

August 17, 1941

Captain George H. Taylor  
Corps of Engineers  
War Department  
Washington, D. C.

Dear Captain Taylor:

In reply to the inquiry in your letter of August 8, directed to Dr. Kehoe, we wish to advise you that gasoline tank trucks, drums and cans cannot be safely or easily cleaned for use as containers for drinking water. In fact, it can be seriously questioned whether they can be properly cleaned under all circumstances even when painstaking and time-consuming cleansing methods are used. We therefore strongly advise that tanks, tank trucks and the like that have been used for the storage and handling of loaded gasoline not be used as containers for drinking water, grain or foodstuffs.

Our reason for taking this position is two-fold. First, it is difficult to free drums and tank trucks from all traces of gasoline, steaming, followed by a protracted series of water washings usually being necessary for this purpose. Moreover, in many instances even after a number of hours of steaming and frequent washings, though the container be free from gasoline immediately after filling, on standing and agitation in travel, contamination of the content may occur and render the water unpotable.

Secondly, and more importantly, we could recommend no method of cleaning that would assure the users that all lead compounds would be removed and that these containers would then be safe for foodstuffs or drinking water. Chemical treatment, in our experience, has not been satisfactory, particularly in the case of tank trucks and drums where it is often difficult to secure proper contact and agitation. Even sand-blasting were it possible to carry out that operation with assurance that it was completely and effectively done would not provide certain safety, since it is almost impossible even when sand-blasters are working within tanks to completely clean the seams, joints between plates, and the crevices.

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It will be apparent from the above that we know of no method of cleaning which will make these containers certainly safe for use for drinking water. There have recently come to our attention, several instances of the use of gasoline tank trucks for hauling water. These trucks were steamed for two days, flushed three times with water, chemically treated and fresh water allowed to stand in the tank. Analysis of the water revealed the presence of lead. The process of flushing was repeated and the water was found to be lead-free, the tank trucks then being considered satisfactory for water service. It should be pointed out that even this time-consuming and uncertain method may not be entirely relied upon since acid and alkaline waters vary greatly in their ability to dissolve lead and a lead-free analysis of one batch of water does not give any assurance that subsequent filling of the tank with water of a different chemical reaction will not result in contamination.

We have written you in some length in reply to your question in view of the importance of the point at issue, and in view of the practical certainty that this question will be raised more than once by the armed forces, particularly during maneuvers.

Very truly yours,

Wvr

Willard Lachle, L. S.

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