

bcc 1800 D. R. Hansen
C. Paton/D. E. R. ush
E2SD P. W. Gann
1800 C. Boutin

January 14, 1972

Mr. Robert B. Swell
Colorado Oil Co.
Box 749
Denver, Colorado 80202

Dear Mr. B. Swell:

Confirming your inquiry on January 10, 1972 concerning conversion of your Therminol FR heat transfer system, I have enclosed literature on two possible replacement fluids, Monsanto's Therminol 55 and 66. Therminol 55 should be satisfactory based on your normal operating temperatures of up to 500°F.

When converting your system to Therminol 55, you should thoroughly drain the Therminol FR (draining warm tends to increase effectiveness of total draining), flush the piping, equipment and expansion tank and again drain into leak-free drums and then seal. Be sure the outside of the drums are free of material. We request you use drums that meet DOT 17E Specification (55 gallon drums, 18 gauge minimum, 2 bung head; 5 gallon drums, 24 gauge minimum).

A flush with Therminol 55 would be advantageous because it would allow you to operate the system at temperature for a period of time to loosen any residual FR from the system. An alternate flushing material would be acetone or xylol; however, they should not be heated for flushing.

Please use the enclosed labels, disposal only, for shipping these drums of used FR and flushing fluid, and ship "collect" to the address shown. Monsanto will pay freight costs incurred and will properly dispose of the material, free of charge, by high temperature incineration. To insure proper disposition of the fluid, please advise one of our Heat Transfer Specialists, 314-694-2614 at time of return.

Any unopened drums of Therminol FR series products (original drum seals must be intact) will be accepted for credit if returned prior to March 1, 1972. Please use the following

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procedure when returning FR fluid for credit:

1. Contact a Monsanto Heat Transfer Specialist (314-694-2514) giving him fluid type and number of drums returned for credit. Also ask for return shipping instructions.
2. Using your company label, indicate Therminol type and clearly mark each label "returned for credit".

We understand you may not be able to return all your unused Therminol FR-1 before the March 1, 1972 cut-off date. We can extend this deadline but we do suggest that you have Therminol 55 in stock so that a change could be made as soon as weather permits or in the event of major fluid loss.

As a reminder, unlike the Therminol FR products, Therminol 55 and 56 are not classified as fire resistant heat transfer fluids. Consequently, you may wish to consider the use of protective devices to minimize any added fire risks. I suggest you consult with the insurer of your property relative to this matter.

A snuffing device should be considered for the combustion chamber of your fired heater. Steam or carbon dioxide may be used to extinguish a furnace fire caused by a heater tube rupture. The snuffing device may be activated by a high temperature switch in your furnace stack. A sprinkler would also be a good suggestion for the heater and piping system.

In order to protect Therminol from unnecessary oxidation, we suggest the use of an inert gas blanket in your expansion tank system to preclude air contact with hot fluid. If you use a recirculating line to the expansion tank, this should be valued closed during the normal system operation.

While both Therminol 55 and 66 are miscible with Therminol FR, we do not recommend adding either fluid to "top-up" an FR system except as an emergency measure for a brief period of time. Addition of Therminol 55 or 66 can cause the mixture to lose its fire resistant properties. Also, the useful life of Therminol 55 or 66 may be drastically reduced by reaction with trace quantities of acid in the Therminol FR.

We suggest you plan your conversion as soon as possible. The Therminol FR fluids are no longer available and are not compatible with other heat transfer fluids.

When our conversion bulletin becomes available, a copy will be sent to you.

Thank you for your cooperation. Please feel free to contact me if you have any additional questions.

Sincerely,

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cc
cc Mr. Rosenbach

J. J. Roder
Product Supervisor