

January 16, 1940

Mr. H. Fossett
The Associated Ethyl Company Ltd.
Thames House, Millbank
London, S. W. 1
England

Dear Mr. Fossett:-

I shall try to reply to various matters that come up in your letters since the one dated November 13th.

The Cleaning of Storage Tanks.

The question of what equipment should be used in the cleaning of storage tanks depends on two factors, one the potential exposure to gasoline vapors, the other the possible exposure to lead compounds. I think it can be accepted as standard practice in refineries that are operated carefully, that no man should enter a gasoline storage tank without an air-line mask. This provision exists because it is so difficult to determine when safe conditions exist with respect to gasoline exposure. It is for this reason that we have been unwilling to permit the use of ordinary canister masks. These, of course, would prevent significant exposure to lead dusts which might arise from the cleaning, and scraping of the sides of the tanks that have been permitted to dry. There is, of course, an additional reason for the avoidance of canister masks in enclosed places, for although canister masks may purify the air, they can not provide the oxygen which is necessary to sustain life. Thus if men enter into a space which is filled with gasoline vapors to the exclusion of air, they will die of oxygen want. Accordingly we believe that the regulations for the use of air-line masks should be extended to all work which involves entering into a tank.

I am a little uncertain as to the situation to which you called attention, or to which Thenault called attention. I assume that there was a plentiful supply of air on top of the roof of this tank. If this was the case, presumably the men were exposed only to dusts, if any were present, or possibly to gasoline vapors in some unknown concentration. The use of equipment of the type described by Thenault would, I think, be unsatisfactory since it would be

better in this instance to use a mask with a tight face-piece which could not leak. In any case I think it would be wiser to use air-line masks since a charcoal canister can be flooded with gasoline vapors rather quickly, if the vapors are in high concentration.

Cleaning of Royal Air Force Storage Tanks.

The cleaning of tanks used by the Air Force is a problem which should be dealt with by them, I believe, after being given the information necessary to acquaint them with the dangers. There are, we believe, no dangers from exposure to lead in connection with these tanks which have never been used for blending, unless there should be moderate to considerable quantities of scale on the sides of the tanks which they attempt to remove by scraping or brushing. There danger will be primarily, of course, from the gasoline vapors. It would appear to me that if they provide against these dangers adequately, they will also secure themselves against any danger from the lead compounds. I should be interested in knowing what their procedures are for cleaning these tanks. This matter has not been brought to our attention by the United States Army Air Corps since they have chosen to handle this matter in accordance with their own judgment. I am not in position, therefore, to give you any detailed information as to their practices, although I believe that in a few isolated instances, the advice of our safety men has been asked in cleaning certain of these tanks. We have considered it wise to apply our regulations, in so far as it is feasible, to all storage tanks which contain gasoline. It is our belief that every care should be taken against unnecessary skin contact and that these tanks should not be entered into without providing for air-line masks. We find that a great many of such tanks are not cleaned for long periods of time. We also find that in many instances where it is feasible, they are not entered at all but are flushed out from the outside. Obviously we encourage the latter practice as much as possible. I may say in conclusion on this point, that where gasoline is stored in tanks of small to moderate size without any water bottom, we have no fear of any considerable quantity of lead compounds in the sediment.

Blending Plant - Consolidated Refineries, Ltd. Haifa.

Your letter concerning the medical supervision of this plant surprised me greatly in that it appeared that the use of our consultant Dr. Thompson had been ignored. As you are probably aware, it has been my purpose to keep the medical supervision of these plants in the hands of as few people as possible, and to give our consultants the responsibility, in direct communication with ourselves, for the

Tully expresses the situation very well, and I am confirming your judgment by writing a note to Mr. Tully, a copy of which I am enclosing. However I shall write to Dr. de Priester stating the fact that if the men do their work properly, there should be no lead exposure. If after this letter, he still wishes to make analyses once per year, I think we should go along with him provided we can be certain that the analyses are properly done.

Concerning Dr. Whishaw in Tasmania

I am quite willing to approve Dr. Fairley's suggestion that he delegate the work in Tasmania to Dr. Whishaw. Accordingly I am writing to Mr. Tully, approving this arrangement, and I enclose a copy of my letter to this end. However I shall write to Dr. Fairley directly, approving this suggestion, and I shall make him responsible for Dr. Whishaw just as I have done in the case of Dr. Hunt and Dr. Sippe.

Very truly yours,

RAK:is

Robert A. Kehoe, M.D.