The Oil DROP

The U.S. EPA's Oil Spill Program Internal Report
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Birth of the EPA Oil Spill Program Update and The Oil DROP

The Oil Program Center is developing an outreach communications strategy to keep the Regions, businesses, industries, and other regulated communities informed on the progress of the program and the significant developments. One component of this plan is the debut of the **"EPA's Oil Spill Program Update,"** a spin-off from the former OPA 90 Update. It will be produced quarterly, with information from the regions in response to their needs.

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Another component, **"The Oil Drop,"** is a more informal journal and will be produced twice a year. With the **"Oil Spill Program Update,"** our goal is to provide straightforward information to keep EPA Regional staff, other Federal agencies and departments, and the regulated community, up to speed with the latest program developments. **"The Oil Drop"** will target a broader audience including concerned citizens and environmental groups as part of educational outreach efforts. Both will be available on the Oil Spill Program Homepage at: ***http://www.epa.gov/oilspill*** and will also be distributed in hard copy.

Fuel Spills at Tank Farm

About 10,000 gallons of diesel fuel spilled at a tank farm in Newington early Sunday, August 31.

Deputy Chief Jack Brown of the Fairfax County Fire and Rescue Department said a worker was filling a diesel storage tank at the Crown Petroleum terminal at the Newington Tank Farm about 2 a.m. when the tank overflowed, spilling about 10,000 gallons of diesel fuel.

The fuel tank, which can hold up to 900,000 gallons, overflowed. A concrete dike designed to contain such overflows or leaks stopped the spill, which was cleaned up by Crown Petroleum.

Brown said authorities are investigating whether an alarm that is supposed to sound when a tank gets close to full was working when the accident occurred.

Brown said bulk storage tanks at the facility are surrounded by containment dikes designed to hold more than each tank's capacity. All the spilled oil was contained in one of the dikes. The tank farm, located in an industrial-commercial area, is one of two in Fairfax County. The other is near Fairfax City.

Oil Recycling

The Pennsylvania Department of Environmental Protection has announced a public-private partnership to increase the recycling of used oil and oil filters. The partnership is being formed to increase voluntary efforts to recycle the more than 28 million gallons of oil and 15.3 million light-duty oil filters sold in the Commonwealth each year.

Major Oil Spill Hits Tokyo Bay

Supertanker runs aground

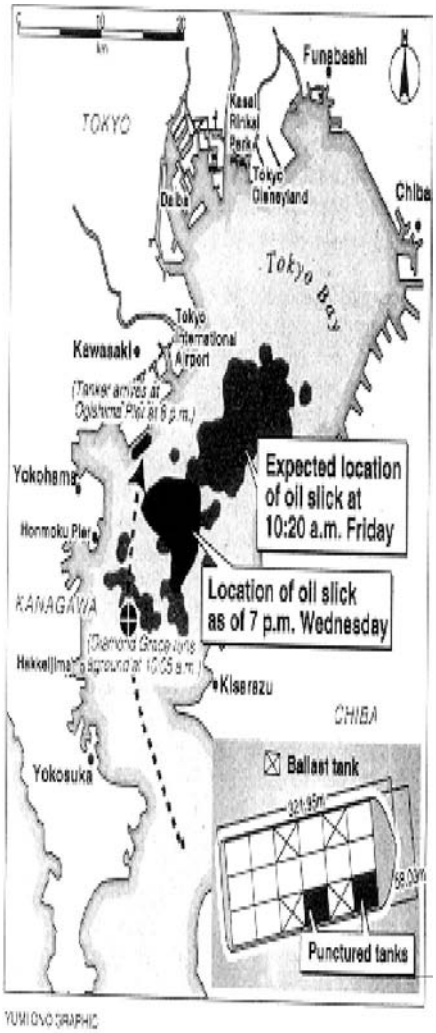
This article was originally reported in the Tokyo Daily News, on July 4th. It illustrates many important considerations addressed during oil spill responses. We have not been able to include the latest information or analysis on this spill.

A supertanker ran aground on July 2 in Tokyo Bay, dumping 15,000 kiloliters of crude oil in one of the worst environmental accidents in Japanese waters, the Maritime Safety Agency said.

