

December 22, 1954.

Tank Farm Fire Protection  
U. S. ARMY - Alaska  
File: 590  
Your File: NPAVB

Colonel C. Y. Farrell,  
District Engineer,  
Alaska District,  
Corps of Engineers,  
ANCHORAGE, Alaska.

Dear Sir:

Your letter of November 24 regarding tank farm fire protection marked to the attention of Mr. A. B. Flood in Toronto has been sent on to us for reply. We regret the delay in answering, which was caused by the writer being out of town for two weeks.

Our Company has operated tank farms at Regina, Calgary, Edmonton and Herman Wells for up to as much as 30 years, and while these locations do not experience temperatures below  $-50^{\circ}\text{F}$  for very long periods, they probably represent the most extreme cold weather conditions under which tank farms have been operated for a long period of time.

It has not been the policy of the oil industry to install permanent fire protection equipment (such as foam chambers and associated piping) on tanks in isolated tank farms where the number of tanks involved is relatively few. However, at the places mentioned above, our tank farms are closely associated with refineries and are sometimes in built-up areas. Therefore, all tanks over 20' in diameter and containing products with a flash point below  $150^{\circ}\text{F}$  are equipped with foam chambers and a permanently piped system for the application of foam. Present practice is to use a mobile air foam system such as is manufactured by the American LaFrance Foamite Corporation of Elmira, New York.

Colonel G. Y. Farrell,December 22, 1954.

With regard to the practicability of foam systems in extremely cold weather, we would advise that, in our many years of operation, we have not experienced a tank fire during very cold weather. This is probably due in considerable measure to the much reduced volatility of oil products at these low temperatures. We are therefore not in a position to advise on the operability of foam for fire protection of tanks under such conditions. For the extinguishment of fires in small low tanks, we believe that wheeled dry chemical units with the powder expelled over the edge of the tank with an applicator would prove quite effective. Such units have the advantage of being unaffected by extreme cold, and will expel the powder in a jet which will reach 40 to 50 feet.

We are enclosing some sheets from our tank specification which show various features affecting fire safety, and, in particular, the layout and arrangement of the permanent foam systems which we use. We hope that the above information will be of some use to you, and if we can be of any further help, do not hesitate to call on us again.

Yours very truly,

R. W. DUNLOP

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Per \_\_\_\_\_

B. H. Sherwood

RH/im  
Encl.

c.c. Mr. W. M. Pearce  
Attention: Mr. A. B. Flood