

PROCEDURE FOR
DECONTAMINATION BY WEATHERING
OF
SLUDGE FROM LEADED GASOLINE STORAGE TANKS

The disposal of sludge from leaded gasoline storage tanks has presented an ever-increasing problem to the petroleum industry. In many areas there is simply not enough space to dig holes for burying this material. Along the coastal plains it is difficult to find suitable disposal areas because of the high water table. In other cases it has been necessary, for a number of reasons, to dig later into the area where the sludge has been buried.

With all this in mind, Ethyl Corporation has been making a detailed study of the sludge disposal problem and has developed a procedure which is satisfactory, safe and, it is believed, more economical than present methods. This method of disposal is outlined in the following paragraphs. (The old method continues to be acceptable if preferred.)

PURPOSE:

Provide a method for safely disposing of sludge taken from tanks that have contained leaded gasoline.

Standard practice up to now has been to bury the sludge in the ground near the tank being cleaned. The objective of the following procedure is to provide a safe way to dispose of leaded gasoline tank sludge, so that burying will not

be necessary.

PROCEDURE:

1. Select a site on which the sludge can be spread.
 - a. The site selected for sludge disposal should be in a remote part of the property and, of course, should be within property limits where it will be fenced off from the public. It should be located away from office buildings and if spread near the tank being cleaned, should be outside the surrounding fire-wall, so that the possibility of gasoline vapors affecting the tank cleaning operations will be eliminated.
 - b. It should be so located that personnel working in, on or around the tank will not get into the spread-out sludge.
 - c. It can be bare ground or covered with grass or concrete.
 - d. It must be fairly smooth and well drained so that water will not stand on it.
 - e. The total area, whether in one or several patches, must be sufficiently large to permit spreading the sludge in a layer not over 3" thick. The total area

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required will, of course, be determined by the amount of sludge in the tank.

- f. It should be so located that air can circulate freely over the surface of the sludge. Exposure to the sun is desirable but not mandatory.
2. Remove sludge from the tank in the usual manner following the safety recommendations approved by API.
3. The sludge can be moved from the tank to the spreading area in available plant equipment. Wheelbarrows, buckets or other small containers may be used for moving it a short distance. Dump trucks, lugger buckets, etc., may be used for longer distances. The containers used should be metal. After use, they should be washed thoroughly with water.
4. The sludge can be spread with hoes, rakes or shovels. It should be spread as uniformly as possible to a maximum thickness of three inches. If the area permits it, a thinner spreading is desirable.
5. Personnel handling and spreading the sludge should be dressed in special clothing as recommended for the cleaners. Masks will not usually be necessary unless there is no air movement and vapors can be detected by odor at face level.

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6. After the spreading is completed the sludge patch or patches should be roped off and marked so that no one will walk through or stand in the sludge.
7. The spread sludge should be left for at least four weeks. After that the sludge may be treated as any other nontoxic waste material. It is satisfactory to remove signs, fences, etc., if any, and leave the sludge in the preselected area permanently. The four-week weathering period applies when the ambient temperature is above 32°F. Therefore, if temperatures under 32° exist during the period of weathering this period of subfreezing temperatures will not be included in the recommended 4 weeks of weathering.

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