The 147,012-ton Diamond Grace, a Panamanian-registered Japanese owned vessel, was reportedly carrying about 257,000 tons of crude oil when it ran aground at 10:05 a.m. about 6 km southeast of Yokohama's Honmoku pier.

The drifting slick washed ashore at cargo piers and the size of the spill has considerably dwindled due to cleanup efforts. Cleanup crews retrieved more than 570 kiloliters, or one-third of the spilled oil, adding that there now is 19 km of oil fence deployed in the bay. No immediate damage to the fisheries industry has been reported. Most of the crude initially believed to have leaked was found to have remained inside the hull of the tanker. The actual oil leaked from the tanker— 1,550 kiloliters—was based on a precise check conducted later. When the tanker ran aground on Nakanose shoal Wednesday morning, three of the vessel's tanks were damaged, puncturing the no.1 and 3 starboard tanks (figure1). The ship was transporting crude from the United Arab Emirates. In the accident, bulkheads separating the tanks were ruptured, and oil contained in the no. l and 3 tanks leaked into the no. 2 tank. Officials could not investigate the internal damage until the tanker was docked at Kawasaki Sea Berth at Ogishima Wednesday night, July 2.

Figure 1.



The tanker's captain reported that the ship ran aground when it tried to pass between two fishing boats by slowing down. The tanker then was carried by the tide and gusts. The report said the tanker suffered a strong shock immediately after it started running at dead slow. Officials said that the accident was not caused by mechanical trouble. It was determined that the accident was due to an operational error.

An official at the Petroleum Association of Japan said experience, prompt response, and good weather have minimized damage—as far as clean-up efforts are concerned. Tokyo Bay is partly confined, which makes it easier to collect oil. The quick response taken by the government and companies accounted for the fast oil collection accomplished in two days.

Green groups say bay wildlife at risk

Environmental groups expressed concern about the potential negative effects oil spilled from the supertanker in Tokyo Bay would have on animal life and tidal flats in the area.

Fish usually breed and mature in the shallows, so the spill could significantly affect them and the animals that feed on the fish, said Tatsuo Nakai, director of education and communication for the Nature

Conservation Society of Japan. Unlike an ocean oil spill, Tokyo Bay is almost enclosed, limiting the flow of water between the Pacific Ocean and the bay so that the oil will remain there for a long time. There are fears the tide flats in the bay, which are home to a diverse and very fragile ecosystem, may be at risk, he said. Tidelands are very sensitive to oil spills. If the oils are carried in by the tide, they will cover a greater area and seep into the ground in three or four hours, damaging the tide flat ecosystem. The number and variety of birds in the Tokyo Bay area

are comparatively small this time of the year. However, migratory birds, which stop at the tidal flats in route from Asia to Australia are due to arrive in August and if the tide flats are damaged it may affect them adversely. If oil washes ashore with the tide, worms and other creatures that serve as food for the birds may die and if they don't, they may sicken animals higher in the food chain that eat them. The agency has been monitoring the air, and according to the agency, the density of nonmethane hydrocarbon, which includes toxic benzene, temporarily rose to as much as 20 times the normal figure at three observation sights, shortly after the oil started spilling. It is necessary to conduct adequate surveys and take the necessary measures in regard to water and air quality, the director of the Environmental Agency's Water Quality Bureau said.

What is an Oil?

Oils are defined under several statutes including the Clean Water Act (CWA) and the Oil Pollution Act of 1990 (OPA). As a result, overlapping regulatory interpretations exist. For this reason, the U.S. EPA and the U.S. Coast Guard are currently developing a nationally consistent program policy and methodology for facilities to determine whether a given substance is considered an oil under the existing CWA.

Under the CWA, the definition of oil includes oil of any kind and any form, such as petroleum and nonpetroleum oils. Generally, oils fall into the following categories: crude oil and refined petroleum products, edible animal and vegetable oil, other oils of animal or vegetable origin, and other nonpetroleum oils.

