# GASOLINE STATION and ATTACHED CONVENIENCE STORE HAZARDOUS WASTE MANAGEMENT

Delaware Department of Natural Resources and Environmental Control,
Solid & Hazardous Waste Management Section

## What Hazardous Wastes are Commonly Generated at Gasoline Stations?

Gasoline stations have the potential to cause great environmental and human health harm and it is important to identify and prevent risks. A fuel spill or other environmental incident could lead to significant environmental damage, human health concerns, criminal prosecution and/or fines, and damage to your company's reputation. Gasoline stations are regulated for a wide variety of elements - from tank integrity to stormwater management systems. This factsheet will only address a narrow portion of the regulations - how hazardous waste generated at a gasoline station needs to be managed.

Typical hazardous wastes generated by gasoline stations include waste fuel (gasoline, diesel, or kerosene), spill cleanup waste (including used spill absorbents), and catchment basin waste. Hazardous waste may also be generated when fuel storage tanks are serviced. In addition, for gasoline stations that also have a convenience store, hazardous waste may be generated in the store. Typical waste generated within a convenience store includes waste fluorescent lamps, used oil, used electronics, and waste aerosol cans. This factsheet will cover each of these common hazardous wastes.

Any site that generates hazardous waste is subject to the federal and state requirements covering the generation, transportation, and management of hazardous waste. It is the responsibility of the generator (the gasoline station owner/operator) to make proper hazardous waste determinations at the time a waste is generated. Each generator will fall into a generator category status (depending on the amount of hazardous waste generated per month), and the regulatory requirements will vary depending on the generator category status. Please see additional Departmental guidance on generator category status and regulatory requirements.

## Human Health and Environmental Concerns

Gasoline is composed of over 200 different chemicals, but there are four that are toxic to humans – benzene, toluene, ethyl benzene, and xylene. When gasoline is dispensed into cars, the vapors escape into the atmosphere and can enter people's lungs and also be deposited on their skin. Gasoline also evaporates very quickly and pollutes the atmosphere. Certain chemicals, called volatile organic compounds, (such as benzene) react with sunlight and form smog in urban areas. Moreover, spills of gasoline can contaminate our drinking water supply - a spill of one gallon of gasoline into a drinking water supply can render one million gallons of water undrinkable. Finally, gasoline is ignitable and a single spark can ignite gasoline vapors.

## Spent Fuel Filters

Fuel filters are used to ensure fuel is pure when dispensed. Filters are located in all fuel dispensers (diesel, gasoline, kerosene, etc.). Fuel filters generally are replaced at gas stations multiple times a year. Spent fuel filters are likely to be ignitable and/or contain toxic chemicals such as benzene, and are therefore likely hazardous waste.

Properly drained metal fuel filters meet the definition of scrap metal and therefore, if recycled, are exempt from regulation as a hazardous waste. Consequently, if spent fuel filters are sent for scrap metal recycling, the generator is not required to manage spent fuel filters as hazardous waste. However, if the generator does not, or is unable to manage, spent fuel filters under the described scrap metal exclusion, the generator must make a hazardous waste determination on spent fuel filters and manage the waste appropriately.

## Waste Fuel

If any waste fuel is generated (gasoline, diesel, or kerosene to be disposed of for any reason), this waste fuel will need to be managed and disposed of as hazardous waste due to its ignitability and toxicity characteristics. As an alternative, waste fuel may be recycled as long as the fuel is not contaminated (able to be reused without prior processing).

## Spill Cleanup Waste

Prevention of spills is always better than a subsequent cleanup. Prevent spills by having up-to-date work practices, providing adequate training to your employee team, and having clean and well-maintained equipment. In addition, emergency response procedures to deal with a spill need to be developed and implemented. Keep spill cleanup materials in an easily accessible place with clear labels so they are ready for use in the event of a spill.

However, even with proper planning, spills do occur at gasoline stations. Most spills are caused by customer error and occur around the fuel dispenser (e.g. overfilling or drive-offs). Spills can also occur during fuel deliveries. A spill

management plan needs to be written to ensure effective response to spills and employees need to be familiar with the plan. In addition, it is a good idea to post signs outlining cleanup procedures and have emergency contact information listed.

