lb/1000 gal)	0.048 kg/m ³ (0.40 lb/1000 gal)	N/A	
TSS	0.021 kg/m ³ (0.17 lb/1000 gal)	0.033 kg/m ³ (0.27 lb/1000 gal)	N/A	
COD	0.19 kg/m ³ (1.6 lb/1000 gal)	0.37 kg/m ³ (3.1 lb/1000 gal)	N/A	
Oil and Grease	0.008 kg/m ³ (0.067 lb/1000 gal)	0.015 kg/m ³ (0.126 lb/1000 gal)	N/A	

The total daily treated Storm Water Allocation in kg/Day or lb/Day for BOD₅, TSS, COD, and Oil and Grease shall be determined by multiplying the appropriate daily average and daily maximum values by the actual daily flow.

b. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be recorded and monitored continuously.

c. There shall be no discharge of floating solids or visible foam in other than trace amounts or oily wastes which produce a sheen on the surface of the receiving water.

d. Samples taken in compliance with the monitoring requirements specified above shall be taken prior to the addition of untreated "clean storm water" and prior to entering the outfall system.

e. "Clean storm water" shall have a total organic carbon (TOC) level less than 35 mg/l and an Oil and Grease level less than 15 mg/l prior to entering the final holding pond and firewater pond. Any segregated "clean storm water" exceeding these limits shall receive complete treatment (air flotation, biological oxidation, and sand filtration).

f. An outfall diffuser system shall be utilized to provide for the dispersal of the treated wastewaters to Port Valdez. A mixing zone is provided in Port Valdez for the purpose of receiving the discharge from the diffuser system. The boundaries of the mixing zone are:

(1) The top of the mixing zone shall be at all times five (5) meters below the receiving water surface.

(2) The bottom of the mixing zone shall be at all times one half (0.5) meters above the bottom of Port Valdez.

(3) The sides of the mixing zone shall not be more than 150 meters from the diffuser centerline.

(4) The ends of the mixing zone shall not be more than 150 meters from each end of the diffuser system.

g. The outfall diffuser shall be designed and located to continually achieve a minimum dilution of 75 to 1 at all points along the boundary of the mixing zone. A report containing all data relative to the determination of dilutions (including worst case) and the design and location of the diffuser system shall be submitted six (6) months prior to diffuser construction start-up to the Director, Enforcement Division and the Alaska Department of Environmental Conservation (ADEC). Before diffuser construction start up may begin the diffuser system design and location must receive joint approval by the Director, Enforcement Division and ADEC.

If it is determined that worst case conditions cannot continually achieve a 75 to 1 dilution, the permittee may request from EPA and ADEC a reduction in the dilution rate upon the showing that a corresponding reduction in aromatic hydrocarbons and cyanide in the discharge (below the 1.0 mg/l and 0.38 mg/l respectively) can be achieved so that the boundary conditions specified in Part A.1.h. are continually maintained.

h. At the boundaries of the mixing zone, conditions of the Alaska Water Quality Standards (18AAC 70.020) for marine waters shall be maintained. In particular the following shall be achieved:

(1) The pH shall not be less than 6.5 standard units or greater than 8.5 standard units, and shall not vary more than 0.1 pH unit from natural conditions.

(2) No measurable increase in sediment concentrations above natural conditions.

(3) Total aromatic hydrocarbons in the water column shall not exceed 10 ug/l (micrograms per liter), or 0.01 of the lowest measured continuous flow 96 hour LC₅₀ for life stages of species identified by the Alaska Department of Environmental Conservation as the most sensitive, biologically important species in a particular location, whichever concentration is less. There shall be no concentration of hydrocarbons, animal fats, or vegetable oils in the sediment which cause deleterious effects to aquatic life. Surface waters and adjoining shorelines shall be virtually free from floating oil, film, sheen or discoloration.

(4) Cyanide in the water column shall not exceed 5 ug/l.

B. MONITORING AND REPORTING REQUIREMENTS

1. Representative Sampling

Samples and measurements taken as required shall be representative of the volume and nature of the monitored discharge.

2. Reporting

Monitoring results shall be summarized each month on a Discharge Monitoring Report form (DMR; EPA No. 3320-1). These reports shall be submitted monthly and are to be postmarked by the 14th day of the following month. Reporting shall begin at the

commencement of discharge. Duplicate signed copies of these, and all other reports herein, shall be submitted to the Director, Enforcement Division, the Alaska Operations Office and ADEC at the following addresses:

United States Environmental Protection Agency
Region 10
1200 Sixth Avenue
Seattle, Washington 98101

Attn: Water Compliance Section M/S 513

United States Environmental Protection Agency
Alaska Operations Office
701 'C' Street - Box 19
Anchorage, Alaska 99513

State of Alaska
Department of Environmental Conservation
Region II
MacKay Building - Room 1206
Denali Street
Anchorage, Alaska 99501

3. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified below, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report form (EPA No. 3320-1). Such increased frequency shall also be indicated.

4. Definitions

a. The "daily average concentration" shall be the arithmetic average (weighed proportionally by flow volume) of all the daily maximum concentrations made during a calendar month.

b. The "daily maximum concentration" shall be the concentration for a sample determined for any calendar day when taken as required in A.1.a.

c. A "composite sample" is a sample weighted proportionally by flow volume. Either the volume of each individual sample comprising the composite will be directly proportional to discharge flow rate or the sampling interval (for constant-volume samples) will be inversely proportional to the flow rates over the time period used to produce the composite.

d. The "daily average flow" is the total discharge volume occurring during a calendar month divided by the number of days within the calendar month for which a discharge occurred.

e. The "daily maximum flow" is the total volume of discharge for any calendar day.

f. BOD₅ means five (5) day biochemical oxygen demand.

g. MGD means millions of gallons per day.

h. mg/l means milligrams per liter.

i. m³/day means cubic meters per day.

j. gpd means gallons per day.

k. kg/m³ means kilograms per cubic meter.

l. lb/1000 gal means pounds per 1000 gallons.

m. kg means kilograms.

n. lbs means pounds.

o. "Bypass" means the intentional diversion of wastes from any portion of a treatment facility.

p. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

q. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventive maintenance, or careless or improper operation.

5. Test Procedures

Test procedures for the analysis of pollutants shall conform to 40 C.F.R. Part 136, which contains a list of approved methods.

Procedures for Aromatic Hydrocarbons (BTX) under Part A.1.a. will be identical or equivalent to those used by the EPA contractor Rockwell International titled "Aromatics in Oily Wastewaters: Determination of Benzene, Toluene, and Xylenes", during 1978 and 1979. Test of permittee's effluent will measure Benzene, Toluene, Xylene, and ethylbenzene content of the effluent.

Test procedures for Aromatic Hydrocarbon (GC-MS) under Part A.1.a. will be identical to or equivalent to those used by the Environmental Protection Agency titled "Sampling and Analysis Procedures for Screening of Industrial Effluents for Priority Pollutants" dated March 1977 and revised April 1977. Parameters to be reported include Benzene, Toluene, o-Xylene, m-Xylene, p-Xylene, 1,2,3-Trimethylbenzene, 1,2,4-Tri-methylbenzene, 1,3,5-Trimethylbenzene, Naphthalene, 2,6-dimethylnaphthalene, 1-Methylnaphthalene, 2-Methylnaphthalene, Pyrene, Benzo-a-pyrene, Chrysene, Fluoranthene, Acenaphthene, Fluorene, 2,4-dimethylphenol, 1,2-dichloroethane, ethylbenzene, 4-nitrophenol, benzo-a-anthracene, anthracene, benzo-ghi-perylene and phenanthrene. Trimethylbenzene and dimethylnaphthalene concentrations can be reported as the sum of all isomers for each of these groups (i.e. total trimethylbenzenes and total dimethylnaphthalenes). Xylene isomers are to be reported individually.

Alternative techniques, jointly approved by the Director, Enforcement Division, EPA, the Alaska Department of Environmental Conservation(ADEC) may be substituted for the Aromatic Hydrocarbons methods given above. Also after joint agreement between EPA, ADEC, and the permittee, one or more of the Aromatic Hydrocarbon analyses or surrogate methods under Part A.1.a. may be eliminated from monitoring requirements.

6. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling;
- b. The dates the analysis were performed;
- c. The person(s) who performed the analyses;
- d. The analytical techniques or methods used; and
- e. The results of all required analysis.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed, calibration and maintenance of instrumentation, and recordings from continuous monitoring instrumentation shall be retained for a minimum of three (3) years, or longer if requested by the Director, Enforcement Division or ADEC.

8. Noncompliance Reporting

a. Noncompliance notification will be made when any of the following situations occur:

- (1) Bypassing of any treatment facilities (Part C.5., below).
- (2) Facility upset (Part C.6., below).
- (3) Failure of facility (Part C.7., below).
- (4) Other instances not covered by above.

b. Noncompliance notification shall consist of at least the following:

- (1) A description of the discharge and cause of noncompliance;
- (2) the period of noncompliance to include exact dates and times and/or the anticipated time when the discharge will again be in compliance; and
- (3) steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

c. Timing of report shall be consistent with the following:

- (1) Permittee shall report telephonically within 24-hours from the time of becoming aware of any violation of a daily maximum. A written submission shall be provided within five (5) days of becoming aware of the noncompliance.
- (2) Permittee shall provide a written report of any violations of the monthly average. This report shall conform to a. and b. above and be submitted concurrently with the Discharge Monitoring Report as a separate report.

C. GENERAL REQUIREMENTS

1. Reopener Clause

This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable standard or limitation promulgated or approved under section 301(b)(2)(c) and (d), 303(c), 304(b)(2) and 397(a)(2) of the Act if the standard or limitation so issued or approved:

- (1) Contains additional or more stringent permit conditions which are not technology based (e.g. conditions based on water quality standards, or effluent standards or prohibitions under Section 307(a)); or
- (2) Contains additional permit conditions controlling pollutants listed as toxic under Section 307(a) of the Act or as hazardous substances under Section 311 of the act and which are not controlled by new source performance standards.

2. Modification

The permit may be modified, terminated, or revoked during its term for cause as described in 40 C.F.R 122.31.

Any permittee who knows or has reason to believe that any activity has occurred or will occur which would constitute cause for modification or revocation and reissuance under 40 C.F.R. 122.31 must report its plans, or such information to the Director, Enforcement Division.

3. Right of Entry

The permittee shall allow the head of the Alaska Department of Environmental Conservation, Director, Enforcement Division and/or their authorized representative, upon the presentation of credentials and such other documents as may be required by law,

- a. to enter upon the permittee's premises where a point source is located or where any records must be kept under the terms and conditions of the permit;
- b. to have access to and copy at reasonable times any records that must be kept under the terms and conditions of the permit;
- c. to inspect at reasonable times any monitoring equipment or method required in the permit;

d. to inspect at reasonable times any collection, treatment, pollution management, or discharge facilities required under the permit; and

e. to sample at reasonable times any pollutants in the ballast or process wastewater treatment streams.

4. Operation and Maintenance

The permittee shall at all times maintain in good working order and operate as efficiently as possible all facilities and systems (and related appurtenances) for collection and treatment which are installed or used by the permittee for water pollution control and abatement to achieve compliance with the terms and conditions of the permit. Proper operation and maintenance includes but is not limited to effective performance based on designed facility removals, adequate funding, effective management, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures.

5. Bypass

a. Bypass is prohibited unless all of the following four (4) conditions are met:

(1) Bypass is unavoidable to prevent loss of life, personal injury or severe property damage;

(2) there are no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment down-time;

(3) permittee makes notification in accordance with Part B.8.b. and c.; and

(4) where the permittee knows in advance of the need for a bypass, prior notification shall be submitted for approval to the Director, Enforcement Division if possible at least 10 days in advance. The bypass may be allowed under conditions determined to be necessary by the Director, Enforcement Division to minimize any adverse effects. The public shall be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible.

b. Prohibition of Bypass

The Director, Enforcement Division may prohibit bypass in consideration of the adverse effect of the proposed bypass or where the proposed bypass does not meet the conditions set forth in Part C.5.a., above.

6. Upsets

a. Effect of an Upset

An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of paragraph b. below are met.

b. Conditions Necessary for a Demonstration of Upset

The permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An upset occurred and that the permittee can identify the specific cause(s) of the upset;

(2) the permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;

(3) the permittee submitted information required in Part B.8.b. and c.

c. Burden of Proof

In any enforcement proceeding the permittee seeking to establish the occurrence of an upset shall have the burden of proof.

7. Failure of the Facility

The permittee, in order to maintain compliance with its permit, shall control production and all discharges upon reduction, loss, or failure of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

The permittee shall report such instances in accordance with Part B.8.b. and c. above.

8. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to waters of the United States resulting from noncompliance with the permit.

9. Removed Substances

Collected screenings, grit, sludges, and other solids removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent entry of those wastes or runoff from such materials into navigable waters unless otherwise authorized in this permit.

10. Transferability of Permits

This permit may be transferred to another person by the permittee if:

- a. The permittee notifies the Director, Enforcement Division of the proposed transfer;
- b. a written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittees (including acknowledgement that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) is submitted to the Director; and
- c. the Director, Enforcement Division within 30 days does not notify the current permittee and the new permittee of his or her intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

D. RESPONSIBILITIES

1. Availability of Reports

Except for data determined to be confidential under section 308 of the Act, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of ADEC and the Director, Enforcement Division. As required by the Act, effluent data shall not be considered confidential. Knowingly making a false statement on any such report may result in the imposition of criminal penalties as provided for in section 309 of the Act.

2. Civil and Criminal Liability

Except as provided in permit conditions on "Bypass" (Part C.5.) and "Upset" (Part C.6.) and "Failure of Facility" (Part C. 7.), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

3. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under section 311 of the Act.

4. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by section 510 of the Act.

5. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

6. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

E. OTHER REQUIREMENTS

1. Outfall Study

Permittee shall develop and implement a study which will measure the actual diffusion and dispersion characteristics achieved by the outfall diffuser system. The study shall extend for a one year period with dispersion studies occurring at sufficiently close intervals to evaluate the effects of the varied climate and seasonal conditions, complete tidal cycles, and extremes in plume stratification. The plan shall as a minimum describe the following.

- a. Frequency and duration of testing;
- b. Method of measuring dispersion and mixing;
- c. Extent of testing in the vicinity around the outfall system, and

d. Type of dye, tracer material, or other material or parameter to be used.

e. Hydrographic characterization at the sampling points.

The study plan shall be submitted to the Alaska Department of Environmental Conservation, the Alaska Operations Office of EPA, and the Director, Enforcement Division, EPA three (3) months prior to commencement of facility operation. The outfall study shall commence no later than three (3) months after start-up of the refinery facility. Summary reports shall be submitted quarterly, with a final report submitted no later than sixty (60) days following completion of the study. Each report shall include all relevant data including actual receiving water and effluent characteristics (affecting dispersion and mixing) as well as times, locations, and duration of test.

2. Receiving Water Monitoring

The permittee shall implement the following receiving water and biological monitoring program for the waters of eastern Port Valdez. The emphasis of the program is on monitoring subtle changes in water quality and sediment and sublethal responses of resident biota to waste water discharges and to sample intensively at selected representative stations to provide an improved statistical basis for analysis of the data. The following program encompasses studies that are considered necessary to objectively evaluate existing conditions and any chronic effects of low levels of refinery/petrochemical effluent process water and ballast water discharges on water quality.

This program shall be implemented no later than two (2) months following the effective date of this permit and will be reviewed semi-annually.

The permittee shall submit semi-annual and yearly progress reports on the studies to the Alaska Department of Environmental Conservation, Pouch O, Juneau, Alaska, the Environmental Protection Agency, Anchorage Office and Director Enforcement Division. Semi-annual and annual reports shall be made available to other agencies upon request. The first semi-annual report shall be due on _____, and semi-annually thereafter through _____. A final summary report, including all data and conclusions contained by that time, shall be submitted by _____. This report shall include a synthesis of data and a discussion and interpretation of major findings and principal investigator recommendations for future monitoring studies should any such studies be deemed necessary as new permit conditions.

The receiving water and biological monitoring program are to include at least the following elements:

a. Intertidal Monitoring Program

(1) Abundance and Zonation Studies

Three (3) muddy, sandy intertidal transects are to be maintained over the life of the permit. Sites: North Lowe River (Dayville Flats), Old Valdez dock area and the Airport Creek area. Sampling intervals along the transects are to be permanently marked. Three sampling periods: April or May, June or July, and September of each year. Vertical intertidal coverage shall be consistent with the range established by Myren and Pella for studying the various Macoma complexes. A minimum of three (3) sampling stations per transect shall be required.

Stratified random sampling methods and data analysis as described by Myren and Pella (1977) shall be generally followed. Temperature, salinity and suspended sediment shall be monitored concurrent with each sampling period.

(2) Biological Studies of Individual Species

Macoma balthica and Mya arenaria shall be individually monitored for purposes of detailing important biological events, including, but not limited to: a) seasonal and annual growth, b) reproductive biology (reproductive staging schemes, i.e. gametogenesis, fecundity, spawning period), and c) mortality. Sampling data reduction and reporting methodologies shall be consistent with those specified in sections 8.6 and 8.7 of the 1979 Final Report to Alyeska, Continuing Environmental Studies of Port Valdez, Alaska. Sites: Old Valdez dock transect and North Lowe River (Dayville Flats). Sampling periods: April or May, June or July and September of each year.

In addition to the study of selected biological events of individual species as described above, the permittee shall provide a measure of the overall biological condition of Macoma balthica, using methodologies consistent with published accounts on this index of health. These accounts generally specify either of the following ratios for calculating the index, both of which are acceptable in reporting results:

$$\frac{\text{Tissue dry weight (g)}}{(\text{shell length in mm})} \times 100$$

(Reference: Stekall, Clement and Shaw. 1978. Sublethal effects of chronic oil exposure on the intertidal clam Macoma balthica. University of Alaska. IMS)

or

$$\frac{\text{ash-free dry weight (g)}}{(\text{cm shell length})^3} \times 1000$$

(Reference: Anderson, J. W. 1978. Condition index and free amino acid level of Protothaca staminea exposed to oil contaminated sediment. Battelle Northwest Laboratories, Sequim, Washington.)

Macoma shall be collected (stratified groups over its vertical tidal range) from the Old Valdez dock intertidal location near the diffuser. Establishment of suitable control site(s) away from these areas to assess baseline condition index is a critical requirement of this study. Sampling frequency at all sites shall be at least semi-annually in conjunction with the elements in a.1. and a.2. above. Temperature, salinity and suspended load shall each be monitored coincident with sampling.

b. Subtidal Benthos Monitoring Program

The deep subtidal benthos program shall consist of annual grab sampling at each of the following stations: Stations 1, 2, 4, 5 and 8 of Feder's Valdez grid. September is suggested for the sampling period. Eight replicate grabs per station shall be taken with a 0.1m² Van Veen sampler. Analyses shall be performed on the data consistent with methods outlined in Section 9.4.3 of the Final Report, Continuing Environmental Studies of Port Valdez, Alaska 1979.

Temperature and salinity of the bottom water, suspended sediment load and percent organic composition of sediments shall be monitored concurrently with this program.

A shallow subtidal shelf sampling program (to approximately 6 meters below MLLW or the depth of shelf break) shall

consist of at least semiannual transecting at adjacent extensions of the three (3) intertidal sites in a. above, emphasizing the following indicator species: Echiurus echiurus, Nephtys punctata, Axinopsida serricata and Polydora quadrilobata. Sampling design shall follow methods established by Lees et al². Temperature, salinity and suspended solids shall be determined concurrent with each daily sampling period.

c. Hydrocarbon Analysis

(1) Sediment concentrations of aromatic, non-biogenic petroleum hydrocarbons shall be monitored annually at intertidal and subtidal stations identified in a. and b. above; and from a minimum of five (5) sites located at or within 0.05 kilometer of both the north and south side of the mixing zone. Naphthalene and total alkyl naphthalene concentrations should be individually highlighted in the analysis of the suite of petrogenic hydrocarbons.

(2) Hydrocarbon levels shall be monitored at least annually in the soft tissues of Macoma balthica, Echiurus echiurus and a single additional species to be selected. Sample sites: each of the intertidal and shallow subtidal transects discussed above.

d. Trace Metals

(1) Chromium, zinc, cyanide and cadmium levels shall be determined at least annually in sediment samples from all subtidal benthos stations and at sediments around the diffuser outfall at sites identified in c.(1) above.

