TNRCC REGULATORY GUIDANCE

Municipal Solid Waste
RG-237
June 1996

SUBJECT: **Used Oil Absorbents**
Proper Management Practices

Introduction

The Texas Natural Resource Conservation Commission (TNRCC) frequently receives inquiries from the regulated community regarding regulations that apply to absorbents for used oil spill cleanups. The TNRCC has adopted new rules in Title 30 Texas Administrative Code (TAC) Chapter 324 concerning used oil management. The new chapter adopts, by reference, the U.S. Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) Part 279, Standards for the Management of Used Oil. This guideline is written primarily in response to used oil spill cleanups, and is intended to support and assist regulated entities in understanding both federal and state regulations that apply to absorbent materials used to cleanup used oil spills.

Why Use Absorbents?

Used oil contains many toxic metals and additives that may pollute the environment. Absorbents, when properly selected and used, are good tools for managing spill cleanups and reducing the potential of used oil contaminating the land or water. Absorbents are used to soak up and retard the movement of a liquid (used oil). Many factors affect the performance and cost of using absorbents for used oil spill cleanups including: safety, capacity, characteristics, applicability, regeneration, and disposal.

General Classes of Absorbents

There are three general classes of absorbents which include the following:

Synthetic pads, such as those made of polypropylene, are water repellant so moisture will not affect their usefulness. Synthetic pads are not biodegradable. With proper steps taken for incineration, synthetic pads have low ash content. Synthetic pads can also be burned for energy recovery and this is preferred to incineration or disposal. Synthetic pads are more expensive than the other types of absorbents, but easier to use. Some absorbent pads are made to be reusable; which makes them more desirable for recycling and saves on disposal costs, when the used oil has been properly removed.

Clay, commonly called "kitty litter," is more like an adsorbent (where the oil would stick to the surface) than an absorbent material (where the oil would be soaked into the material). Clay is heavy, highly abrasive, and not biodegradable. Although clay is cheaper to purchase, it is often more expensive to use because clay does not absorb as much used oil as other classes of absorbents. Clay absorbents may be used in fuel blending, however, high ash content may result from incineration because of the low British thermal Units (BTUs) per pound of clay. Clay

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absorbents with no visible sign of free-flowing oil may be accepted for landfill disposal with prior TNRCC approval.

Cellulose materials are biodegradable organic absorbents, such as peat moss, corn cobs, saw dust, or recycled paper products. Cellulose materials can be burned for energy recovery**.**

Regulations That Apply to Absorbent Materials:

Federal Regulations
Absorbent materials with no visible sign of free-flowing oil are not regulated as used oil unless burned for energy recovery. These materials that show no sign of free-flowing oil are regulated as solid waste and are subject to hazardous waste determination as required by 40 CFR Part 261. The hazardous waste determination does not apply to household hazardous waste.

State Regulations
The TNRCC categorizes petroleum-contaminated materials as special waste when disposed in municipal solid waste landfills (MSWLF). Regulations covering the management of special waste are in 30 TAC Chapter 330.

Please contact the TNRCC Technical Assistance Team at (512) 239-6781 for regulations and authorization applied to disposing absorbent materials in landfills.

Recycling Options

There are several options for recycling used oil absorbents, such as wringing the oil out of the absorbent pad, reclaiming the used oil and reusing the absorbent pads. Another option is to use an absorbent that after use has value as a fuel, then send it for burning for energy recovery.

Absorbent materials recycled by burning for energy recovery are subject to regulation as used oil and subject to the required specifications of used oil regulation (40 CFR Part 279.11). Used oil not exceeding any specification level listed in Table 1 of this regulation is an on-specification used oil and is not subject to restrictions on burning (40 CFR Part 279.61).

Disposal Options

Waste minimization is the most desirable option for handling used oil absorbents. Recycling of used oil absorbents, such as reuse or burning for energy recovery, is the next desirable options followed by bioremediation and incineration. TNRCC considers disposing of used oil absorbents in landfills the least environmentally responsible option. Please call the TNRCC Used Oil and Used Oil Filter Recycling Program at (512) 239-6001 for a list of facilities that accept absorbent materials for processing and/or burn them for energy recovery.

(i) Thermal Treatment- Incineration
Incineration imposes the highest degree of toxic organic contamination control combined with very low human health risks. Hydrocarbons, in particular, incinerate well because of their organic content and energy value. Incineration is not subject to 40 CFR Part 279 regulations, but may be subject to other regulations (i.e., air permits and industrial hazardous waste permits).

(ii) Bioremediation
Liabilities and expenses associated with using landfills can be reduced through bioremediation. This involves applying organisms and/or oxygen and mineral nutrients, such as phosphate and nitrogen, to the contaminated

media. The process can be a cost-effective alternative. It also reduces or eliminates levels of contaminants such as Total Petroleum Hydrocarbon (TPH) and benzene, toluene, ethyl benzene, xylene (BTEX). Under a controlled environment, bioremediation is an effective method. Bioremediation is not subject to 40 CFR Part 279 regulations. For more information, please call Texas Bioremediation Council at (800) 626-6598.

(iii) Disposal in MSWLF

Absorbent materials contaminated with used oil usually are too high in TPH to be disposed. Absorbent materials must be sampled, tested and certified as nonhazardous waste prior to disposal in a MSWLF. For more information on current state regulations for disposal of nonhazardous absorbent materials in a MSWLF, please contact the TNRCC Technical Assistance Team at (512) 239-6781. If the absorbent materials are hazardous, they should be disposed at a hazardous waste disposal facility. Disposal in a MSWLF is not subject to used oil regulations.

Suggested Analytical Testing Prior to Landfill Disposal

A generator may use process knowledge to eliminate unnecessary testing. If there is insufficient documentation to support process knowledge, then analytical data must be used to classify the waste for landfill disposal. The kind of analytical testing done depends on the source of contamination. Generally, analytical tests for used oil absorbents are:

- TPH;
- Toxicity Characteristic Leaching Procedure (TCLP); and
- Total Organic Halogens

Before landfill disposal, the generator is required to:

- Determine the amount of waste generated;
- Explore reuse/recycling options;
- Contact the landfill about its restrictions; and
- Obtain prior approval from the TNRCC Technical Assistance Team on a case-by-case basis.

Railroad Commission of Texas (RRC) Permit Required

- In addition to the above requirements, if the generator is under the jurisdiction of the RRC, a RRC permit is required. Please contact RRC at (512) 463-6887.

For more information please contact:

Municipal Solid Waste Division, Automotive Waste Management Section, Used Oil and Used Oil Filter Recycling Program at (512) 239-6001.

Prepared by the TNRCC Used Oil and Used Oil Filter Recycling Program