A spill of petroleum products needs to be promptly and properly cleaned up. The spill needs to be contained to prevent spreading and spill absorbents from a spill kit should be used to soak up as much of the spill as possible. Allowing petroleum products to evaporate, rather than cleaning them up, is considered treatment and not permitted. Waste from the spill (the spilled material and any spill absorbents or other cleanup supplies) will likely need to be managed as a hazardous waste requiring proper management, transportation and disposal. For example, if the absorbents used in the spill cleanup are soaked with fuel, they are likely to be ignitable and/or contain toxic chemicals such as benzene, and are therefore likely hazardous waste.

### Catchment Basin Waste

Catchment basins (also called "spill containment manholes" or "spill buckets") are basically buckets around the fill pipe of an underground storage tank. These buckets work by catching any spills that occur while the tank is being filled. In addition to collecting spilled fuel, the catchment basin may also collect water, sediment, or other debris. The basin needs to be free of holes or defects and any liquid or debris that accumulates in the catchment basin needs to be removed promptly. If the generator determines that the liquid is useable (i.e., clean, useable fuel), then the generator may drain or pump the liquid into the fuel tank. However, if the liquid contains materials other than fuel, the generator must pump out the catchment basin and properly dispose of the collected waste. At this point, the generator must make a hazardous waste determination - most likely the waste will be hazardous as it will probably contain some fuel or other chemicals. Catchment basins need to be kept empty and clean, as well as routinely inspected and maintained.

### Fuel Storage Tank Waste

Water removed from the fuel tanks may be a characteristic hazardous waste due to the benzene concentration; therefore, the water must be managed as hazardous waste or undergo a hazardous waste determination prior to disposal. Any solids removed from the fuel tanks during maintenance may also be characteristic hazardous waste due to the benzene concentration. Removed solids must be managed as hazardous waste or undergo a hazardous waste determination prior to disposal.

Should you ever find fuel in the fuel storage tank sump, ***immediately*** contact DNREC's Tank Management Section (TMS) at 302-395-2500 and request to speak to a compliance officer. If the TMS cannot be reached, call the 24 Hour Complaint and Spill Notification Line at 1-800-662-8802 and report the problem.

### Convenience Store Waste

Some gasoline stations also have convenience stores, which may generate hazardous waste. Waste fluorescent lamps (lamps no longer being used), even the low-mercury ("green tip") lamps, contain mercury and pose a hazard to human health and the environment when improperly managed. Fluorescent lamps that exceed the regulatory limit for mercury can be managed as universal waste or as hazardous waste. Universal waste must be recycled and there are less-stringent regulations under this management method to encourage recycling. As a very brief overview, universal fluorescent lamp waste must be placed in containers which are adequate to prevent breakage, such as cardboard boxes; the containers must be labeled with the words "Universal Waste-Lamps," "Waste Lamps," or "Used Lamps;" the containers must be closed; and waste lamps cannot be accumulated on-site for longer than a year. If you choose to manage your waste lamps as hazardous waste, then you must comply with the hazardous waste regulations applicable to your generator category status. Please see our "Waste Lamp Management" factsheet for full guidance.

Used oil may, for example, be generated from lubricating convenience store equipment such as refrigerators. Used oil often contains hazardous contaminants, such as flammable fuels, lead, and other toxic metals. Please see our "Used Oil Management" factsheet for full guidance.

Another common hazardous waste at convenience stores is electronic waste. DNREC recommends recycling all electronic waste. The Delaware Solid Waste Authority (DSWA) accepts electronic waste for recycling from both households and businesses. Please call 1-800-404-7080 or visit http://dswa.com/programs/electronic-goods/ for full details or questions.

Convenience stores may also generate aerosol cans. Many cleaners, lubricants, paints, solvents, and pesticides are packaged in aerosol cans. Aerosol cans contain both the product and a pressurized propellant. These products may have hazardous characteristics, such as ignitability (e.g., paints or lubricants) or toxicity (e.g., pesticides or chlorinated cleaning products). Please see our "Aerosol Can Management" factsheet for full guidance.

### More Information

Additional factsheets for the management of Waste Aerosol Cans, Waste Fluorescent Lamps, Universal Waste, Used Oil, and Electronic Equipment are available.

State hazardous and universal waste regulations are in 7 DE Admin Code 1302, Delaware's *Regulations Governing Hazardous Waste*, Parts 260-266, 268, 273, and 279. http://regulations.delaware.gov/AdminCode/title7/1000/1300/1302/index.shtml

For more assistance, contact DNREC, Solid and Hazardous Waste Management Section at 302-739-9403 or Karen J'Anthony, Program Manager, at karen.janthony@state.de.us.

For assistance with your tank systems, contact DNREC, Tank Management Section at 302-395-2500 and request to speak to a compliance officer.