(2) Chromium, zinc, cyanide and cadmium concentrations are to be determined in bottom water samples collected at stations listed in c.(1) above concurrent with the taking of sediment samples.

(3) Chromium, zinc, cyanide and cadmium concentrations in Macoma balthica and Echiurus echiurus soft tissues are to be determined for individuals sampled at each of the established intertidal and shallow subtidal transect sites. Sampling interval to be identical to that described for sediments and water.

Fact Sheet

United States Environmental Protection Agency
Region 10
1200 Sixth Avenue
Seattle, Washington 98101
(206) 442-1270

Date: December 7, 1979

Application No.: AK-002763-4

FACT SHEET -- PROPOSED NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE POLLUTANTS PURSUANT TO THE PROVISIONS OF THE CLEAN WATER ACT

Alaska Petrochemical Company (Alpetco)
Valdez, Alaska

has applied for a National Pollutant Discharge Elimination System (NPDES) permit to discharge pollutants pursuant to the provisions of the Clean Water Act. This fact sheet includes (a) the tentative determination of the Environmental Protection Agency (EPA) to issue a permit, (b) information on public comment, public hearing and appeal, (c) the description of the proposed discharge, (d) a listing of tentative effluent limitations, schedules of compliance and other conditions, and (e) a description of the discharge location. We call your special attention to the technical material presented in the latter part of this document.

This Regional Office of the EPA has tentatively determined to issue a permit to discharge to the above listed applicant subject to certain effluent limitations and other conditions necessary to carry out the provisions of the Clean Water Act. These proposed limitations and conditions are tentative.

Persons wishing to comment on the tentative determinations contained in the proposed permit may do so by submitting either written or oral comments to EPA as described in paragraph 3, Public Comments, of the December 7, 1979 Public Notice.

After the expiration of the public notice, the Director, Enforcement Division will review all comments received on the proposed NPDES permit. If no substantive comments are received then the tentative determinations contained in the proposed permit will become final determinations. No final determinations will be made until 30 days after the date of issuance of the final Environmental Impact Statement.

The permit will become effective 30 days after the final determinations are made unless a request for an evidentiary hearing is submitted within 30 days after receipt of the final determinations. An evidentiary hearing will be granted only if it meets all the requirements of 40 C.F.R. §124.74.

The proposed NPDES permit and other related documents are on file and may be inspected and copies made in Room 11D, 1200 Sixth Avenue, Seattle, Washington 98101, at any time between 8:30 am and 4:00 pm, Monday through Friday. Copies and other information may be requested by writing to EPA at the above address to the attention of Kim Wilson, M/S 521, or by calling (206) 442-1270. This material also is available from the EPA Alaska Operations Office, Room E535, 701 "C" Street, Anchorage, Alaska 99513. A copying machine is available in the Seattle office for public use at a charge of 20 cents per copy sheet.

FACT SHEET

Technical Section

- I. Alaska Petrochemical Company, an Alaskan corporation
(hereinafter called "Alpetco")
Valdez, Alaska
(907) 272-1517 (Anchorage office)

NPDES Permit No. AK-002763-4

II. Activity

The proposed Alpetco refinery is designed to convert 150 thousand barrels per day of Alaska North Slope crude oil into premium transportation fuels and petrochemicals.

EPA categorizes refineries into five classes (A through E) according to their processing capabilities. The proposed facility would be a class C refinery, meaning it would have cracking and petrochemical production capabilities. The process units include an atmospheric crude unit, a vacuum distillation unit, a sulfurizer, an naptha hydro-treater, a coker, a catalytic reformer, a catalytic cracker, an aromatics extraction unit, an aromatics distillation unit and a sulphur plant. For a detailed description of the proposed activity see page II-11 of the NPDES application.

The proposed refinery will be a "bottomless" refinery thereby producing 100 percent of the raw material crude into a maximum practicable slate of products leaving only low quantites of residual heavy fuel oils. No crude bottoms will be returned to the crude source pipeline.

The daily product slate is approximately 75 thousand barrels of unleaded high-octane gasoline, 30 thousand barrels of jet fuel, 5 thousand barrels of diesel fuel, and 35 thousand barrels of benzene, toluene and other petrochemicals.

Sources of wastewaters from the proposed refinery operation falls into one of seven categories: (1) clean (uncontaminated) storm water, (2) contaminated storm water, (3) non-organic waste streams, (4) ballast water, (5) high oil waste streams, (6) low-oil waste streams, and (7) sanitary waste.

- (1) Uncontaminated storm water is routed directly to the common outfall. This discharge will be monitored during storm conditions to insure effluent quality.

- (2) Contaminated storm runoff would be collected in an impoundment basin to allow treatment at a controlled flow rate. A skimmer would remove any floating oil. The skimmer would discharge to the API separator.
- (3) Non-organic waste streams are created by (a) regeneration of demineralizers, (b) the hydrogen plant, and (c) boiler water blowdown.

(a) the wastewater from regenerating demineralizers would contain the same quantities of organic material found in the water supply. The pH of the stream would vary from highly acidic to highly basic depending on the phase of the regeneration cycle. The regenerant wastewater streams would be routed to an equalization tank where adequate retention time (24 hours) would allow for partial self-neutralization of the stream. Following equalization, the stream would enter a neutralization tank where pH would be controlled to a range of 6 to 9 before discharge.

(b) Wastewater from the hydrogen plant would be essentially free of organic contamination. Therefore, this stream would be directed to the regenerant equalization tank rather than biological treatment. The buffering capacity of the stream also assists in neutralizing the acid streams.

(c) The boiler blowdown would contain relatively high concentrations of dissolved solids, some suspended solids, BOD, and phosphorus. Since the phosphorus is an essential nutrient for biological treatment, boiler blowdown would be mixed with deoiled process water and treated at the main treatment system.

After equalization and neutralization, the treated non-organic waste streams will be monitored and combined with other plant streams prior to discharge.

- (4) The proposed ballast water system would provide treatment within the normally anticipated range of characteristics. Since ships discharge ballast at very high flow rates, the water would be pumped to a stream-traced receiving tank to allow for equalization and rapid oil-water separation. Alum and polymer then would be added to the CPI effluent to further coagulate oil and solids. These residual materials would be removed in a dissolved air flotation unit.

The primary treatment methods are designed to remove free and emulsified oil plus suspended solids. The chemical oxygen demand (COD) and biochemical oxygen demand (BOD) of the wastewater would be reduced by rotating biological contactors. Effluent suspended solids generated by biological treatment would be removed by a clarifier. Filtration of the effluent would ensure maximum effluent quality.

After treatment, the water would be mixed with the inorganic wastewater in the equalization basin.

- (5) The basic treatment concept for oily waste streams consists of oil removal, biological oxidation, and suspended solids removal.

The sulfide caustic stream would be pretreated using air oxidation to convert sulfide to thiosulfates and sulfates.

The effluent from the oxidation tower would be combined for treatment with water from the desalter, the olefin poly plant, and oily water sewer. Since each of these streams would have the potential to contain very high oil concentrations, the API separator would be used to remove oil and to protect downstream operations.

Alum and polymers would be added to the combined API separator and storm surge pond effluent. The flocculated wastewater would be further treated for oil removal in a dissolved air flotation (DAF) unit. The DAFs proposed for process water and ballast water are similar in design.

- (6) Wastewater from the sour water stripper, the sulfur plant tail gas cleanup, and pretreated HF alkylation wastes would have relatively low oil concentration. These waste streams would be combined with deoiled process wastes and storm water for biological oxidation. The combined streams would be neutralized prior to bio-treatment to ensure maximum treatment efficiency. Nutrient in the form of phosphoric acid would be added as required.

Biological oxidation of soluble organic molecules in the deoiled wastewater would be achieved using a rotating biological contactor (RBC), then a polishing filter would be used to insure maximum effluent quality.

- (7) All sanitary wastes would be collected and pumped to the Valdez municipal treatment plant.

III. Receiving Water

- A. Port Valdez, Prince William Sound.
- B. The Alpetco petrochemical facility will discharge to waters classified as Type II/Marine Waters. Port Valdez marine waters are classified as classes II(A), II(B), II(C), and II(D) according to Water Quality Standards 1979 publication (18 AAC 70.010).

Class II(A) pertains to water supply for aquaculture, seafood processing, industrial and any manufacturing or production enterprise (i.e., placer mining, energy development) waters.

Class II(B) pertains to recreation waters, waters to contact recreation and secondary recreation. Class II(C) pertains to those waters in which fish, shellfish, aquatic life and wildlife (including seabirds, waterfowl, and furbearers) inhabit the waters. Class II(D) pertains to those waters for harvesting of raw mollusks or other raw aquatic life.

In applying water quality criteria, a volume of dilution for the effluent within the receiving water will be prescribed in the wastewater disposal permit. Water quality standards may not be exceeded outside the mixing zone. Mixing zones are disallowed in instances where the substances discharged are bioaccumulative in food chains, concentrates in sediments, is persistent, carcinogenic, mutagenic or teratogenic, or if the potential ecological or human health effects are so adverse that a mixing zone is not appropriate.

C. Water quality standards criteria, outside a mixing zone, of significance to this permit include:

1) dissolved gas - Surface dissolved oxygen (D.O.) concentrations in coastal water shall not be less than 6.0 mg/l for a depth of one meter except when natural conditions cause this value to be depressed. D.O. shall not be reduced below 4 mg/l at any point beneath the surface. D.O. concentrations in estuaries and tidal tributaries shall not be less than 5.0 mg/l except where natural conditions cause this value to be depressed. In no case shall D.O. levels above 17 mg/l be permitted. The concentration of total dissolved gas shall not exceed 110% of saturation at any point of sample collection.

2) pH - shall not be less than 6.5 or greater than 8.5, and shall not vary more than 0.1 pH units from natural conditions.

3) dissolved inorganic substances - no man induced alterations shall be made that would cause a change in the waters isohaline patterns of more than $\pm 10\%$ of the natural variations.

4) toxic and other deleterious organic and inorganic substances - substances shall not individually or in combination exceed 0.01 times the lowest measured 96 hr. LC50 for life stages of species identified by the department as being the most sensitive, biologically important to the location, or exceed criteria cited in EPA, Quality Criteria for Water or Alaska Drinking Water Standards, whichever concentration is less. Substances shall not be present or exceed concentrations which individually or in combination impart undesirable odor or taste to fish or other aquatic organisms as determined by either bioassay or organoleptic tests.

5) petroleum hydrocarbons, oils and grease - total hydrocarbons in the water column shall not exceed 15 ug/l or 0.01 of the lowest measured continuous flow 96 hr. LC50 for life stages of species identified by the department as the most sensitive, biologically important species in a particular location, whichever concentration is less. Total aromatic hydrocarbon in the water column shall not exceed 10 ug/l, or 0.01 of the lowest measured continuous flow 96 hr. LC50 for life stages of species identified by the department as the most sensitive, biologically important species in a particular location, whichever concentration is less. There shall be no concentrations of hydrocarbons, animal fats, or vegetable oils in the sediment which cause deleterious effects to aquatic life. Surface waters and adjoining shorelines shall be virtually free from floating oil, film, sheen or discoloration.

6) residues, floating solids, debris, sludge deposits, foam, scum - shall not alone or in combination with other substances or wastes cause the water to be unfit, unsafe or cause acute or chronic problem levels as determined by bioassay or other appropriate methods. Shall not alone or in combination with other substances cause a film, sheen, or discoloration on the surface of the water of adjoining shorelines; cause leaching of toxic or deleterious substances; or cause a sludge, solid, or emulsion to be deposited beneath or upon the surface of the water, with the water column, on the bottom or upon adjoining shorelines.

7) temperature - shall not cause the weekly average temperature to increase more than 1 C. The maximum rate of change shall not exceed 0.5 C per hour. Normal daily temperature cycles shall not be altered in amplitude or frequency.

8) sediment - shall not pose hazards to incidental human contact or cause interference with the use. There shall be no measureable increase in concentrations above natural conditions.

For further details on water quality standards, refer to the February 1979 publication of Water Quality Standards, 18 ACC 70.010. This document may be obtained from any office of the Alaska Department of Environmental Conservation.

D. It is not expected that there will be any water quality violations at the boundaries of the defined mixing zone. This conclusion is reached after considering a variety of materials. First, the dilution rates expected from the proposed Alpetco diffuser is defined by Metcalf & Eddy, Inc., Engineers, in a "Draft Report to DOWL Engineers on Oceanographic Studies of Alpetco Discharge in Port Valdez" dated October 5, 1979. This

material will become a part of the draft EIS being prepared for this project. Second, a variety of data on numerous parameters - in particular toxic pollutants - has been measured at other relateable facilities around the U.S. by EPA. These data were reviewed with regards to the expected dilution rates to determine boundary conditions for various pollutants. Finally, the treatment system proposed by Alpetco should result in effluent limits significantly below the limits for "New Source Performance Standards" and below the levels achieved by most of the existing older refineries located throughout the U.S. from which a majority of the data base was obtained.

IV. Background

- A. This is a new petrochemical complex and as such the permit represents a "New Source" permit. It will be the first permit issued to Alpetco for waste water discharges.
- B. The Discharge flow is broken down as follows:

	<u>Average Flow</u>	<u>Maximum Flow</u>
Process Water	2,500,000 gpd	unknown
Ballast Water	2,995,000 gpd	3,900,000 gpd
Storm Water	1,584,000 gpd	3,900,000 gpd
Clean Storm Water	unknown	unknown

Effluent limits reported by the applicant in his NPDES application are as follows:

<u>Parameter</u>	<u>Average</u>	<u>Maximum</u>
pH	6 Minumum	9
BOD ₅	10 mg/l	10 mg/l
COD	135 mg/l	250 mg/l
TSS	5 mg/l	10 mg/l
Ammonia	7 mg/l	N/A
Aluminum	Trace	N/A
Phenols	0.02 mg/l	N/A
Oil & Grease	0 mg/l	N/A
Chlorine	0.01 mg/l	N/A
Nickel	0.5 mg/l	N/A
Cyanide	0.5 mg/l	N/A

Note: It should be kept in mind that these levels are only estimates and until the facility is placed in actual operation, it will not be possible to accurately describe discharge levels.

V. Basis for Limitations

Limitations contained in this proposed permit reflect both National guidelines and the Alaska Water Quality Standards. Guidelines utilized are the "Effluent Guidelines and Standards for Petroleum Refining" effective May 12, 1974 with amendments dated September 10, 1974, May 20, 1975, and March 23, 1977. The section of those

guidelines pertaining to this facility is Subpart C - Petrochemical Subcategory, section 419.35 - Standards of Performance for New Sources. For purposes of calculations from these guidelines, crude oil throughput was assumed at 161,440 barrels per process day. The process configuration was calculated to be 8.23 giving a process factor of 1.39. The size factor was 1.13. (See Attachment 1, for calculations)

Parameters limited according to National Guidelines for process water, are as follows:

- BOD₅
- T.S.S.
- C.O.D.
- Oil and Grease
- Phenolic Compounds
- Ammonia
- Sulfide
- Total Chromium
- Hexavalent Chromium
- pH

The maximum limit for oil and grease from ballast water was reduced from guideline values of 0.015 kg/m³ to 0.010 kg/m³ to conform to demonstrated available values obtained by Alyeska Pipeline Service Company's Ballast treatment plant at Valdez.

The permit contains receiving water criteria and effluent limits extracted from the Alaska Water Quality Standards (18 AAC 70). Receiving water limits are to be maintained at the boundaries of the defined mixing zone. The mixing zone meets criteria outlined in the water standards as well as conforming to the requirements of the proposed diffuser system. The criteria specified are for control of pH, sediment, aromatic hydrocarbons, and cyanide in the receiving water and aromatic hydrocarbons and cyanide in the effluent.

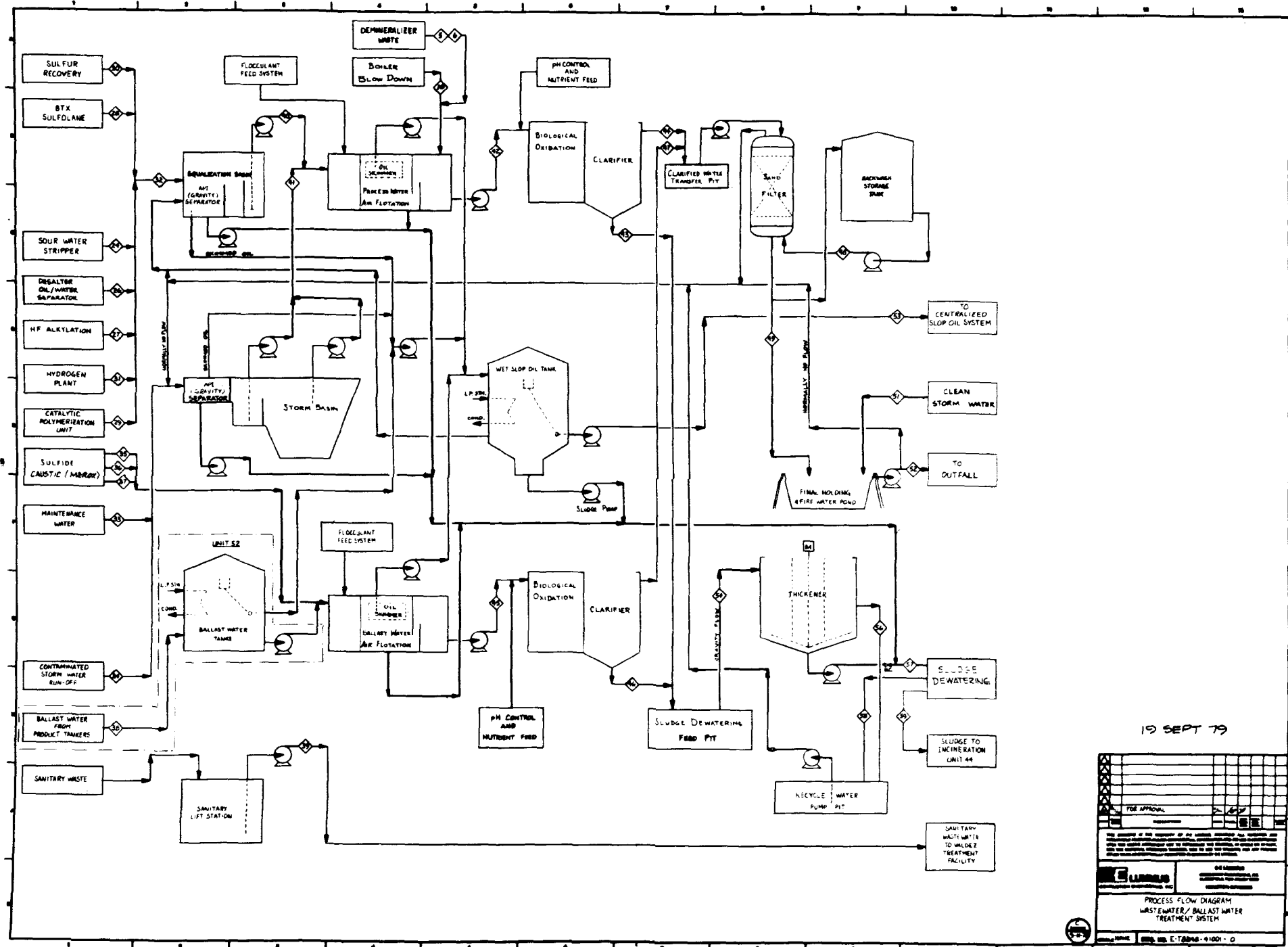
The proposed permit requires that the diffuser system achieve a dilution of 75 to 1 and be tested upon plant start-up to verify dilution rates. The present estimate is that dilutions will be 260:1 at 5 meters below the surface; with a worst case of 75:1 at a trap level of 40 meters when the plume does not reach the surface on the receiving water.

In addition the permit contains a biological receiving water monitoring program developed by the Alaska Department of Environmental Conservation to measure pre-operational and post-operational conditions.

VI. Basis for Compliance Schedule

The only compliance schedules contained in the proposed permit are for reporting and obtaining approval of the outfall diffuser design and location and testing the outfall diffuser system when completed and for an ongoing biological monitoring program. Compliance with effluent limits and receiving water criteria and limits is expected at plant start-up.

- A. Limitations
Please refer to pages 2, 3, 4, 5 and 6 of draft permit for proposed limits.
- B. Expiration date of permit - The proposed permit is set to expire five (5) years from the effective date.



