ARAEN-P (2 June 61) 2nd Ind
SUBJECT: Modification of Haines - Fairbanks Pipeline

Headquarters, United States Army, Alaska, APO 949, U. S. Army 16 JUN 1961

TO: District Engineer, U S Army Engineer District, Alaska

1. References:

a. Field Report Alaska Pipeline Modification for Chrome Dome dated 5 June 1961 - prepared by Kenneth L. Treiber, USAERDL.

b. Message Office Chief of Engineers ENGMC - CO 4329, 8 June 1961, Inclosure 2.

2. Submitted herewith is design criteria requested by basic letter and required to initiate design directed by Inclosure 1. This criteria is furnished at this time without benefit of an official Department of the Army position available to this Headquarters. Establishment of such a position could modify the following assumptions:

a. U. S. Army Alaska will determine criteria and requirements, throughput capacity, scope cost estimates and time schedules for accomplishment. Air Force costs and time schedules itemized by reference 1b will not limit design actions.

b. All funding for design and construction will be made available from sources and by action of other than this Headquarters.

c. Design and construction will be executed in an orderly manner, assuming 1st Phase construction to be started not earlier than the Spring of 1962 and completed in one season. Second phase construction assumed to be started in the Spring of 1963 and completed in one season.

d. Throughput capability will be 32,000 bbl per day of JP-4, assuming that existing pumping capability at the five existing stations will be utilized and all stations will be provided 100% standby pumping and prime mover capability. This requirement for 100% standby is dictated by the implied urgency of the firm delivery requirement to supply the 23,809 bbl/day for Chrome Dome plus additional mobilization requirement of 8,000 bbl/day for all other users.

e. That design will assume a 1st Phase of trailer housing and a 2nd Phase of permanent standard housing, 1080 SF row house units similar to FY58 MCA Program project constructed on the pipeline. Utilities service - electricity, heat, water, sewer and distribution designed for 1st Phase housing to have adequate capacity to support the permanent housing.

f. New pumping stations will be held to the minimum consistent with the final plan based on new equipment characteristics, line profile and pressure gradient.

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g. Design will include providing 300,000 bbl of 10PSI protective construction tankage at Haines in 1st Phase and 200,000 bbl of 10 PSI protective construction tankage in 2nd Phase at Tok. All required modifications of existing tank farm piping and increase of marine discharge capability at Haines, for super tankers, will be incorporated in the project.

h. Real Estate actions and right of entry for site survey, subsoil investigation, test wells and construction for new stations in Canada will be provided by action initiated by the District Engineer, Alaska District.

i. Firm verification of the availability of adequate potable water for the new stations proposed at the earliest possible time to allow evaluation and possible relocation of the stations to a location where water is available.

3. The report reference 1a is considered one solution of the problem although the throughput capability does not meet USARAL requirements. The final solution is considered to be a District Engineer responsibility to provide a system that would have assured 32,000 bbl/day delivery capability of JP-4, assuming 24 hour operation on a sustained basis and allowing appropriate safety factors. Pump size, prime mover size, number and location of new stations and augmentation of existing station capability will be consistent with operational requirements established by experience in operation of the present installation and the requirement for assured delivery capability.

4. Attached as Inclosure 3 is sketch showing a typical arrangement for the proposed new station. It is realized that site selection may require deviation to adjust to topography of the respective sites.

5. Also attached as Inclosure 4 is sketch layout of the Operations Building for the new stations.

6. It is requested that the recommended solution based on specific pump and prime mover equipment, hydraulic design, new station location and existing station augmentation be submitted for review and approval of this Headquarters prior to sub soil or water investigation activities at the new station sites.

FOR THE COMMANDER:

G. W. DUNDAS
Major, AGC
Asst Adjutant General

CC: NPD
OCE
OQMG
AAC
ALCOM
Supp. Com
DCE/Lor

4 Incls
1. nc
2. Msg ENGMC-CO 4329
3. Typical Arrangement for new station
4. Layout sketch Operations Bldg. - new stations