

ALAN C. TULLY
REPRESENTING
ETHYL EXPORT CORPORATION
LONDON AND NEW YORK

369 COLLINS STREET, MELBOURNE C1

October 12th., 1938

Dr. R.A. Kehoe,
College of Medicine,
University of Cincinnati,
CINCINNATI, Ohio. U.S.A.

Dear Dr. Kehoe,

I am enclosing herewith an investigation of the tank cleaning system established by the Texas Company in Australia and New Zealand. This is made up of three groups of reports:- first, the head office instructions concerning the cleaning of tanks, which are sent out to each installation; second, an overall picture of the Texas Company's storage facilities in keeping with your questionnaire; third, reports obtained tactfully by our representatives in the course of their blending plant inspections, which augment the second group indicating the interpretation of the cleaning instructions by the installation superintendent.

We are doing similar investigations in regard to each of our customer companies here, including those who do not blend, but who of course maintain storage facilities for lead treated petrol. These will come along as soon as they are prepared.

Sincerely yours,

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Alan C. Tully

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Texas Company (Asia) Ltd (Singapore)
Head office instructions

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CLEANING OF INTERIORS AND PREPARATION
OF TANK FOR ENTERING AND INSPECTION.

Tanks that have contained leaded gasoline require to be handled somewhat differently than tanks that have been in clear gasoline or kerosene service.

The following outline covers procedure and practice to be adopted in case of all storage tanks other than in leaded gasoline service. At the end of this instruction, the further precautions required in the handling of the work when dealing with a leaded gasoline tank are given.

Although all Superintendents have authority to empty and clean tanks promptly, a Request for Job Order should be made up and submitted to Head Office to serve as a convenient record of the work done, and also as a notification to Head Office that the work is being proceeded with.

The Request for Job Order form permits a very convenient and handy record of the cleaning performed on any individual tank, and it is for this reason that a Request for Job Order is insisted upon. Naturally, it will be a confirmation Job Order Request, but it should be prepared and sent in when it is decided to undertake the work.

As soon as the tank is empty, all manway covers should be removed and explosion hatches held open with wooden struts supported on rim of hatches to permit free ventilation. These wooden struts under explosion hatches should be so placed that although they safely hold the hatch up, in the event of an explosion the strut will kick out and permit the hatch cover to drop and seal the hatch.

Remove the tank valves and fix blind flanges to close off the ends of the tank line, on the line side of the valve (see Part F, Section 2, for maintenance and cleaning of gate valves.) Opportunity should be taken, before the valves are reinstalled, to give them a hydrostatic test in accordance with Part J, Section 4.

Tank flanges should be left open and the swingline raised to allow any product trapped in swingline to drain out.

The tank is then ready for ventilation. The tank should be left at this stage for a period of at least 48 hours to ventilate thoroughly.

Not before this period of ventilation has elapsed should any employee enter the tank, and then only under the following conditions:--

After the ventilation period it is necessary to send employees into the tank to clean out the residue on the bottom and the sludge. As the tank may still be gassy at this stage, these employees are required to be properly equipped with masks and rope.

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They should use masks of the airline type and an employee should be stationed outside the tank near the manway to control the airline. Sawdust can be sprinkled on the tank bottom to soak up the moist sludge and the material removed.

When the tank has all, or the greater part of the sludge removed, it should then be left for a further twentyfour hour period to ventilate. After this period the tank should be gas free and employees may enter the tank for further cleaning or inspection.

No repairs involving heat or flame are to be undertaken until tank is further treated, as dealt with in Part F, Section 7.

Plates should then be brushed down with wire brushes, going over the bottom of the tank and the shell plates wherever necessary. Portions of the plates affected with hard scale or heavy deposits may be further scraped with scrapers, to bring the plate proper to view. All loose smooth scale should be swept down. A tank is not clean if there is a thick accumulation of rust in any portion of the tank, and cleaning must be thorough. A proper inspection of the tank cannot be made until tanks are properly cleaned.

SPECIAL ADDITIONAL PRECAUTIONS TO BE

TAKEN WHEN CLEANING LEADED GASOLINE STORAGE TANKS.

In such cases the sludge and rust is likely to have heavy lead deposits. For this reason, not only must employees entering the tank for cleaning or inspection be equipped with airline masks, but they should also wear clothing equivalent to that prescribed for leaded gasoline mixing operators in Part C, Section 3. This clothing should not be the clothing used by the leaded gasoline mixing operators, but should be clothing kept for this particular purpose. It should be treated and handled as prescribed in the Ethyl Gasoline Booklet.

Refer to the Ethyl Gasoline Corporation's Booklet, copy of which is in the possession of Terminal Superintendents, and carry out all precautions laid down therein in connection with the cleaning of tanks. Avoid skin contact with the sludge. The sides of the tank will have to be kept in a wet condition to avoid dry dust particles in the air of the tank. The sludge should be buried in some out of the way spot. All tools used should be cleaned after use with kerosene. Clothing of the operators should be laundered as outlined in the Ethyl Gasoline Booklet.

Cannister type gas masks should not be used in petroleum fumes, as they will not protect the wearer from gasoline or petroleum vapors. Masks of the airline type should be used by cleaners until tanks are clean.