19 SEPT 79

FOR APPROVAL	
DESIGNED BY	DATE
CHECKED BY	DATE
THIS DOCUMENT IS THE PROPERTY OF THE COMPANY. IT IS TO BE KEPT IN THE COMPANY'S FILES AND NOT TO BE LOANED, REPRODUCED, COPIED, OR IN ANY MANNER DISSEMINATED OUTSIDE THE COMPANY WITHOUT THE WRITTEN PERMISSION OF THE COMPANY.	
PROCESS FLOW DIAGRAM WASTEWATER/BALLAST WATER TREATMENT SYSTEM	
E-1001-0	

PSD PERMIT APPLICATION LETTERS

ALASKA PETROCHEMICAL COMPANY

601 WEST 5TH AVENUE

ANCHORAGE, ALASKA 99501

TELEPHONE 907 272-1517 TELETYPE 090-25157



October 8, 1979

Chief, Compliance Evaluation Section
Region X - Environmental Protection Agency
1200 Sixth Avenue
Seattle, Washington 98101

Dear Sir:

Enclosed with this cover letter is Alaska Petrochemical Company's (Alpetco) request for a PSD permit to construct and operate a 150,000 bpd refinery and petrochemical facility in Valdez, Alaska.

As you are aware, this PSD permit application is the result of an intensive effort by Alpetco over the past year to monitor ambient air quality in the vicinity of the proposed facility as well as accumulate and evaluate all other available data from all sources. Numerous meetings with representatives of EPA-Region X, the Alaska Operations Office (EPA), and the Alaska Department of Environmental Conservation have helped to guide the development of this application as well as impacting the design of the facility itself and the input of many individuals from each of these agencies is sincerely acknowledged. The input of the City of Valdez and the cooperation of the industrial sector, particularly Alyeska Pipeline Service Company, is also acknowledged.

The use of the non-guideline model, in this case the Lagrangian model termed RADM (for Random-walk Atmospheric Dispersion Model), has also been discussed with each of the above agencies as well as representatives from Research Triangle Park. Because of some reservations expressed by reviewers of RADM relative to the

behaviour of vertical winds and wind shear, Alpetco is prepared as a part of its anticipated pre-construction monitoring program to measure this vertical wind behaviour over short-term periods (say, mid-summer) by a combination of multiple pibal releases and doppler radar observations. These observations should permit further validation of RADM for utilization in Port Valdez. In addition, Alpetco would be willing to enter into a cooperative agreement with the appropriate agencies and Alyeska Pipeline Service Company that would permit selected meteorological stations within Port Valdez to be maintained during pre- and post-construction periods.

You will note that the basic approach throughout this application is highly conservative (particularly in estimating emission data and emission flow rates); for example, TSP and NO_x estimates may be high by a factor of 2 or more.

The application demonstrates that Alpetco:

1. Meets all applicable emission limits achievable by the application of best available control technology (BACT);
2. Complies with allowable air quality increments of sulfur dioxide (SO_2) and particulate matter (TSP); and
3. Complies with national and Alaska ambient air quality standards.

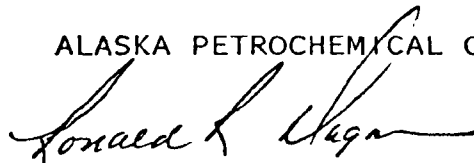
Copies of this application are being made available to the Alaska Operations Office (EPA) and the Alaska Department of Environmental Conservation this same date.

I will be available to you or your staff at your convenience to provide any further information you may require during your evaluation of this application; similarly, representatives of Alpetco's

engineering group, CE-Lummus, Dames & Moore, and Pace can also be made available if this is necessary.

Very truly yours,

ALASKA PETROCHEMICAL COMPANY



Ronald R. Dagon
Manager, Environmental Programs
and Permitting

Enclosure: PSD Permit Application

cc: CCC/HOK-DOWL (Paulson)
EPA - Region X (Smith)
ADEC (Akins)
City of Valdez (Lewis)
Alyeska Pipeline Service Company (Fisher)
Burr, Pease & Kurtz (Sedwick)
CE-Lummus (Irving)
Alpetco - Houston (Hanzlik/Carmichael)
Alpetco - Anchorage (Anderson)

ALASKA PETROCHEMICAL COMPANY

601 WEST 5TH AVENUE
ANCHORAGE, ALASKA 99501
TELEPHONE 907 272-1517 TELEX 090-25157

November 23, 1979

Mr. Michael M. Johnston, Chief
New Source Permits Section
U.S. Environmental Protection Agency - Region X
1200 Sixth Avenue
Seattle, Washington 98101

Dear Mr. Johnston:

Enclosed with this letter is a supplement to Alaska Petrochemical Company's (Alpetco) October 8, 1979 Prevention of Significant Deterioration (PSD) Application. This supplement addresses the clarification of the air quality analysis and BACT analysis issues raised in your November 9, 1979 letter regarding the completeness of Alpetco's PSD application.

This supplement has been prepared by Dames & Moore under the supervision of Charles Fahl (Anchorage) and George Lou (Seattle) with assistance from the Pace Company of Houston (Paul Pizzi) primarily in regards to BACT.

Copies of this supplement are being made available to the Alaska Operations Office (EPA) and the Alaska Department of Environmental Conservation (Juneau) this same date.

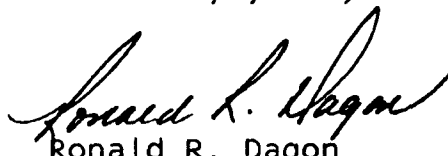
As I indicated in my October 8, 1979 cover letter to our PSD application, the application demonstrates that Alpetco:

1. Meets all applicable emission limits achievable by the application of Best Available Control Technology (BACT);
2. Complies with allowable air quality increments of sulfur dioxide (SO₂) and particulate matter (TSP); and
3. Complies with national and Alaska ambient air quality standards.

I appreciate the timely response you and your staff provided for the PSD application review and the input of your technical staff is particularly acknowledged. In addition, the continuing dialogue between EPA's Rob Wilson and Stan Hungerford of ADEC and their demonstrated abilities has enabled all of us to avoid any misunderstandings and duplication of effort relative to this substantial work effort.

I will be available to you or your staff at your convenience if any further information or clarification is required.

Sincerely yours,



Ronald R. Dagon
Manager, Environmental Programs
and Permitting

RRD:jbd

Enclosure: Supplement to Alpetco's PSD Permit Application

CC: CCC/HOK-DOWL (Paulson)
EPA - Region X (Smith)
ADEC (Akins)
City of Valdez (Lewis)
Alyeska Pipeline Service Company (Fisher)
Burr, Pease & Kurtz (Sedwick)
Alpetco - Houston (Hanzlik/Carmichael)

Note: The PSD permit application is contained in Attachment C.



Corps of Engineers Permits

CORPS OF ENGINEERS PERMIT APPLICATIONS

ALASKA PETROCHEMICAL COMPANY

601 WEST 5TH AVENUE

ANCHORAGE, ALASKA 99501

TELEPHONE 907 272-1517 TELEX 090-25157

September 20, 1979

The District Engineer, Alaska District,
Corps of Engineers
P. O. Box 7002
Anchorage, Alaska 99510

Attn: Regulatory Functions Branch

Gentlemen:

Enclosed with this letter are two "Applications for a Department of the Army Permit - ENG Form 4345" from Alaska Petrochemical Company (Alpetco) related to the proposed construction and operation of a refinery and petrochemical facility in Valdez, Alaska.

The attached location map identifies the following proposed activities and preferred construction method [] for which Department of the Army permit programs under Section 10 of the River and Harbor Act of 1899, Section 404 of P.L. 92-500 and Section 103 of P.L. 92-532 may apply:

1. construction of a tanker terminal on the south shore of Port Valdez (separate application dated September 20, 1979, all other proposed activities under application dated September 21, 1979) - Sec. 10
2. construction of a temporary construction dock on the north shore of Port Valdez [sheet pile w/gravel fill; sufficient grading to support grid for large barges] - Sec. 10
3. construction of a control levee on the east bank of Valdez Glacier Stream [earth-fill core w/rip-rap] - Sec. 404
4. diversion of Slater Creek from Corbin Creek (Glacier) to Valdez Glacier Stream [ditching w/rip-rap] - Sec. 404
5. construction of a diversion ditch on the eastern boundary of the Alpetco site - Sec. 404
6. construction of a bridge across Valdez Glacier Stream [pile-supported, steel and concrete w/surfaced gravel-fill approaches] - Sec. 404

7. construction of bridge crossings and associated paved roadways of Robe River, Corbin Creek (Robe), Corbin Creek (Glacier) and related tributaries [concrete w/surfaced gravel-fill approaches and/or gravel-covered culverts] - Sec. 404
8. pipeline (crude, product, and ballast water) crossings of Robe River, Corbin Creek (Robe), Corbin Creek (Glacier) and related tributaries, and Ambercrombie Creek [buried at periods of minimal flow and non-interference w/anadromous fish] - Sec. 404
9. pipeline (crude, product, and ballast water) crossing of the Lowe River [buried at periods of minimal flow and non-interference w/anadromous fish] - Sec. 10
10. installation of a waste water outfall pipe from the Alpetco site across Valdez Glacier Stream discharging from the north shore of Port Valdez [conventional burial] - Sec. 10

As you are aware, Alpetco is preparing a draft EIS which addresses (among numerous other issues) all of the above listed proposed activities:

"The Environmental Protection Agency (EPA) has received an application (AK-002763-4) for a National Pollutant Discharge Elimination System (NPDES) permit for discharge of waste waters from a proposed refinery/petrochemical complex to be built by Alaska Petrochemical Company (Alpetco) in Valdez, Alaska. Based on a review of information submitted by the applicant, this facility has been initially determined to be a new source (40 CFR 6.906d). Also, the proposed issuance of a NPDES permit has been determined to be a major federal action requiring preparation of an EIS (40 CFR 6.910).

The EIS will be prepared under a third party agreement between EPA and the applicant, whereby the applicant retains a consultant and EPA retains control over preparation of the EIS. EPA is ultimately responsible for

assuring that the EIS complies with all applicable federal regulations. CCC/HOK - Dickinson. Oswald.Walsh.Lee of Anchorage, Alaska has been selected as the EIS consultant.

Alpetco proposes to build a refinery/petro-chemical complex capable of processing 150,000 barrels per day of crude oil. A fuels refinery will come on line first, followed by an aromatics refinery and possibly an ethylene production unit. Refinery facilities will include crude oil and product transportation and storage facilities. A power plant, including fuel supply storage and transportation facilities, may also be required. No decision on the fuel source for the power generating unit has been made; however, coal, oil and natural gas will be evaluated as possible fuels in the EIS. The refinery will be largely air-cooled. Treated waste waters will be discharged to Valdez Arm." (EPA Notice of Intent dated December 7, 1978)

As you are also aware, Alpetco under the terms of its agreement with the State of Alaska to purchase the State's royalty oil is required to develop the project in an expeditious manner. Following an extensive search for suitable sites within the State, Alpetco notified the State that Valdez had been chosen as the location for the facility in November, 1978. The Alaska Department of Environmental Conservation has reviewed the Alpetco site report and in a memorandum to the Commissioner, Department of Natural Resources, has indicated that there are no insurmountable environmental problems evident that would prevent the location of the plant on the selected site near the City of Valdez.

In March, 1979 the Commissioner, Department of Natural Resources, formally approved Alpetco's site selection (letter from LeResche to Cain dated March 5, 1979 enclosed).

During the past year, numerous field investigations related primarily to site evaluation and EIS preparation have been performed by a variety of consultants as well as representatives

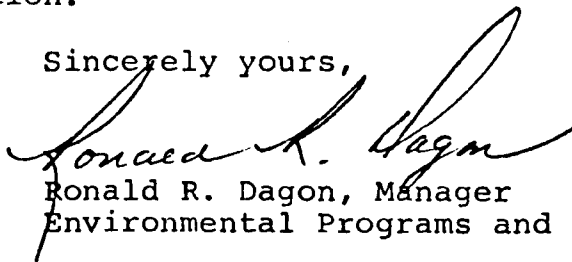
of numerous local, state and federal agencies who have also made significant inputs to the on-going scope of work for the EIS. Many public meetings have been held in Valdez with positive public response and Alpetco has a continuing dialogue with Valdez local officials and residents.

A variety of recent technical reports which will be incorporated into the EIS are available from Alpetco for your utilization in consideration of these applications, including:

- Plant Communities of Eastern Port Valdez (Dames & Moore, 1979)
- Freshwater Aquatic Habitats of the Valdez Area (Dames & Moore, 1979)
- Intertidal and Shallow Subtidal Habitats of Port Valdez (Dames & Moore, 1979)
- Bathymetry and Subsurface Conditions Vicinity Solomon Gulch, Port Valdez, Alaska (Dames & Moore, 1979)
- Groundwater Hydrology (Draft) and As-built Reports on Wells B-2 and B-3, Alpetco Site (DOWL, 1979)
- Preliminary Results of Alpetco EIS Soils Study (DOWL, 1979)
- Proposed Pipeline Route Soil Reconnaissance (DOWL, 1979)

Both the program manager, CCC/HOK-DOWL, and I are prepared to provide a familiarization tour of the site and community at your earliest convenience. Please do not hesitate to ask for additional information.

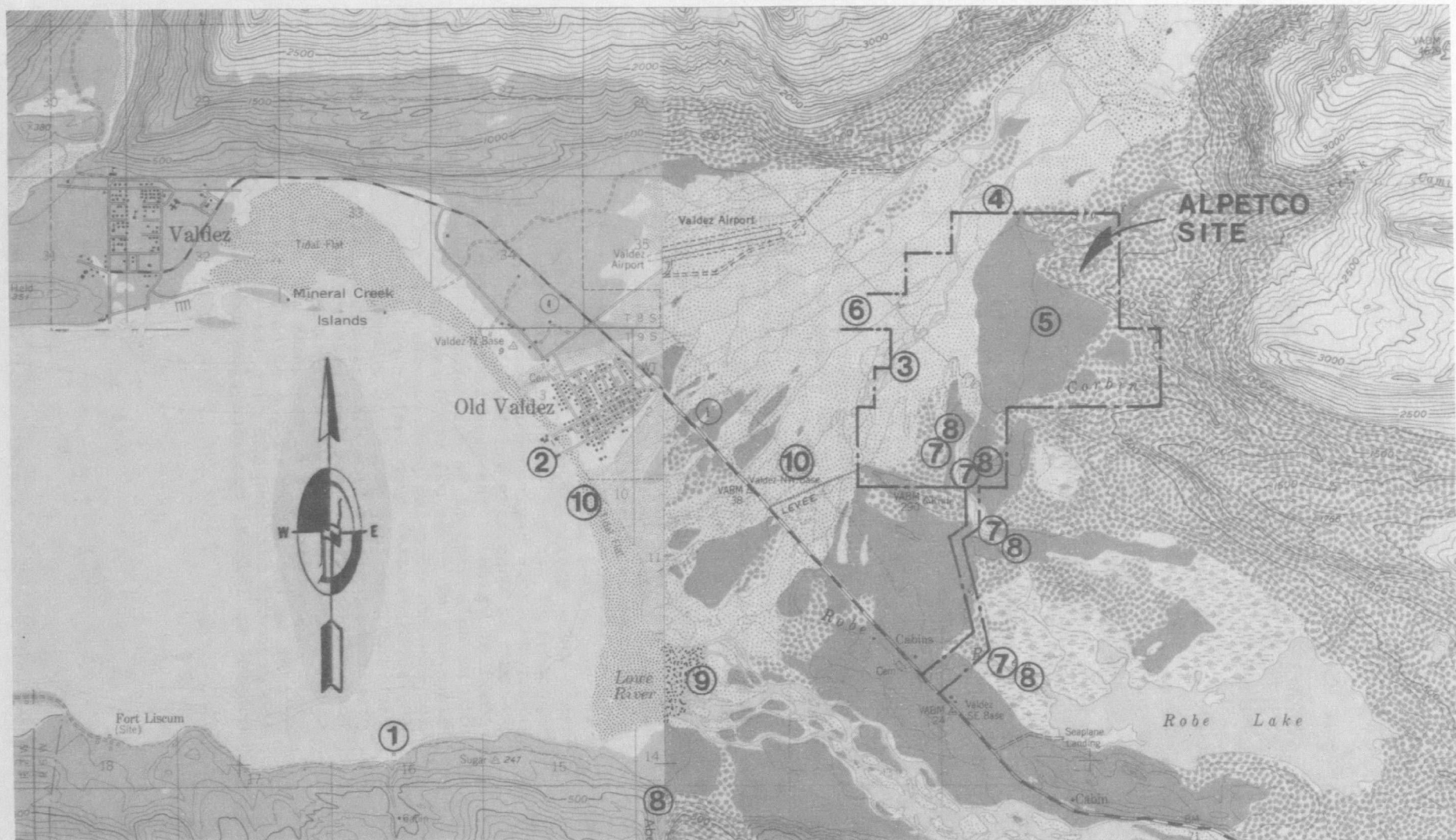
Sincerely yours,



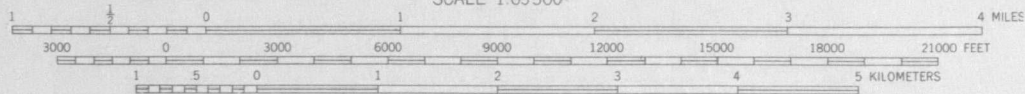
Ronald R. Dagon, Manager
Environmental Programs and Permitting

Enclosures: Location map
LeResche letter of March 5, 1979
Application for Dept. of the Army Permit
dated September 20, 1979
Application for Dept. of the Army Permit
dated September 21, 1979

cc: CCC/HOK-DOWL (Paulson)	City of Valdez (Lewis)
EPA - Region X (Smith)	Alpetco-Houston (Hanzlik/Carmichael)
ADEC (Akins)	Burr, Pease & Kurtz (Sedwick)
ADNR (LeResche)	CE-Lummus (Irving)
ADF&G (Logan, Barrett)	Santa Fe (King)
NMFS (Area Director)	Dames & Moore (Winn)
USFWS (Area Director)	Alpetco-Anchorage (Anderson)



SCALE 1:63360



CONTOUR INTERVAL 100 FEET

DATUM IS MEAN SEA LEVEL

DEPTH CURVES AND SOUNDINGS IN FEET DATUM IS MEAN LOWER LOW WATER

SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER

THE MEAN RANGE OF TIDE IS APPROXIMATELY 10 FEET

CORPS PERMITS **[10/404]** **LOCATION MAP**

ALASKA PETROCHEMICAL COMPANY (ALPETCO)

SEPT 1979

STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

OFFICE OF THE COMMISSIONER

JAY S. HAMMOND, GOVERNOR

FOUNDED - 1906

March 5, 1979

Mr. Gordon Cain
President
Alaska Petrochemical Company
P. O. Box 6554
Houston, Texas 77005

Dear Mr. Cain:

In accordance with the terms of Article 4.2.2 of the Agreement for the Sale and Purchase of State Royalty Oil between Alaska Petrochemical Company and the State of Alaska dated February 22, 1978, the Commissioner of Natural Resources must approve the site selected for the petrochemical facility. This letter constitutes that approval.

Upon receipt of your formal notice of your choice of Valdez as the site for the Alpetco facility, I forwarded copies of the Site Report to all concerned departments of State Government for their review and comments. I have enclosed copies of those comments for your information. In summary, the Department of Environmental Conservation indicated that while there was much work to be done to secure approval of air and water discharge permits, there were no insurmountable environmental problems evident from knowledge present at this time which would prevent location of the plant at Valdez. The Department of Fish and Game approved of the selection of Valdez because (1) no additional tanker transport of crude oil would be required and (2) navigation for tankers carrying products was relatively safe because of the sophisticated ship traffic control system in the area. Fish and Game felt there was a possibility of water quality problems resulting from discharge of refinery effluent into Port Valdez but did not feel that the potential for water quality deterioration was grounds for rejecting the Valdez site. The Department of Community and Regional Affairs brought up the matter of the potential flood hazards at the proposed site and the fact that the site would be subject to initial consideration under the Valdez Coastal

Mr. Gordon Cain

March 5, 1979

Zone Program. The Department of Community and Regional Affairs has conferred with the City of Valdez Planning Director on these matters.