Many substances are easily recognizable as oils (e.g., gasoline, diesel, jet fuel, kerosene, and crude oil). Under the CWA definition, many other substances are considered oils which may not be easily recognizable by industry, including the oils of vegetable and animal origin and other nonpetroleum oils. Therefore, facilities should work closely with the EPA and USCG (if applicable) to make determinations for the substances they store, transfer, and refine. [1]

For more information on the Clean Water Act (CWA) you might want to visit the website address of EPA's Office for Water . It is: htpp:// www.epa.gov/ow/.

Did you know.....

That many products we use every day are made from oil?[2] Surprisingly, some of these products include:

- Paraffin wax
- Pharmaceuticals
- Explosives
- Pesticides
- Detergents
- Cosmetics
- Adhesives
- Polishes
- Paints
- Nylon
- Plastics

Restaurants and the Recycling of Cooking Oils

As reported by the Washington Post, on Sept. 17.

Hundreds of thousands of gallons of cooking oil are used each week in the 8,000 to 10,000 restaurants in the Washington-Baltimore area. And hundreds of gallons of oil residue are drained off cooking surfaces and poured into containers out back behind those restaurants for collection by grease recycling or rendering companies. Typically, it is reprocessed into animal feed and the cycle starts again when the meat from those chickens, cows, or pigs ends up once again on the grill top.

A local recycling company that sells its oil to a poultry business on the Eastern Shore, says that it blends the oil with corn and soybean meal and other vegetable proteins, and it enhances the growth of the chickens, turkeys or hogs.

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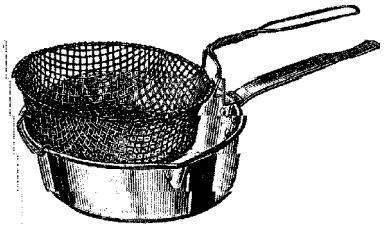
[1]Introduction and Background to the Oil Pollution Prevention Regulation, Sept. '97

[2]OPA Update July 1994

The grease business is definitely picking up. There is a steady increase in frying oils, as more and more restaurants open.

Restaurants definitely have an environmental problem. If they try to dump the cooking oil down the drain, it clogs up their drains and they have to pay for that; and if it makes it to the water treatment plants, it clogs that up and they would be getting big fines for



violating the Clean Water Act.

While healthier eating is trendier today, people are still very much attracted to the fast-food outlets, where cooking oil and french fries go hand in hand.

What may be bad for human consumers, though, is good for the hogs and chickens that dine on it. Eating fat makes you fat, because it has a lot of calories. And that's exactly why the poultry industry feeds it to a chicken.

Feed producers' steady interest in used cooking oil provides another incentive in the grease recycling business:

Restaurants don't mind dragging oil outside to containers because they generally get paid for the stuff.

The amount of oil used per restaurant varies a lot, according to Steven Grover, director of technical services for the National Restaurant Association: " A popular seafood restaurant might use 50 to 100 gallons a week. If a restaurant has only one little five-gallon fryer, it may only produce five gallons every two weeks." But, with 787,000 restaurants nationally, says Grover, that's no small potatoes, no matter how you look at it.

Most restaurants are serviced every week or two. Oil turns rancid more quickly if water is mixed in. The result is nothing to sniff at, say those who have smelled it.

Used Cooking Oil Fouls Arlington, VA Stream

A container holding about 500 gallons of used restaurant cooking oil, intended to be recycled, was overturned, and the oil gushed down a sewer line, into Spout Run. The Arlington County Fire Marshal believed that it was an act of vandalism by disgruntled customers. Emergency crews were able to contain much of the oil with boom deployment before it could reach the Potomac River, and the rest was washed with hot water pressure hoses. The vandals could face federal charges for violating the Clean Water Act.

This brings up the issue of vegetable/edible/non-petroleum oils and their negative effects on the environment compared to petroleum oils. Research has shown that non-petroleum oils have harmful physical effects such as smothering and coating of wildlife, as well as toxic effects, such as oxygen depletion, when the oils start to break down in water. The issue of whether this container should have had some type of containment around it or be secured in some other way, might be something the facility needs to consider. These security precautions are normally taken for petroleum recycling tanks.

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