On January 2, 1979, notices of a public hearing to be held in Valdez concerning its selection as the facility site were sent to ten major newspapers in Alaska to be published several times during the month of January. Also on that date Legislative leaders and the Legislators representing the Valdez area were notified of the scheduled hearing and invited to attend or comment.

On January 29, 1979, at 7 p.m. I conducted the public hearing in Valdez for the purpose of gathering information regarding the selection of Valdez as the site for the petrochemical facility and to determine public acceptance of the proposed facility by the residents of the Valdez area. Approximately 180 citizens attended the public hearing as well as several state and federal officials and officials from the Alaska Petrochemical Company. The responses from the sixteen people who testified were unanimously in favor of the selection of Valdez as the site for the facility.

In view of the favorable response received by the Department of Natural Resources from State and local officials and the residents of Valdez, your selection of Valdez as the site for the petrochemical facility to be built under the terms of the Agreement for the Sale and Purchase of State Royalty Oil between Alaska Petrochemical Company and the State of Alaska is hereby approved.

Sincerely,



Robert E. LeRoesche
Commissioner

Enclosures

cc: Jay S. Hammond

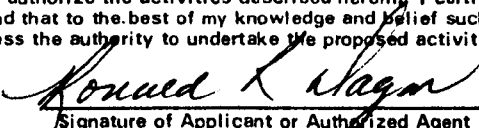
APPLICATION FOR A DEPARTMENT OF THE ARMY PERMIT

For use of this form, see EP 1145-2-1

The Department of the Army permit program is authorized by Section 10 of the River and Harbor Act of 1899, Section 404 of P. L. 92-500 and Section 103 of P. L. 92-532. These laws require permits authorizing structures and work in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Information provided in ENG Form 4345 will be used in evaluating the application for a permit. Information in the application is made a matter of public record through issuance of a public notice. Disclosure of the information requested is voluntary; however, the data requested are necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and checklist) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

1. Application number (To be assigned by Corps)		2. Date <u>20</u> <u>Sept</u> 1979 Day Mo. Yr.		3. For Corps use only.	
4. Name and address of applicant. (Alpetco) Alaska Petrochemical Company 601 W. 5th Ave., Suite 320 Anchorage, AK 99501 Telephone no. during business hours A/C (907) <u>272-1517</u> A/C () _____		5. Name, address and title of authorized agent. Telephone no. during business hours A/C () _____ A/C () _____			
6. Describe in detail the proposed activity, its purpose and intended use (private, public, commercial or other) including description of the type of structures, if any to be erected on fills, or pile or float-supported platforms, the type, composition and quantity of materials to be discharged or dumped and means of conveyance, and the source of discharge or fill material. If additional space is needed, use Block 14. Construction of a private two-berth refinery dock w/product pipelines and ballast water on piles without dredging (see attached drawings).					
7. Names, addresses and telephone numbers of adjoining property owners, lessees, etc., whose property also adjoins the waterway. State of Alaska					
8. Location where proposed activity exists or will occur.					
Address: <u>Dayville Road</u> Street, road or other descriptive location <u>City of Valdez</u> In or near city or town			Tax Assessors Description: (If known) Map No. Subdiv. No. Lot No. <u>16</u> <u>9S</u> <u>6W</u> Sec. Twp. Rge.		
<u>N/A</u> <u>Alaska</u> <u>99686</u> County State Zip Code					
9. Name of waterway at location of the activity. Port Valdez					

10. Date activity is proposed to commence. <u>1980</u> Date activity is expected to be completed <u>1982</u>						
11. Is any portion of the activity for which authorization is sought now complete? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If answer is "Yes" give reasons in the remark section. Month and year the activity was completed _____ . Indicate the existing work on the drawings.						
12. List all approvals or certifications required by other federal, interstate, state or local agencies for any structures, construction, discharges, deposits or other activities described in this application.						
<table border="0" style="width: 100%;"> <tr> <th style="text-align: left;"><u>Issuing Agency</u></th> <th style="text-align: left;"><u>Type Approval</u></th> <th style="text-align: left;"><u>Identification No.</u></th> <th style="text-align: left;"><u>Date of Application</u></th> <th style="text-align: left;"><u>Date of Approval</u></th> </tr> </table>		<u>Issuing Agency</u>	<u>Type Approval</u>	<u>Identification No.</u>	<u>Date of Application</u>	<u>Date of Approval</u>
<u>Issuing Agency</u>	<u>Type Approval</u>	<u>Identification No.</u>	<u>Date of Application</u>	<u>Date of Approval</u>		
Alaska DNR USCG Alaska DEC	pipeline right-of-way permit certification permit for hazardous materials private aids to navigation certificate of reasonable assurance					
13. Has any agency denied approval for the activity described herein or for any activity directly related to the activity described herein? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If "Yes" explain in remarks)						
14. Remarks (Checklist, Appendix H for additional information required for certain activities). 1. layout is designed for simultaneous occupancy by 2 tankers and is predicated on the assumptions shown below (4) 2. a report prepared for Alpetco by Dames & Moore (August 1979) titled: "Bathymetry and Subsurface Conditions - Alpetco Proposed Tanker Terminal, Solomon Gulch, Port Valdez, Alaska" is available for distribution; please note the general conclusions below (5) 3. an EIS is being prepared that considers this proposed activity under an application for an NPDES permit (AK-002753-4) that has been determined to be a major federal action (EPA-Region X); this NPDES permit would be followed by a Cert. of Reasonable Assurance (ADEC) 4. <u>Assumptions</u> - (by Santa Fe Technical Service Company) • 1-80,000 DWT Tanker - 45 ft. Draft.						
(continued)						
15. Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities. <div style="text-align: center;">  Signature of Applicant or Authorized Agent Ronald R. Dagon, Manager Environmental Programs and Permitting </div> <p>The application must be signed by the applicant; however, it may be signed by a duly authorized agent (named in Item 5) if this form is accompanied by a statement by the applicant designating the agent and agreeing to furnish upon request, supplemental information in support of the application.</p> <p>18 U. S. C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both. Do not send a permit processing fee with this application. The appropriate fee will be assessed when a permit is issued.</p>						

ALASKA PETROCHEMICAL COMPANY

Block 14 (continued)

4. Assumptions (continued)

- 1-45,000 DWT Tanker - 40 ft. Draft.
- 55 ft. and 50 ft. minimum water depths at respective berths.
- No dredging.
- Tide range of - 6.0 ft. to + 16.0 ft. MLLW
- Maximum wave of 10 ft. at +16.0 ft. MLLW tide.
- Design Tsunami of 20 ft. at +12.0 ft. MLLW tide.
- Piling will be anchored into bedrock by drilling and grouting.

5. Conclusions and Recommendations - (from Dames & Moore,
August 1979)

GENERAL

Based on the data collected, we conclude that the site conditions are suitable for the construction of the proposed dock. The area is characterized by a wedge of unconsolidated sediments atop an irregular surface of greywacke bedrock. Both the bathymetric and sub-bottom surveys indicate that slumping has been an active process in this region, but no clear evidence of recent displacements, either slumps or faults, could be identified in the data.

The soils at the site are essentially frictional silt and sand. Driven displacement piles will, in all likelihood, encounter refusal before reaching design tip elevations based on frictional resistance; therefore some predrilling may be necessary.

APPLICATION FOR A DEPARTMENT OF THE ARMY PERMIT

For use of this form, see EP 1145-2-1

The Department of the Army permit program is authorized by Section 10 of the River and Harbor Act of 1899, Section 404 of P. L. 92-500 and Section 103 of P. L. 92-532. These laws require permits authorizing structures and work in or affecting navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Information provided in ENG Form 4345 will be used in evaluating the application for a permit. Information in the application is made a matter of public record through issuance of a public notice. Disclosure of the information requested is voluntary; however, the data requested are necessary in order to communicate with the applicant and to evaluate the permit application. If necessary information is not provided, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and checklist) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.

1. Application number (To be assigned by Corps)		2. Date <u>21</u> <u>Sept</u> <u>1979</u> Day Mo. Yr.		3. For Corps use only.	
4. Name and address of applicant. (Alpetco) Alaska Petrochemical Company 601 W. 5th Ave., Suite 320 Anchorage, AK 99501 Telephone no. during business hours A/C (407) <u>272-1517</u> A/C () _____		5. Name, address and title of authorized agent. Telephone no. during business hours A/C () _____ A/C () _____			
6. Describe in detail the proposed activity, its purpose and intended use (private, public, commercial or other) including description of the type of structures, if any to be erected on fills, or pile or float-supported platforms, the type, composition and quantity of materials to be discharged or dumped and means of conveyance, and the source of discharge or fill material. If additional space is needed, use Block 14. The proposed activities call for the construction of a temporary construction dock on the north shore of Port Valdez (Sheet Pile w/fill); construction of a control levee on the east bank of Valdez Glacier Stream (earth-bank w/rip-rap); diversion of Slater Creek from Corbin Creek (Glacier) (continued)					
7. Names, addresses and telephone numbers of adjoining property owners, lessees, etc., whose property also adjoins the waterway. City of Valdez State of Alaska					
8. Location where proposed activity exists or will occur.					
Address: <u>N/A</u>			Tax Assessors Description: (If known)		
Street, road or other descriptive location <u>Valdez</u>			Map No.	Subdiv. No.	Lot No.
In or near city or town			Sec.	Twp.	Rge.
<u>N/A</u> County	<u>Alaska</u> State	<u>99686</u> Zip Code	(see continuation)		
9. Name of waterway at location of the activity. Port Valdez and Vicinity (see accompanying location maps)					

10. Date activity is proposed to commence. Fall 1980
Date activity is expected to be completed Spring 1983

11. Is any portion of the activity for which authorization is sought now complete? ☐ YES ☒ NO
If answer is "Yes" give reasons in the remark section. Month and year the activity was completed _____
_____ . Indicate the existing work on the drawings.

12. List all approvals or certifications required by other federal, interstate, state or local agencies for any structures, construction, discharges, deposits or other activities described in this application.

<u>Issuing Agency</u>	<u>Type Approval</u>	<u>Identification No.</u>	<u>Date of Application</u>	<u>Date of Approval</u>
City of Valdez	Building permit/lease			
ADEC	Certificate of Reasonable Assurance			
	Certificate of Risk Avoidance			
	Waste Water Disposal Permit			
	(see continuation)			

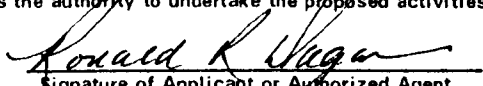
13. Has any agency denied approval for the activity described herein or for any activity directly related to the activity described herein?

☐ Yes ☒ No (If "Yes" explain in remarks)

14. Remarks (Checklist, Appendix H for additional information required for certain activities).

to Valdez Glacier Stream (ditching); construction of a diversion ditch on the eastern boundary of the Alpetco site (ditching); construction of a bridge across Valdez Glacier Stream (pile supported-steel and concrete); construction of bridge crossings and associated paved roadways of Robe River, Corbin Creek (Robe), Corbin Creek (Glacier), and related tributaries (pile supported-steel and concrete); pipeline (crude, product and ballast water) crossings of Robe River, Corbin Creek (Robe), Corbin Creek (Glacier) and related tributaries, and Ambercrombie Creek (all crossings buried); pipeline (crude, product and ballast water) crossing of the Lowe River (buried); and installation of a waste water outfall pipe from the Alpetco site across Valdez Glacier Stream discharging from the north shore of Port Valdez (buried).

15. Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete, and accurate. I further certify that I possess the authority to undertake the proposed activities.


Signature of Applicant or Authorized Agent
Ronald R. Dagon, Manager

Environmental Programs and Permitting

The application must be signed by the applicant; however, it may be signed by a duly authorized agent (named in Item 5) if this form is accompanied by a statement by the applicant designating the agent and agreeing to furnish upon request, supplemental information in support of the application.

18 U. S. C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both. Do not send a permit processing fee with this application. The appropriate fee will be assessed when a permit is issued.

ALASKA PETROCHEMICAL COMPANY

Block 8 (continued)

T9S R6W Sec 1, 2, 10, 11, 13, 14, 15, 16, 24
R5W Sec 5, 6, 7, 18
T8S R6W Sec 36
R5W Sec 31, 32

Block 12 (continued)

ADF&G Anadromous fish protection permit

ADNR Water use permit
 Pipeline right-of-way lease

USDOD COE (structures)

USDOT CG - application for private aids to navigation
 CG - bridges over navigable waters
 FAA - notice of proposed construction

USCEQ
 EIS

USEPA NPDES
 PSD
 SPCC

NOTE: The original Drawings which
accompanied this Application are included
with the Public Notice which follows.

CORPS OF ENGINEERS PUBLIC NOTICE



DEPARTMENT OF THE ARMY

ALASKA DISTRICT, CORPS OF ENGINEERS

P.O. BOX 7002

ANCHORAGE, ALASKA 99510

REGULATORY FUNCTIONS BRANCH

(907) 279-4123

REPLY TO
ATTENTION OF:

NPACO-RF-P
Port Valdez 84

19 October 1979

PUBLIC NOTICE

NPACO No. 071-OYD-2-790372

Application has been received in this office from the Alaska Petrochemical Company (ALPETCO), 601 West 5th Avenue, Suite 320, Anchorage, Alaska 99501, for a Department of the Army permit under Section 10 of the River and Harbor Act of 1899 (30 Stat. 1151; 33 U.S.C. 403) and Section 404 of the Clean Water Act (Public Law 95-217) to construct a tanker terminal in an area adjacent to the Dayville Road in the Port of Valdez, near the city of Valdez, Alaska, as shown on the plans attached to this notice. This project will be used in conjunction with the activities described in Public Notice NPACO No. 071-OYD-2-790373.

The applicant proposes to build a facility capable of simultaneous occupancy by two tankers. Each loading platform will be 145'x70'. A control tower, operations building, crane, and loading arms will be constructed on each loading platform.

The loading platform, designed to accommodate 80,000 DWT tankers, will be flanked by four 30'x30' breasting dolphins and three 18'x18' mooring dolphins. The loading platform designed to accommodate 45,000 DWT tankers will be flanked by two 30'x30' breasting dolphins and three 18'x18' mooring dolphins. An additional 18'x18' mooring dolphin will be sited between the two loading platforms and will service both. All facilities will be supported by steel jacketed, steel pipe pile bents braced longitudinally and horizontally. The loading platforms and dolphins will be connected by walkways. The pipeway/roadway trestle will connect the two loading platforms and extend to the Dayville Road, total length approximately 2,350'. The trestle will be 40' wide and will be supported by steel jacketed, steel pipe pile bents braced longitudinally and horizontally. The bents will be sited on 100' centers. The piling will be anchored into bedrock by drilling and grouting.

A report titled "Bathymetry and Subsurface Conditions - ALPETCO Proposed Tanker Terminal, Solomon Gulch, Alaska" has been prepared by Dames & Moore (August 1979). The report is available from the applicant. An Environmental Impact Statement concerning the entire project is being prepared by the Environmental Protection Agency.

NPACO-RF-P
Port Valdez 84

A Certificate of Reasonable Assurance or waiver of certification is required for this activity under Section 401 of the Clean Water Act (Public Law 95-217). This certification, or waiver thereof, is issued by the Alaska Department of Environmental Conservation, Pouch O, Juneau, Alaska, telephone (907) 465-2670.

The Division of Policy Development and Planning, State of Alaska, is reviewing this work for consistency with the approved Alaska Coastal Management Program.

The evaluation of the impact of the activity on the public interest will include application of the guidelines promulgated by the Administrator, EPA, under authority of Section 404(b) of the Clean Water Act (Public Law 95-217).

The National Register of Historic Places and the latest published version of the Federal Register have been consulted in regard to the proposed activity. Consultation of the National Register constitutes the extent of cultural resource investigations by the District Engineer, and he is otherwise unaware of the presence of such resources.

Preliminary determinations indicate that the proposed activity will not affect an endangered species or their critical habitat designated as endangered or threatened pursuant to the Endangered Species Act of 1973 (87 Stat. 844). Formal consultation pursuant to Section 7 of the Act with the Department of Interior is not required for this proposed activity.

The decision whether to issue a permit will be based on an evaluation of the probable impact of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered; among those are conservation, economics, aesthetics, general environmental concerns, historic values, fish and wildlife values, flood damage prevention, land use, navigation, recreation, water supply, water quality, energy needs, safety, food production, and, in general, the needs and welfare of the people.

NPACO-RF-P
Port Valdez 84

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

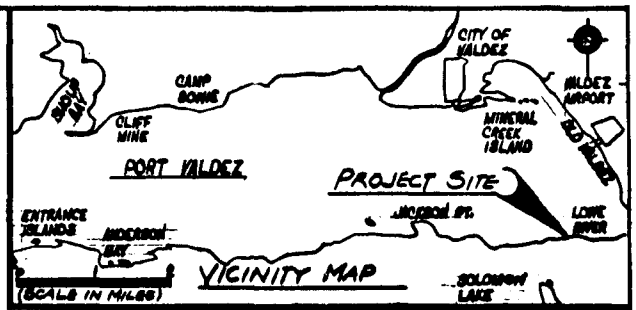
Written statements received in this office on or before 19 November 1979 will become a part of the record and will be considered in the determination. Any response to this notice should be mailed to the Alaska District, Corps of Engineers, ATTN: Regulatory Functions Branch, P.O. Box 7002, Anchorage, Alaska 99510. If further information is desired concerning this notice, contact CPT Mike Mahoney at (907) 752-4942 or (907) 279-4123.

FOR THE DISTRICT ENGINEER:

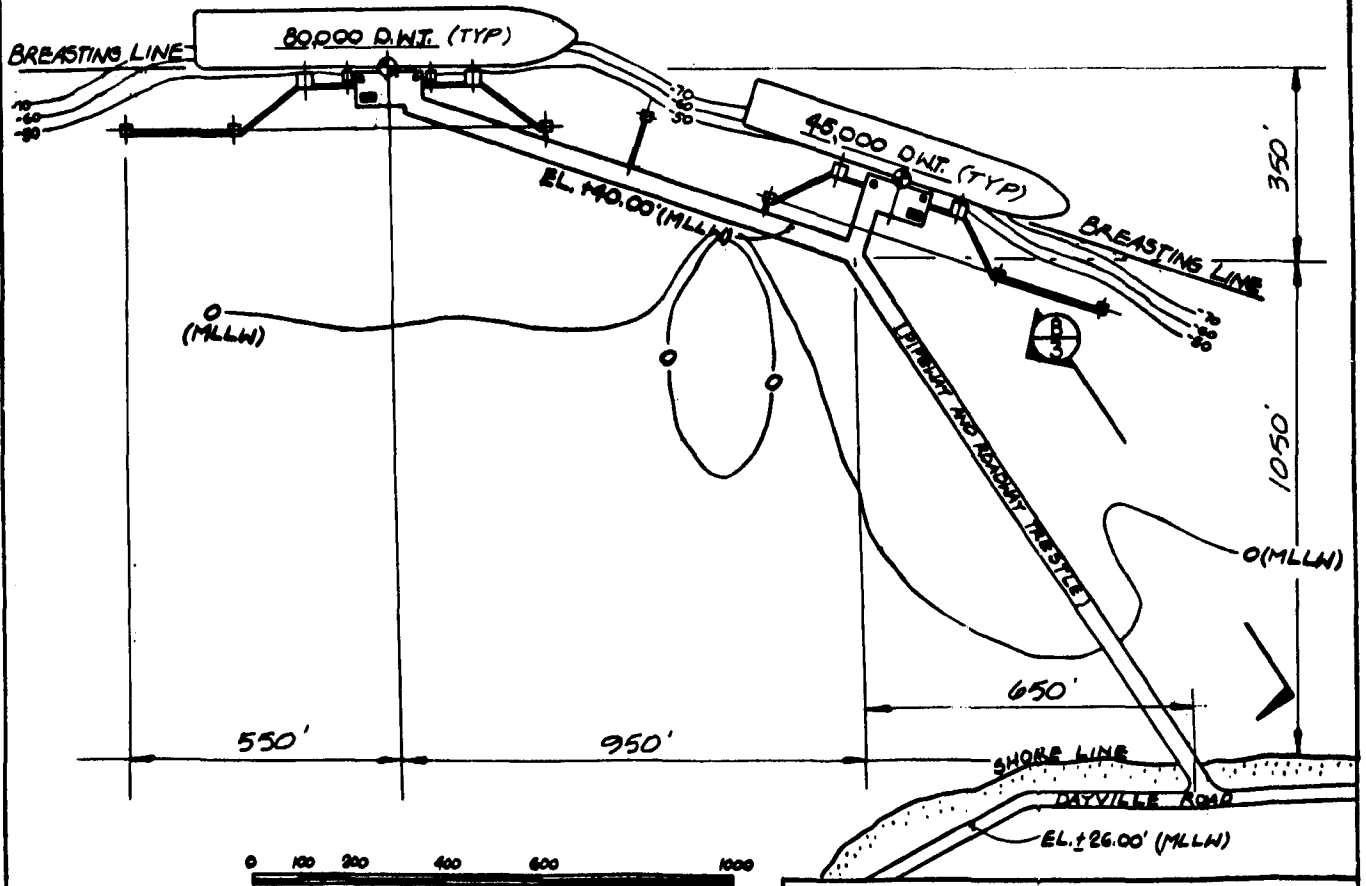
- 3 Incl
1. Plan
2. ACMP Notice
3. 401 Notice



DAVID L. ROBBINS
Chief, Construction/Operations Division



FROM NATIONAL OCEAN SURVEY CHART 16708
(FORMERLY C#88 85/9)



ADJACENT LANDOWNERS: STATE OF ALASKA
PURPOSE: TANKER LOADING TERMINAL
DATUM: MEAN LOWER LOW WATER (MLLW)
(NATIONAL OCEAN SURVEY)

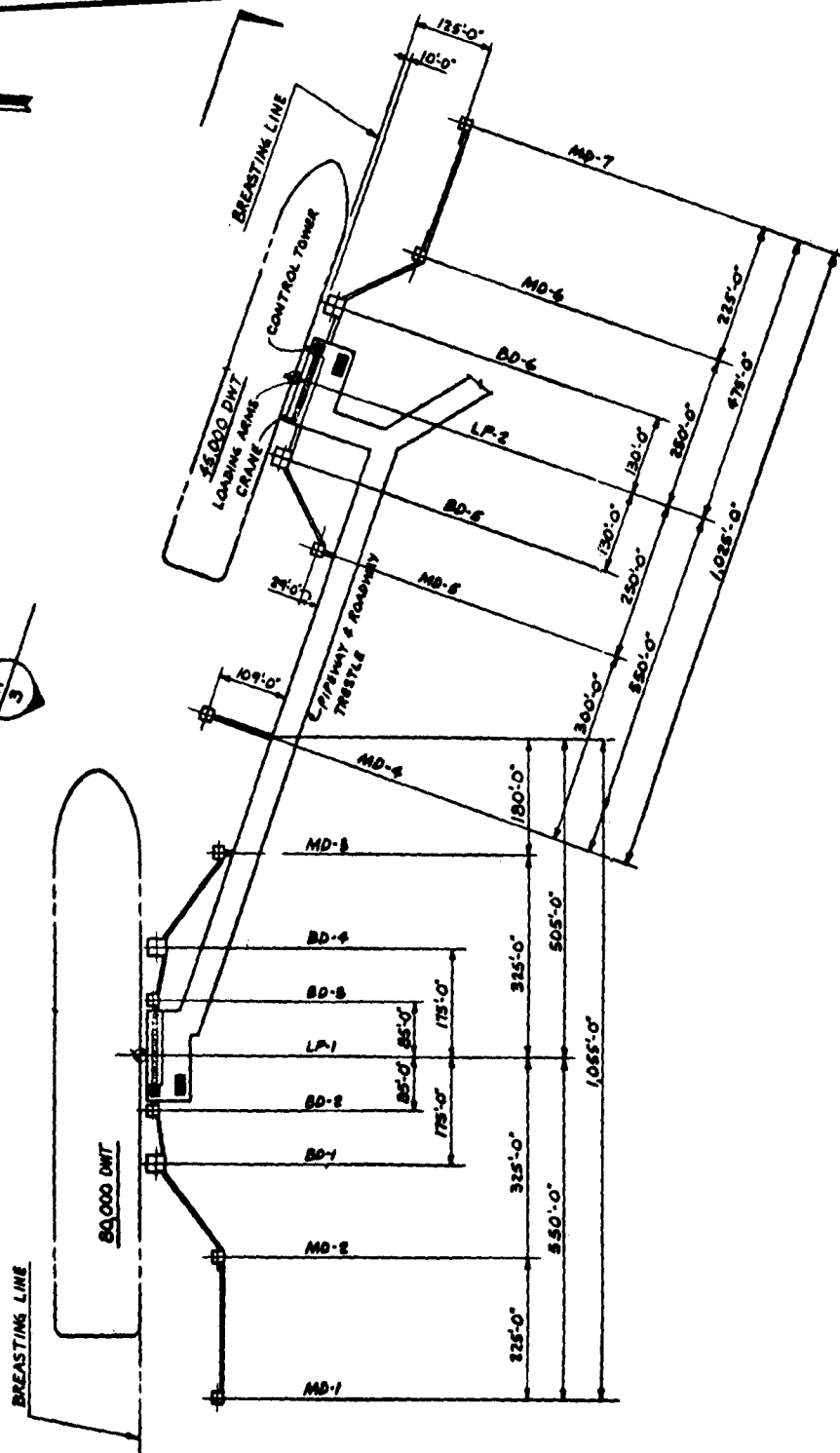
NOTES:

1. ELEVATIONS REFER TO MEAN LOWER LOW WATER (MLLW)
2. GRID SYSTEM REFER TO ALASKA STATE GRID ZONE 8.

PROPOSED TANKER TERMINAL

PROJECT PLOT PLAN Port Valdez 84

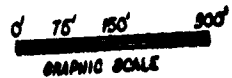
AT PORT VALDEZ
CITY OF VALDEZ STATE OF ALASKA
APPLICATION BY: ALASKA PETROCHEMICAL CO.
SHEET 1 OF 7 DATE: 20 SEPT. 79



NOTES

1. ELEVATIONS REFER TO MEAN LOWER LOW WATER (MLLW)
 2. GRID SYSTEM REFERS TO ALASKA STATE ZONE 8.

PLAN



PURPOSE: TANKER LOADING TERMINAL
DATUM: MEAN LOWER LOW WATER (MLLW)
 NATIONAL OCEAN SURVEY

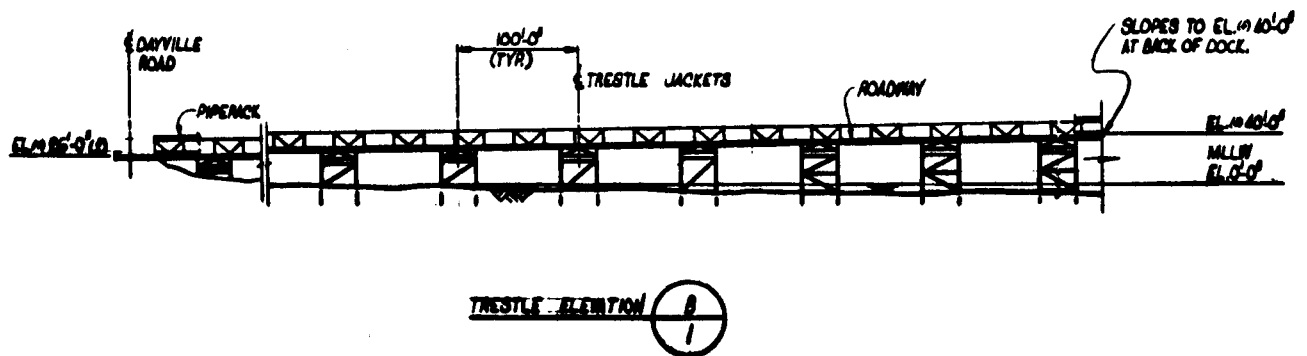
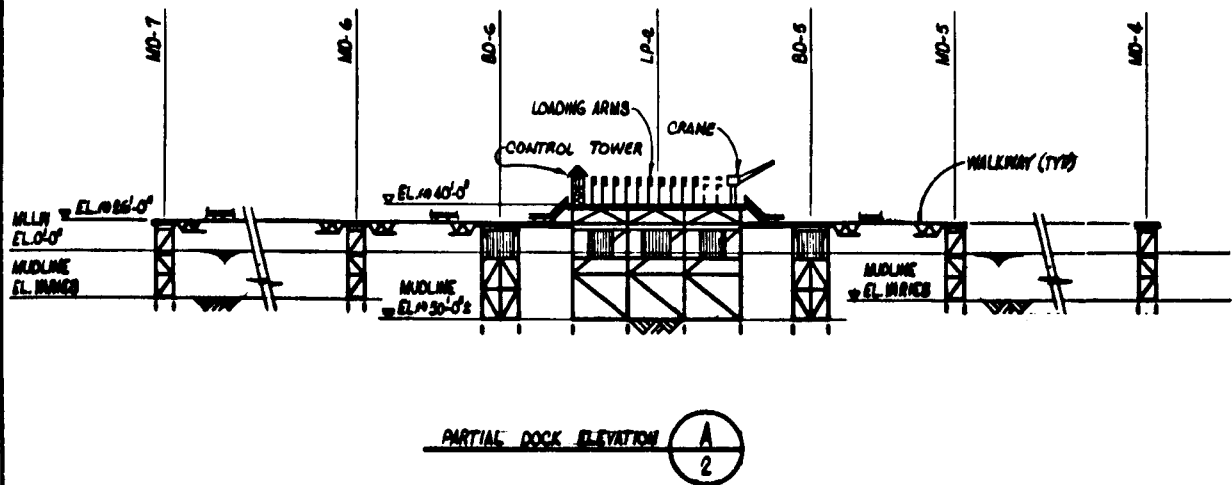
Port Valdez 84

PROPOSED TANKER TERMINAL

DOCK PLAN

AT PORT VALDEZ
 CITY OF VALDEZ
 APPLICATION BY:
 SHEET 2 OF 7

STATE OF ALASKA
 ALASKA PETROCHEMICAL CO.
 DATE: 20 SEPT. 79



0' 50' 100'
GRAPHIC SCALE

NOTES

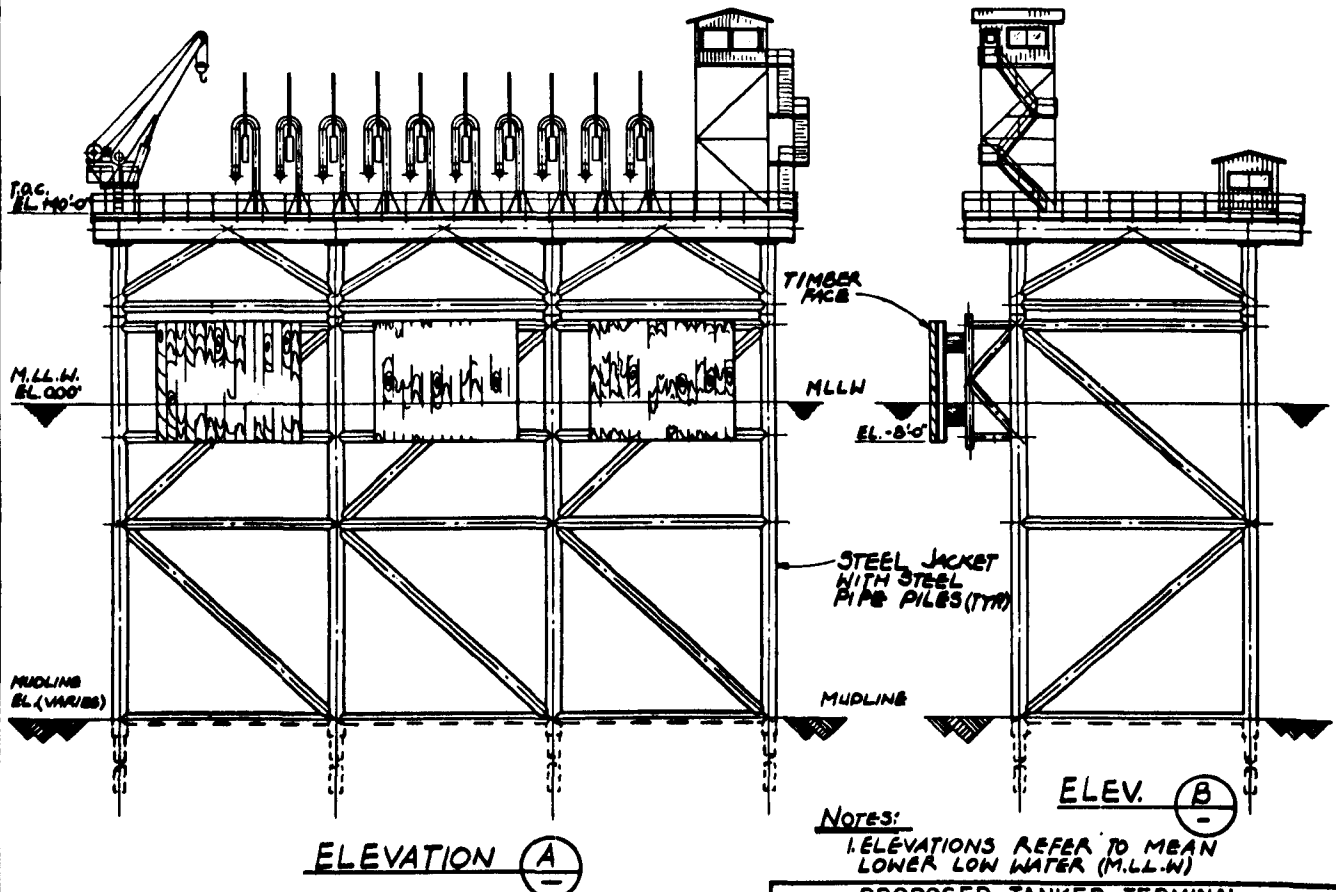
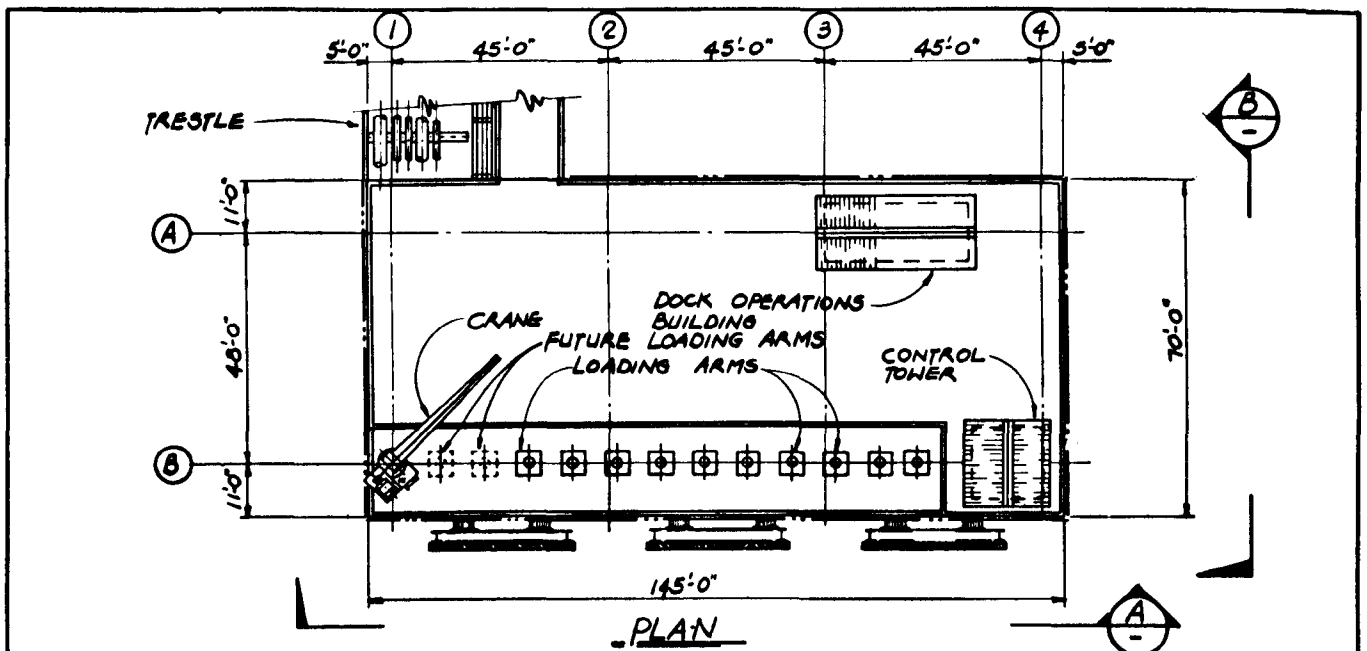
1. ELEVATIONS REFER TO MEAN LOWER LOW WATER (MILLIN)

PURPOSE: TANKER LOADING TERMINAL

DATE: MEAN LOWER LOW WATER (MILLIN)
NATIONAL OCEAN SURVEY

Port Valdez 84

PROPOSED TANKER TERMINAL	
LOADING DOCK ELEVATION AND TRESTLE ELEVATION	
AT PORT VALDEZ	
CITY OF VALDEZ	STATE OF ALASKA
APPLICATION BY: ALASKA PETROCHEMICAL CO.	
SHEET 3 OF 7	DATE: 20 SEPT. 79



NOTES:

1. ELEVATIONS REFER TO MEAN LOWER LOW WATER (M.L.L.W.)

PROPOSED TANKER TERMINAL

LOADING PLATFORM

AT PORT VALDEZ

CITY OF VALDEZ STATE OF ALASKA

APPLICATION BY: ALASKA PETROCHEMICAL CO

SHEET 4 OF 7 DATE: 20 SEPT. 79

PURPOSE:

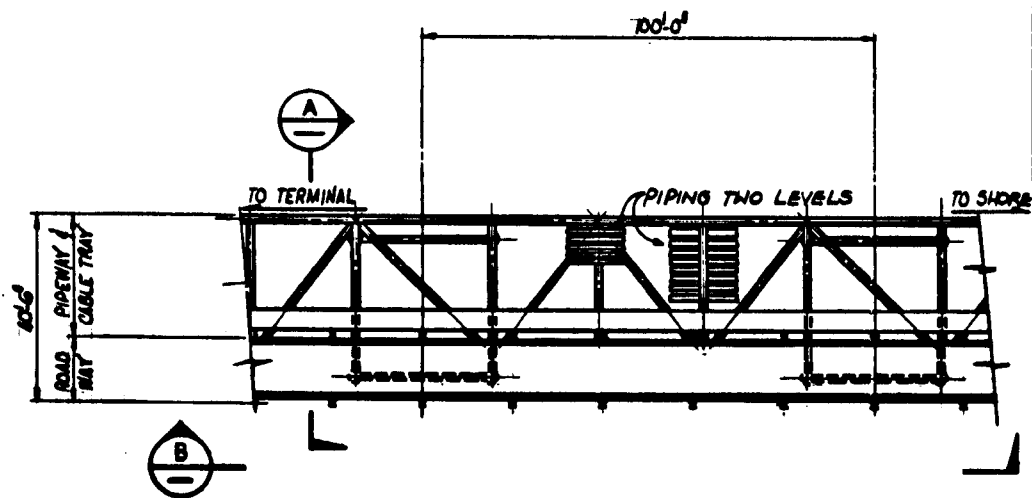
TANKER LOADING TERMINAL

DATUM:

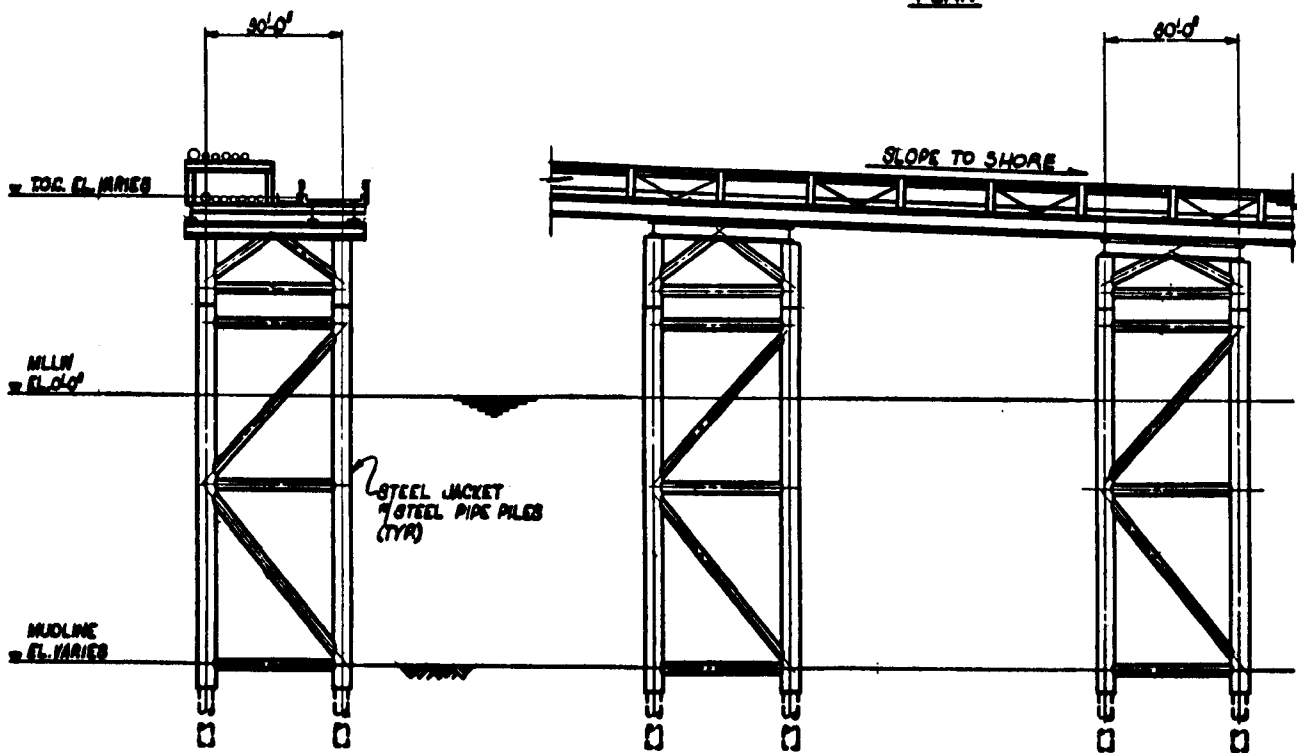
MEAN LOWER LOW WATER (M.L.L.W.)
NATIONAL OCEAN SURVEY

Port Valdez 84

GRAPHIC SCALE



PLAN



SECTION



0' 10' 20' 40'
GRAPHIC SCALE

ELEVATION



Port Valdez 84

NOTE
ELEVATIONS REFER TO MEAN LOWER LOW WATER (MLLW)

PURPOSE: TANKER, LOADING TERMINAL

DATUM: MEAN LOWER LOW WATER (MLLW)
NATIONAL OCEAN SURVEY

PROPOSED TANKER TERMINAL

TYPICAL TRESTLE AND SUPPORT
PLAN, ELEVATION & SECTION

AT PORT VALDEZ

CITY OF VALDEZ

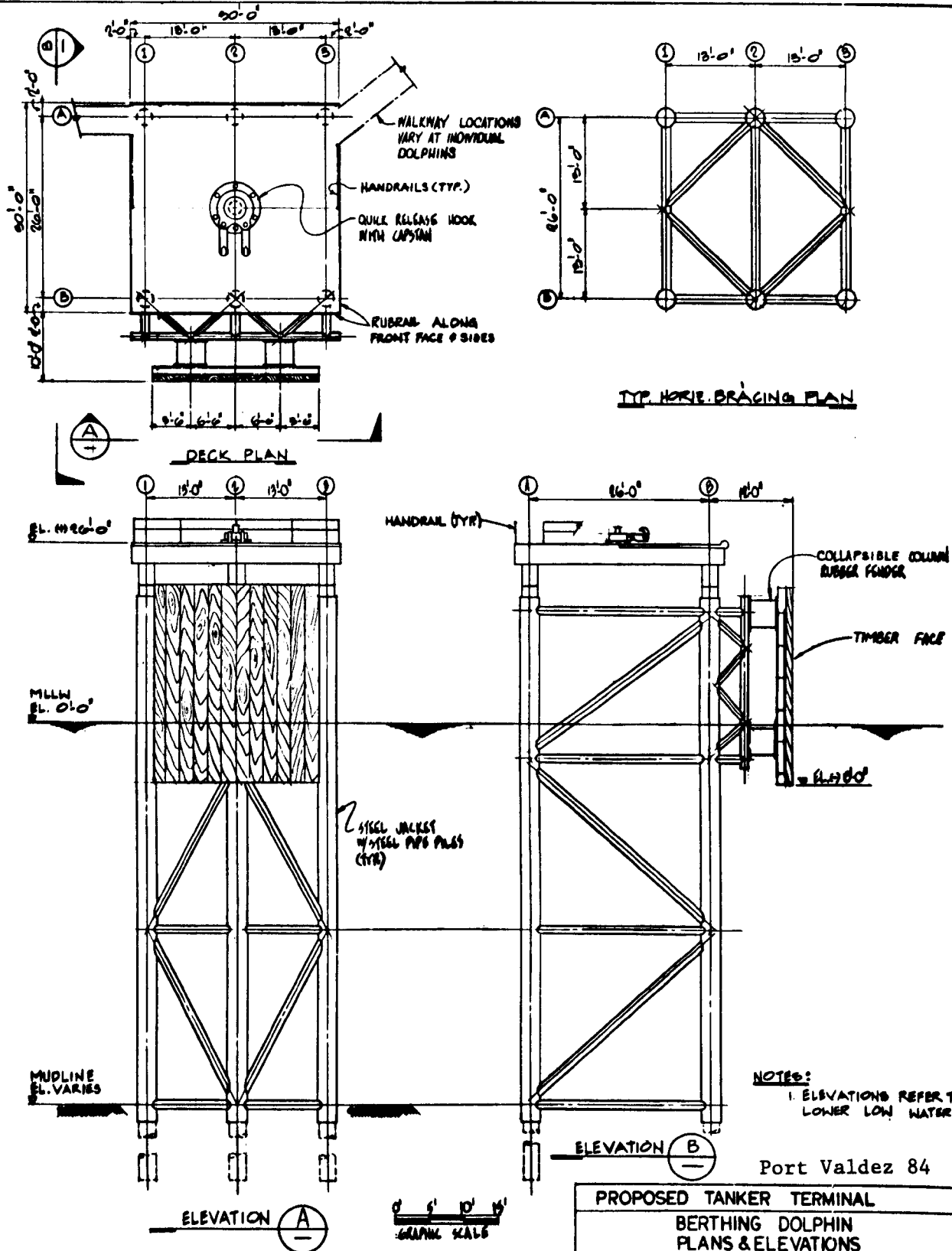
APPLICATION BY:

SHEET 5 OF 7

STATE OF ALASKA

ALASKA PETROCHEMICAL CO.

DATE: 20 SEPT. 79

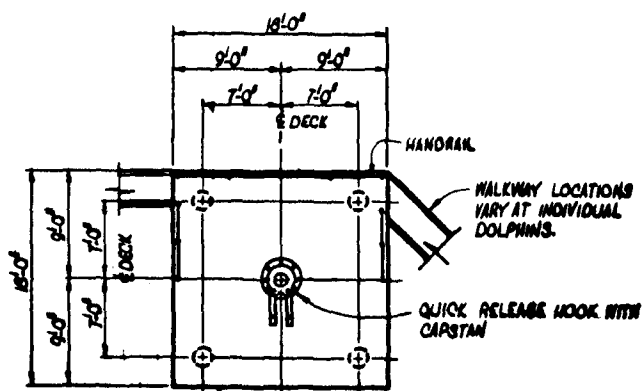


PURPOSE: TANKER LOADING TERMINAL
 DATUM: MEAN LOWER LOW WATER (MLLW)
 NATIONAL OCEAN SURVEY

PROPOSED TANKER TERMINAL
 BERTHING DOLPHIN
 PLANS & ELEVATIONS

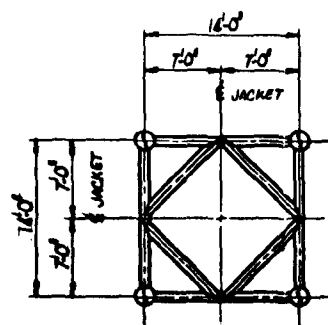
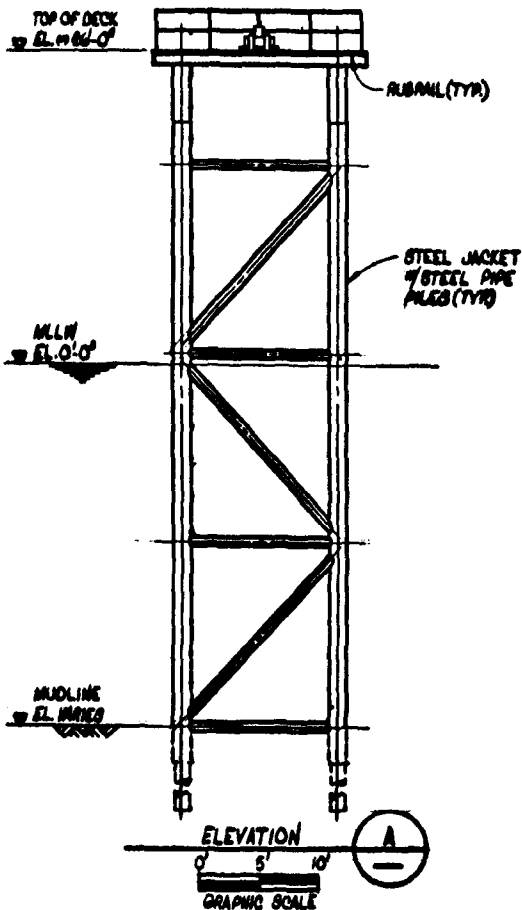
AT PORT VALDEZ
 CITY OF VALDEZ
 APPLICATION BY: ALASKA PETROCHEMICAL CO.
 SHEET 6 OF 7

STATE OF ALASKA
 DATE: 20 SEPT. 79



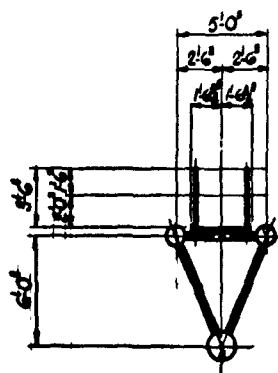
RUBRAIL ALONG
FRONT FACE & SIDES
DECK PLAN

0' 5' 10'
GRAPHIC SCALE



TYPICAL HORIZONTAL BRACING PLAN

0' 5' 10'
GRAPHIC SCALE



TYPICAL SECTION THRU WALKWAY

0' 5' 10'
GRAPHIC SCALE

NOTES

1. ELEVATIONS REFER TO MEAN LOWER LOW WATER (MLLW)

Port Valdez 84

PROPOSED TANKER TERMINAL

MOORING DOLPHIN
PLANS AND ELEVATION AND
TYPICAL WALKWAY SECTION

AT PORT VALDEZ
CITY OF VALDEZ STATE OF ALASKA
APPLICATION BY: ALASKA PETROCHEMICAL CO.
SHEET 7 OF 7 DATE: 20 SEPT. 79

PURPOSE: TANKER LOADING TERMINAL

DATUM: MEAN LOWER LOW WATER (MLLW)
NATIONAL OCEAN SURVEY



DEPARTMENT OF THE ARMY
ALASKA DISTRICT, CORPS OF ENGINEERS

P.O. BOX 7002

ANCHORAGE, ALASKA 99510
REGULATORY FUNCTIONS BRANCH
(907) 279-4123

REPLY TO
ATTENTION OF:

NPACO-RF-P
Port Valdez 85

19 October 1979

PUBLIC NOTICE

NPACO No. 071-OYD-2-790373

Application has been received from the Alaska Petrochemical Company, (ALPETCO), 601 West 5th Avenue, Suite 320, Anchorage, Alaska 99501, for a Department of the Army permit under Section 10 of the River and Harbor Act of 1899 (30 Stat. 1151; 33 U.S.C 403) and Section 404 of the Clean Water Act (Public Law 95-217) to construct a refinery and petrochemical supporting facilities at Valdez, Alaska, as shown on the plans attached to this notice. This project will support the composite facility described in NPACO No. 071-OYD-2-790372.

The applicant proposes to build a temporary construction dock on the north shore of Port Valdez. This work will involve dredging 1,000 cubic yards of material, placing a sheet-pile wall with deadmen, placing a 4,000 cubic yard gravel fill, and constructing a concrete ramp. The facility will be used to offload prefabricated refinery modules. The concrete ramp will remain in place while the other facilities will be removed after the project is completed. A control levee will be constructed on the east bank of Valdez Glacier Stream. It will consist of a 200,000-cubic-yard earth embankment with 40,000 cubic yards of riprap erosion protection. Slater Creek will be diverted from Corbin Creek to Valdez Glacier Stream. A diversion ditch will be cut on the eastern boundary of the ALPETCO site. The ditches will require 15,000 cubic yards of dredging, a 40,000 cubic yard fill section, and 25,000 cubic yards of riprap.

A pile-supported steel and concrete bridge will be constructed across Valdez Glacier Stream. The approaches will be surfaced gravel fills. A paved roadway will be constructed across the Robe River, Corbin Creek (Robe), and Corbin Creek (Glacier) and related tributaries. Stream crossings will be concrete bridges with surfaced gravel approaches or gravel covered culverts. Crude, product, and ballast water pipeline crossings will be made across the Lowe River, Robe River, Corbin Creek (Robe), Corbin Creek (Glacier) and related tributaries, and Ambercrombie Creek. All crossings will be made during periods of low water. A wastewater outfall pipe will extend from the ALPETCO site across Valdez Glacier Stream to discharge from the north shore of Port Valdez. These facilities are related to the proposed construction and operation of a refinery and petrochemical facility in Valdez, Alaska.

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An Environmental Impact Statement concerning the entire project is being prepared by the Environmental Protection Agency.

A Certificate of Reasonable Assurance or waiver of certification is required for this activity under Section 401 of the Clean Water Act (Public Law 95-217). This certification, or waiver thereof, is issued by the Alaska Department of Environmental Conservation, Pouch O, Juneau, Alaska, telephone (907) 465-2670.

The Division of Policy Development and Planning, State of Alaska, is reviewing this work for consistency with the approved Alaska Coastal Management Program.

The evaluation of the impact of the activity on the public interest will include application of the guidelines promulgated by the Administrator, EPA, under authority of Section 404(b) of the Clean Water Act (Public Law 95-217).

The National Register of Historic Places and the latest published version of the Federal Register have been consulted in regard to the proposed activity. Consultation of the National Register constitutes the extent of cultural resource investigations by the District Engineer, and he is otherwise unaware of the presence of such resources.

Preliminary determinations indicate that the proposed activity will not affect an endangered species or their critical habitat designated as endangered or threatened pursuant to the Endangered Species Act of 1973 (87 Stat. 844). Formal consultation pursuant to Section 7 of the Act with the Department of Interior is not required for this proposed activity.

The decision whether to issue a permit will be based on an evaluation of the probable impact of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered; among those are conservation, economics, aesthetics, general environmental concerns, historic values, fish and wildlife values, flood damage prevention, land use, navigation, recreation, water supply, water quality, energy needs, safety, food production, and, in general, the needs and welfare of the people.

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Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

Written statements received in this office on or before 19 November 1979 will become a part of the record and will be considered in the determination. Any response to this notice should be mailed to the Alaska District, Corps of Engineers, ATTN: Regulatory Functions Branch, P.O. Box 7002, Anchorage, Alaska 99510. If further information is desired concerning this notice, contact CPT Mike Mahoney at (907) 752-4942 or (907) 279-4123.

FOR THE DISTRICT ENGINEER:

- 3 Incl
- 1. Plan
- 2. ACMP Notice
- 3. 401 Notice

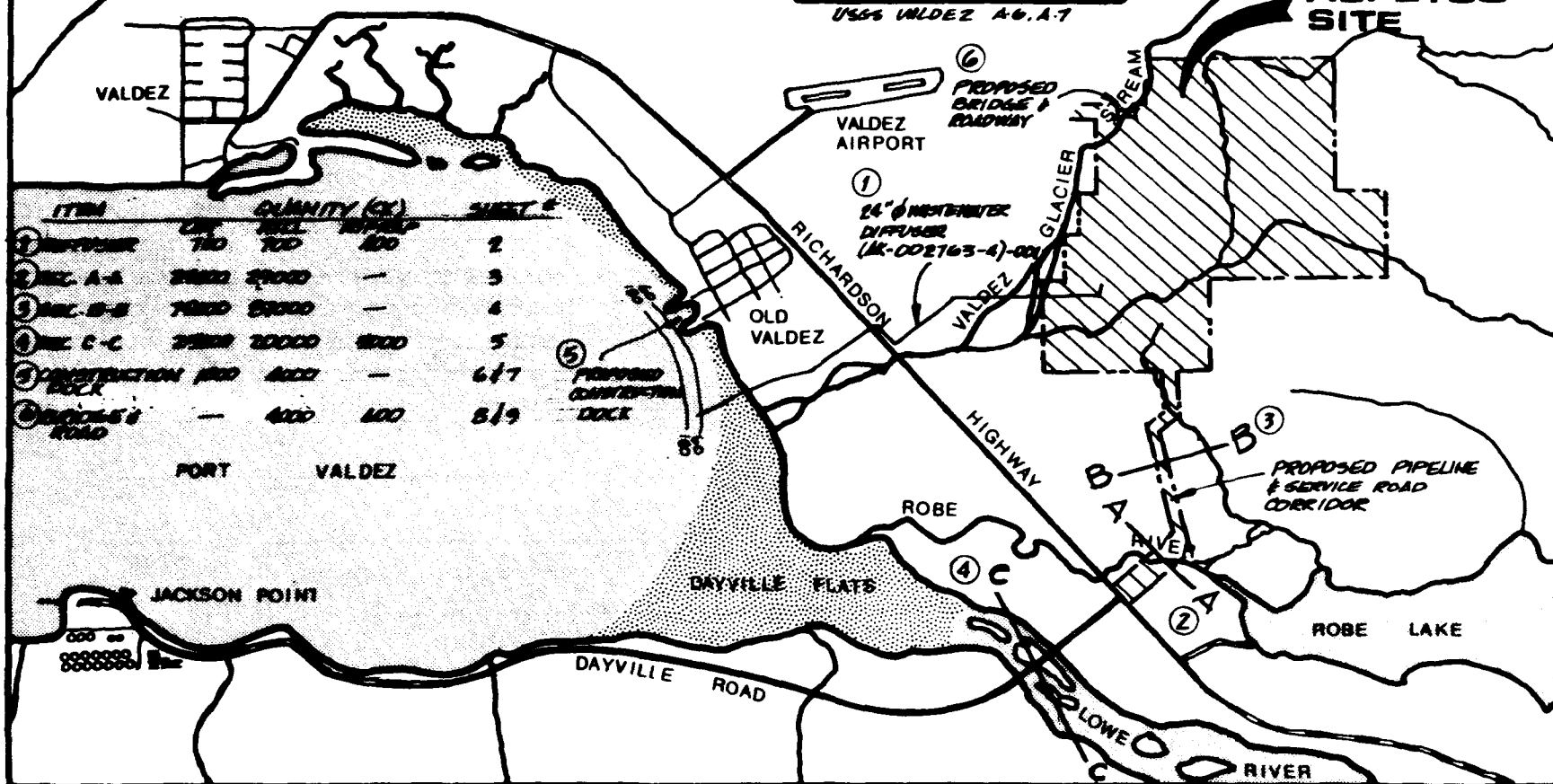
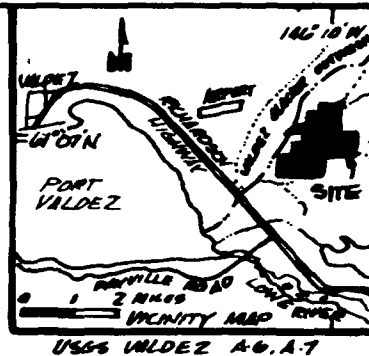


DAVID L. ROBBINS

Chief, Construction/Operations Division

SCALE: 1" = 1 MILE NOTES:

1. ELEVATIONS U.S.G.S. MEAN LOWER LOW WATER
2. ALL CUT & FILL WILL BE BY STANDARD CONSTRUCTION TECHNIQUES I.E. BACKHOE OR DREDGE EQUIPMENT WORKING ON MUDS. CONSTRUCTION WILL TAKE PLACE DURING LOW FLOW / LOW TIDE.
3. ADJACENT LANDOWNERS ARE CITY OF VALDEZ & STATE OF ALASKA.
4. FILL MATERIAL SOURCE IS LOCATED BETWEEN THE AIRPORT & PROPOSED SITE IN COMMERCIAL GRNBL PITS.



KEY MAP

VALDEZ, STATE OF ALASKA

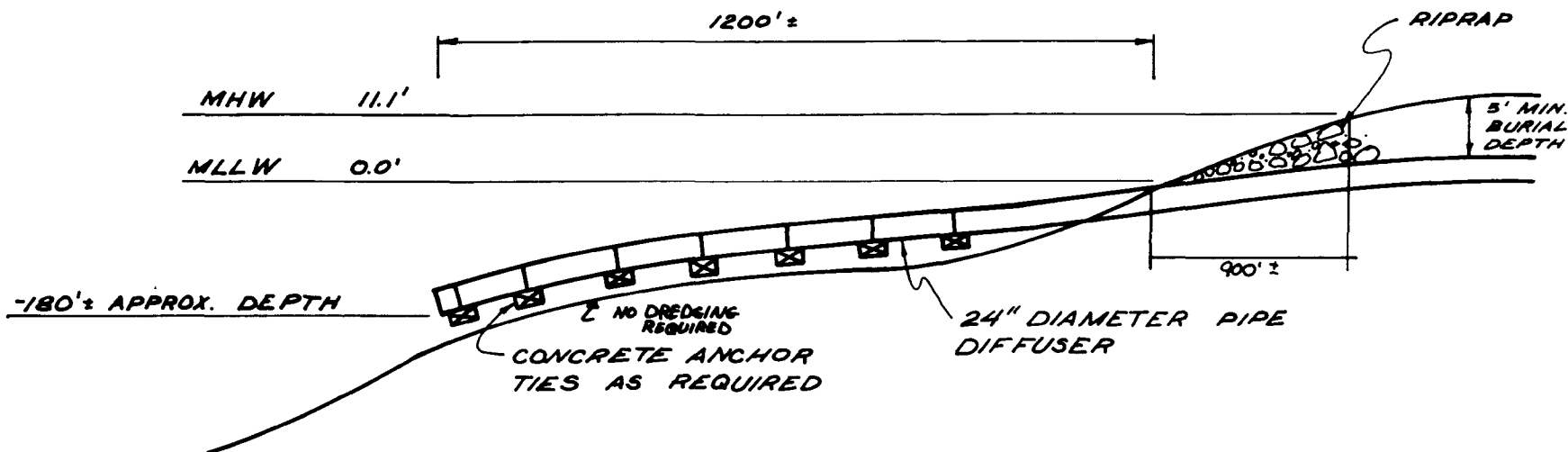
APPLICATION BY: ALASKA PETROCHEMICAL COMPANY

SHEET 1 of 11

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Port Valdez 85

B-105



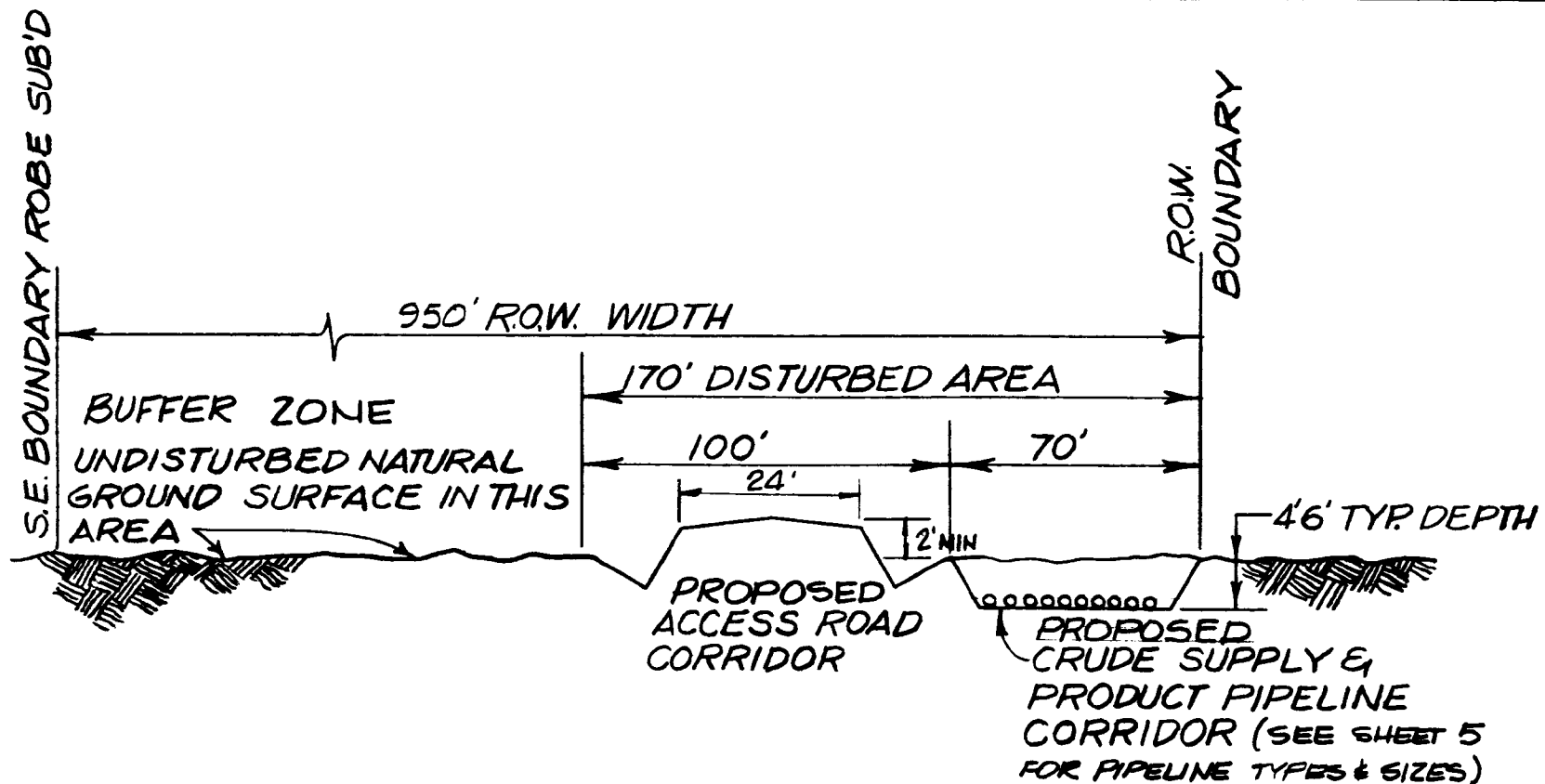
NOTES

1. INSTALLATION IN TIDAL ZONE WILL BE EXCAVATION, INSTALLATION AND BACKFILL.
2. BELOW TIDAL ZONE THE PIPE AND DIFFUSER WILL BE SUPPORTED ON CONCRETE ANCHORS.
3. ELEVATION USCGS.
4. DRAWING NOT TO SCALE.

TREATED WASTEWATER
DIFFUSER TO PORT
VALDEZ

Port Valdez 85

VALDEZ STATE OF ALASKA
APPLICATION BY: ALASKA
PETROCHEMICAL COMPANY
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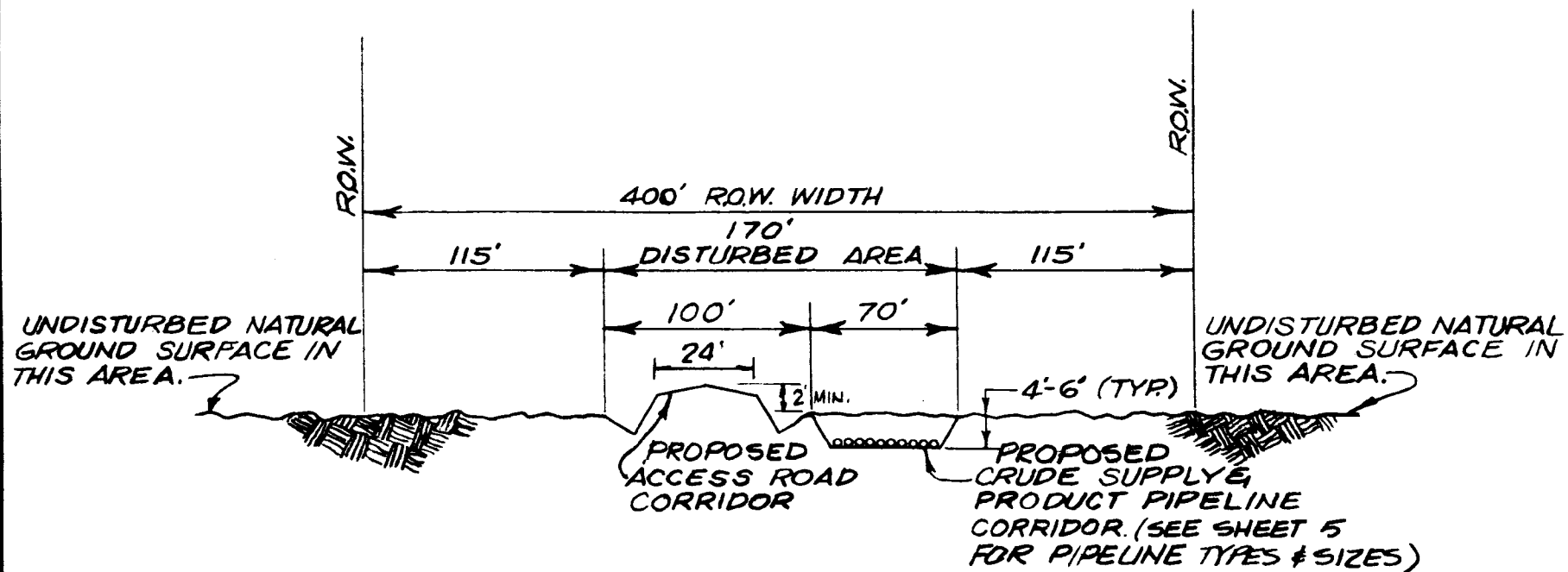
SECTION A-A

NO-SCALE

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ACCESS CORRIDOR CROSS SECTION
VALDEZ STATE OF ALASKA

APPLICATION BY: ALASKA PETROCHEMICAL COMPANY
SHEET 3 of 11 21 SEPT 79



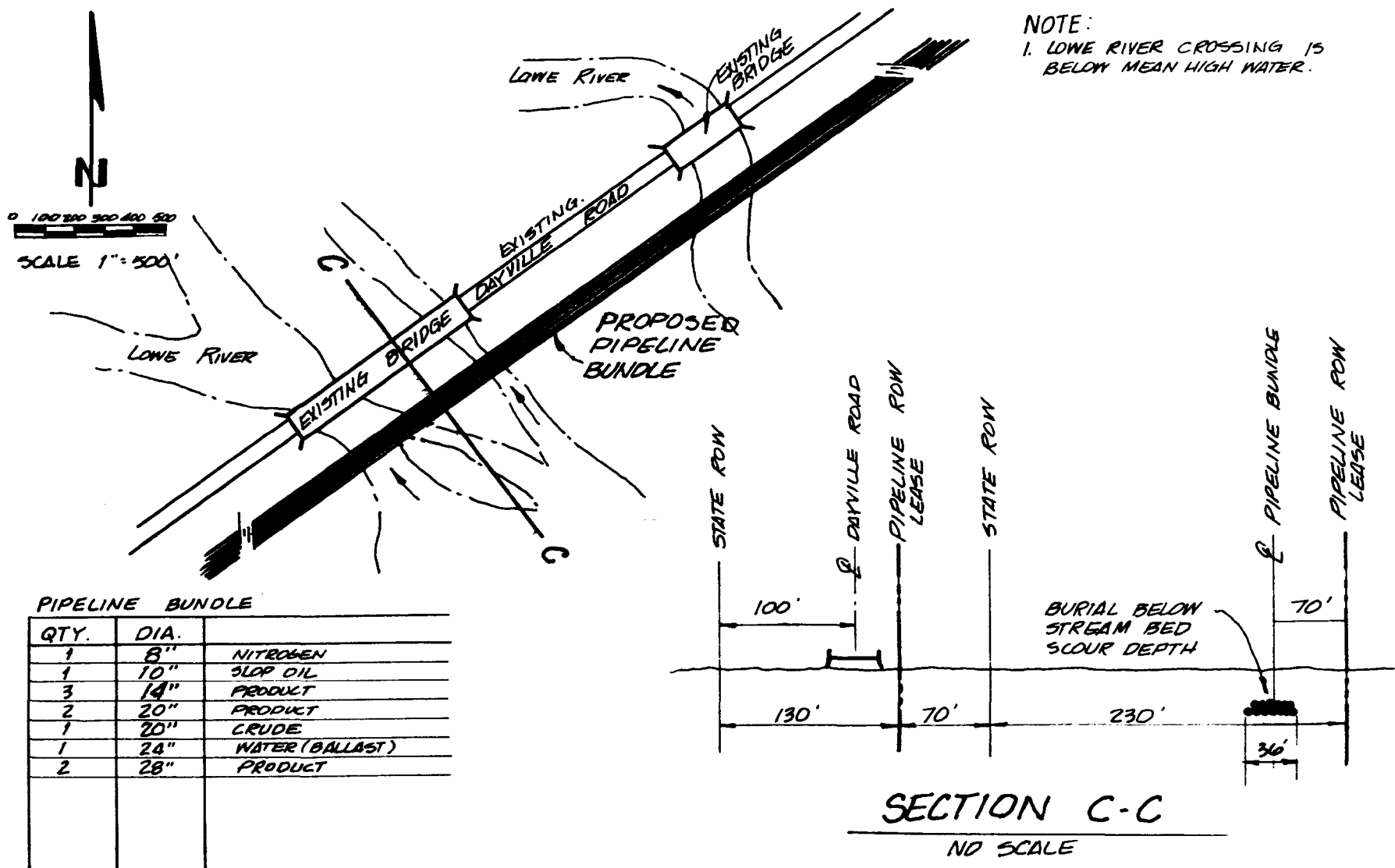
SECTION B-B

NO SCALE

Port Valdez 85

ACCESS CORRIDOR CROSS SECTION
VALDEZ STATE OF ALASKA

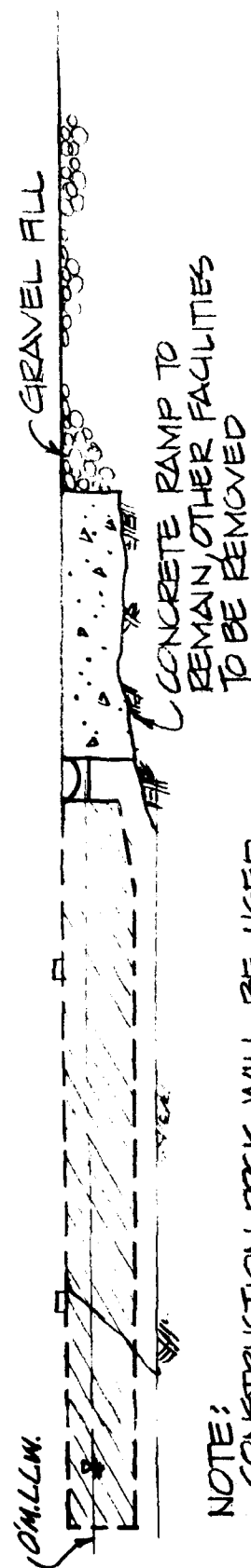
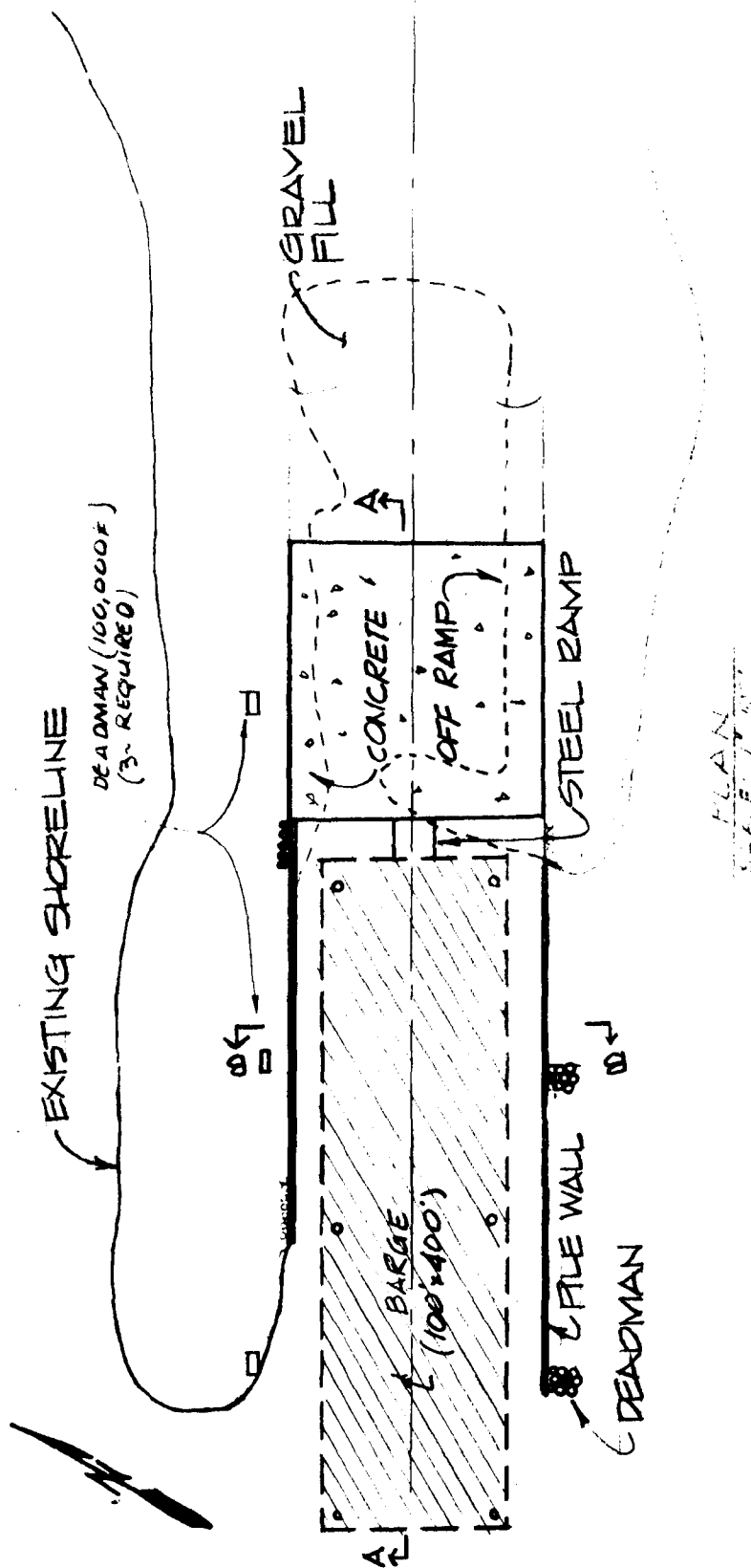
APPLICATION BY: ALASKA PETROCHEMICAL COMPANY
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LOWE RIVER CROSSING
VALDEZ STATE OF ALASKA

APPLICATION BY: ALASKA PETROCHEMICAL COMPANY
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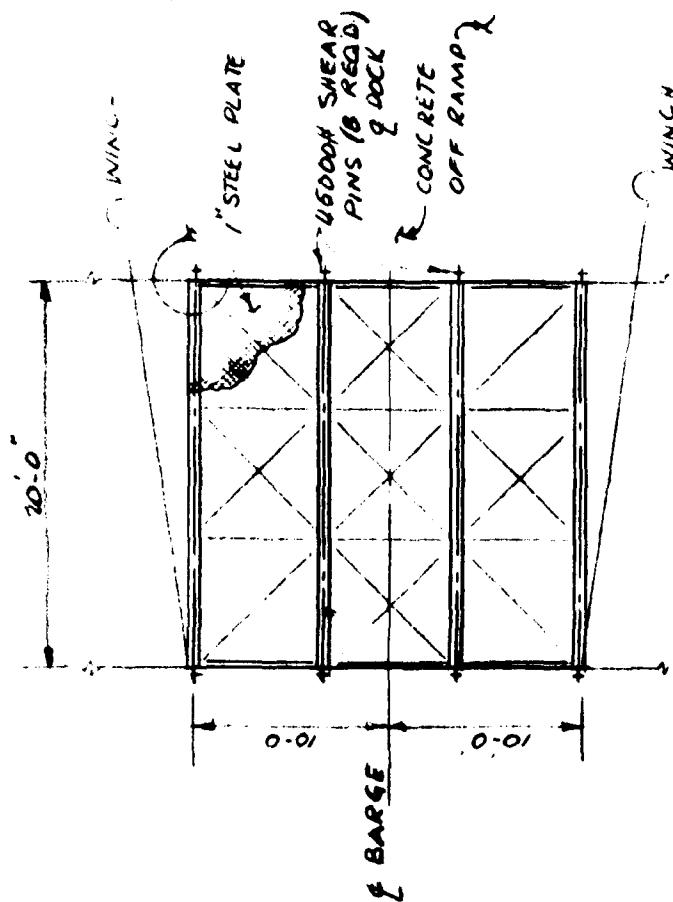
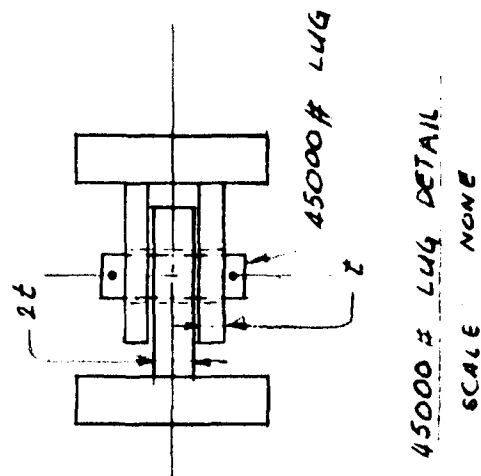
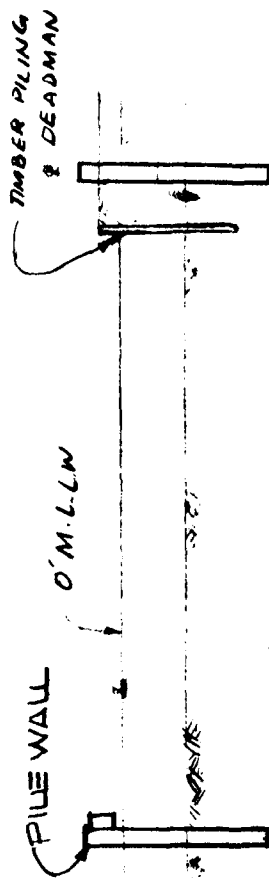
NOTE:
CONSTRUCTION DOCK WILL BE USED
DURING CONSTRUCTION ONLY FOR
OFFLOADING PREFABRICATED
REFINERY MODULES.

NOTE: ELEVATION BASED ON M.L.L.W.
(MEAN LOWER LOW WATER)

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TEMPORARY
CONSTRUCTION DOCK
VALDEZ, ALASKA

APPLICANT: ALASKA
PETROCHEMICAL CO.
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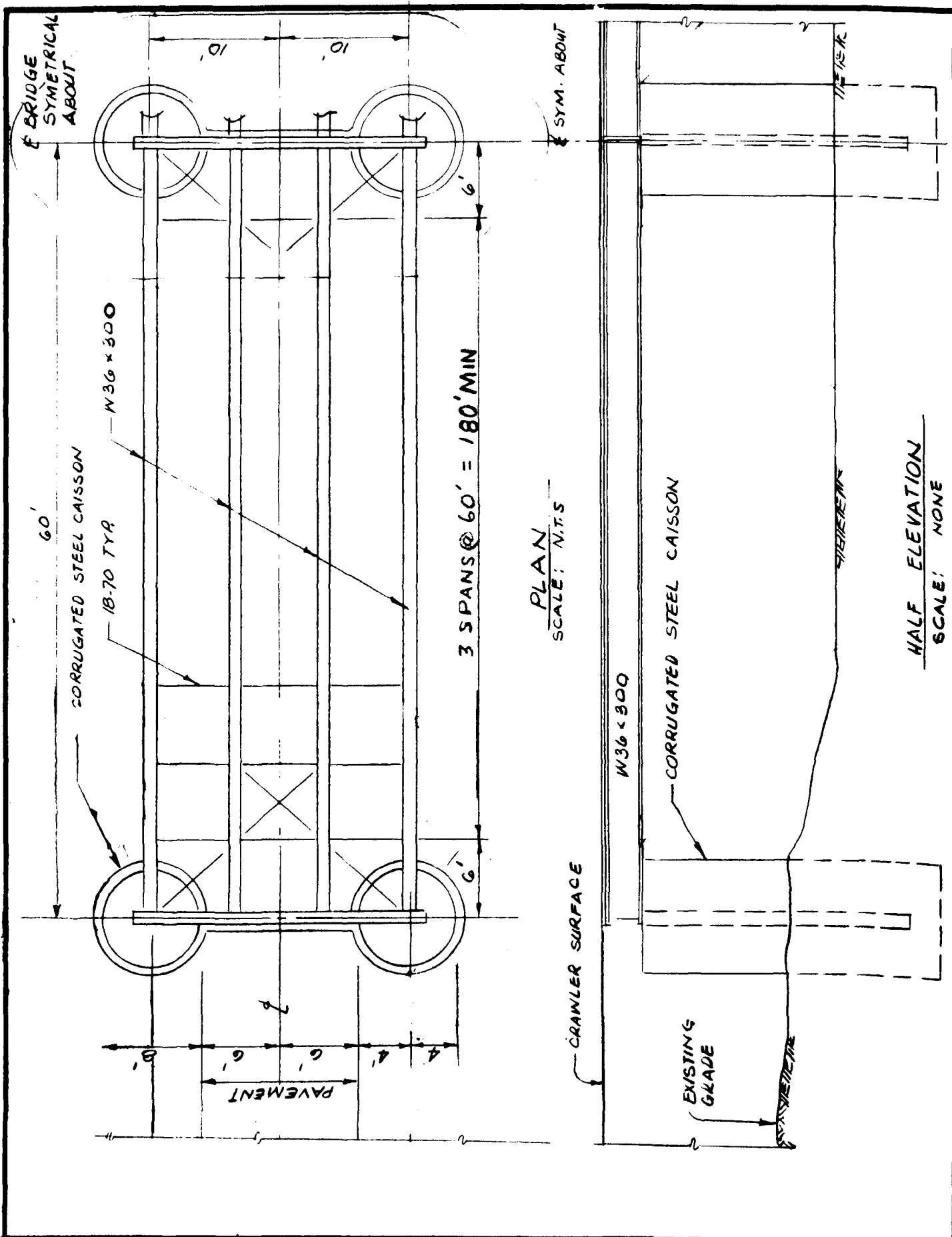
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CONSTRUCTION DOCK
DETAIL

VALDEZ, ALASKA

APPLICANT: ALASKA
PETROCHEMICAL CO.

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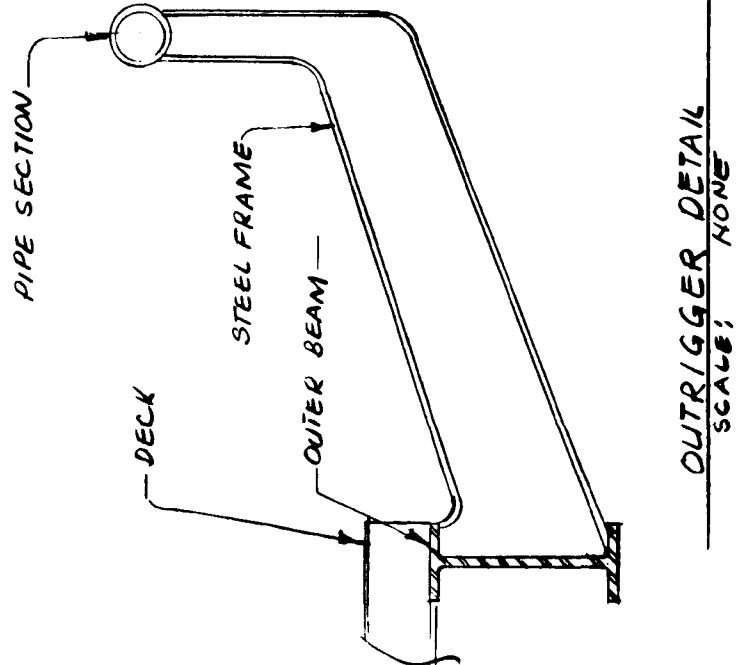
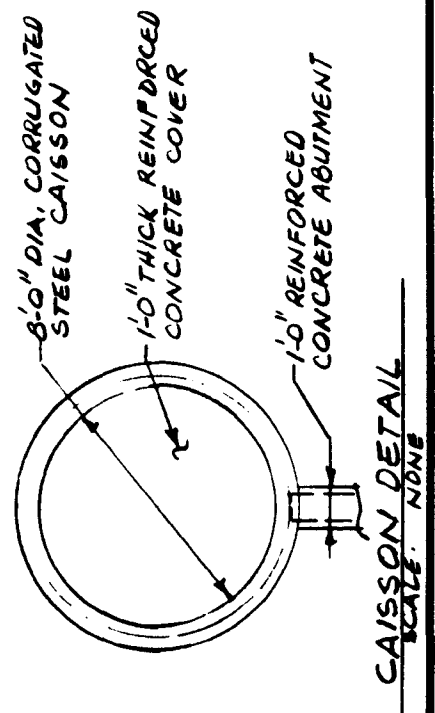
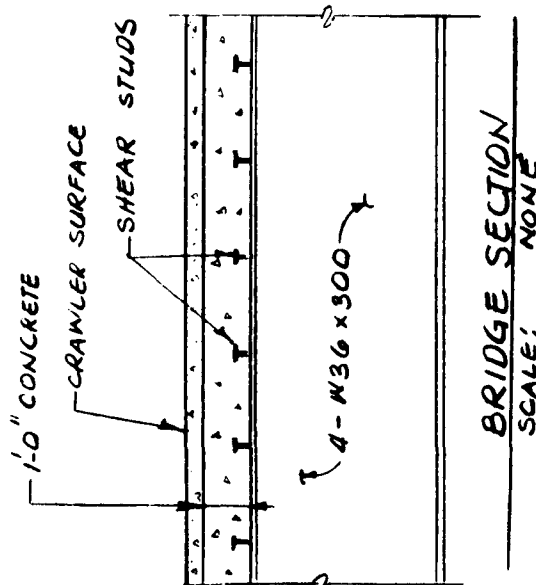
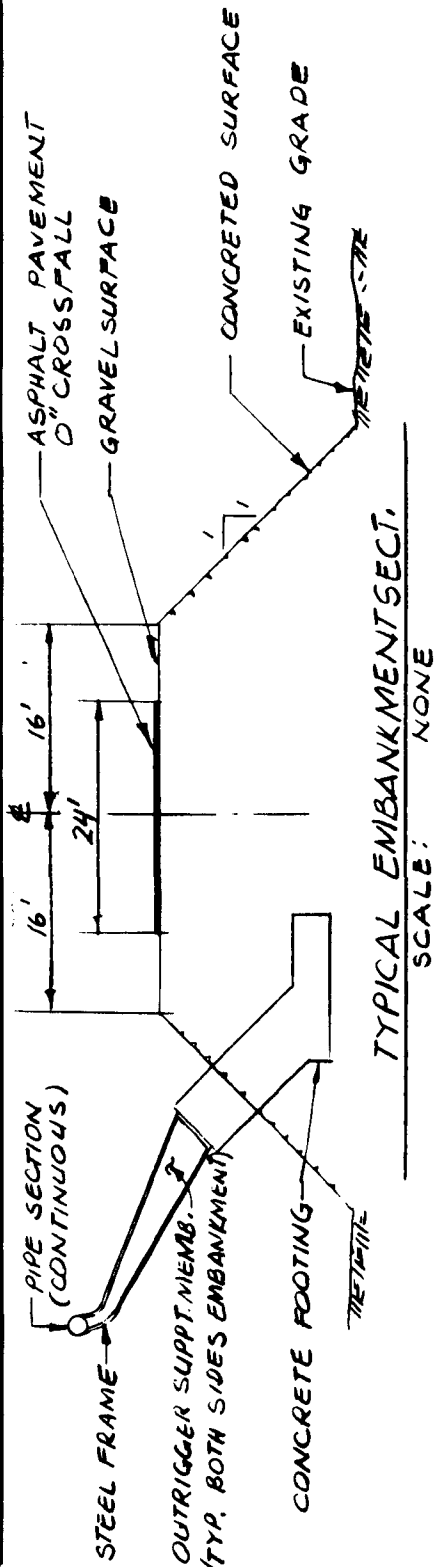
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VALDEZ GLACIER STREAM
BRIDGE AND ROADWAY CROSSING

VALDEZ, ALASKA

APPLICANT: ALASKA
PETROCHEMICAL CO.

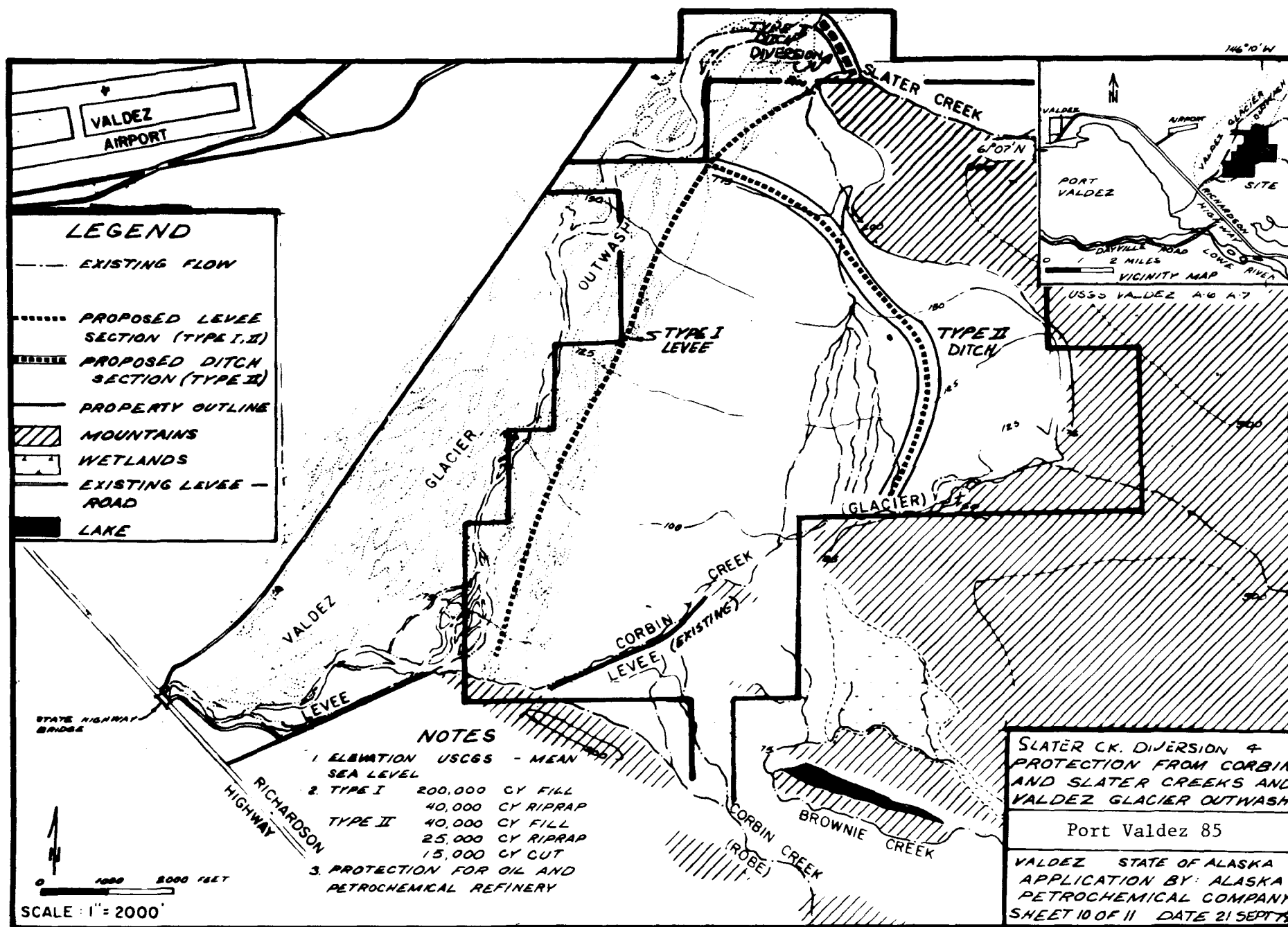
SHT. 8 of 11 21 SEPT '79



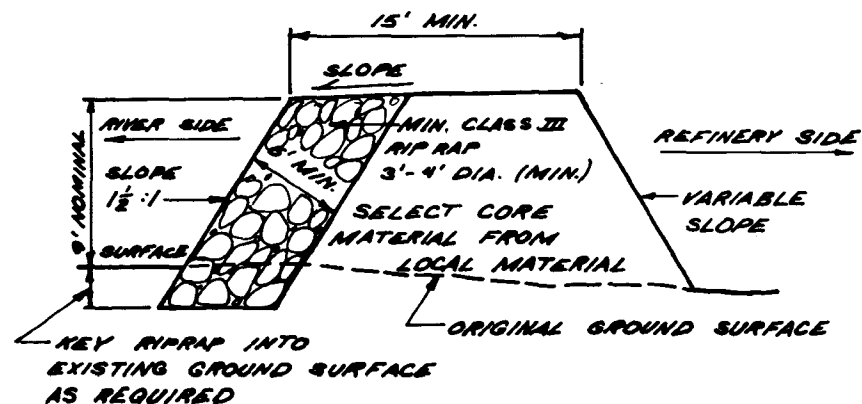
Port Valdez 85

BRIDGE AND ROADWAY
DETAILS
VALDEZ, ALASKA

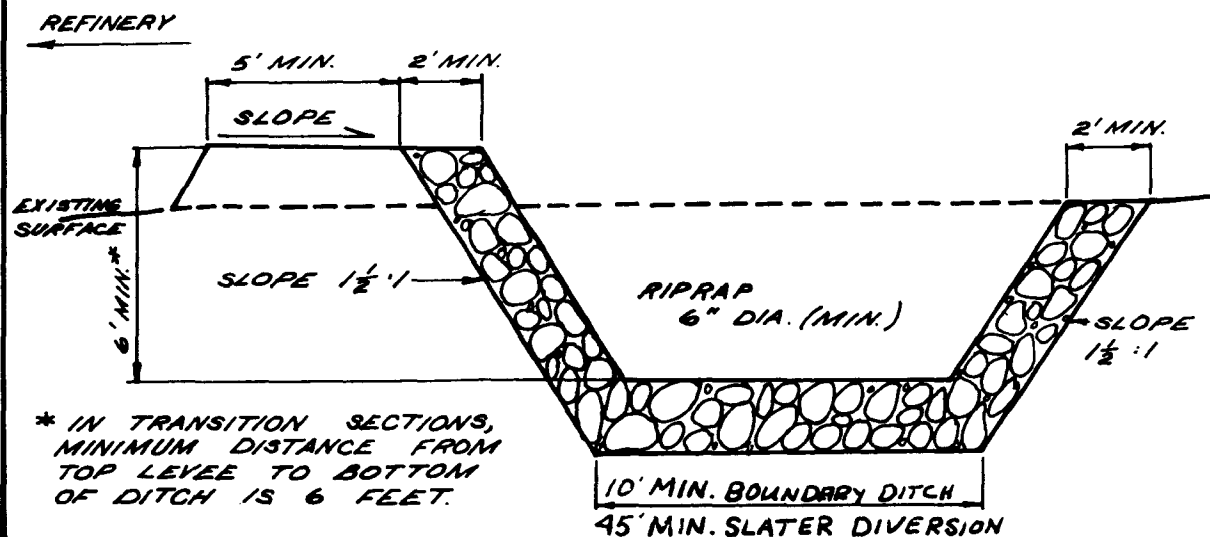
APPLICANT: ALASKA
PETROCHEMICAL CO.
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TYPE I LEVEE SECTION



TYPE II DITCH SECTION



DETAILS FOR
SHEET 10

Port Valdez 85

VALDEZ STATE OF ALASKA
APPLICATION BY: ALASKA
PETROCHEMICAL COMPANY
SHEET 11 OF 11 DATE 2/5/79