



EPA AND GAS STATIONS

As the lead environmental regulator, the EPA has a responsibility to ensure that pollution from development activities is managed and minimized where possible. You may have noticed that there is an increase in the number of motor vehicles as you make your daily trip from home to work and back. With this increase, is the corresponding increase in the number of service stations required to ensure that our vehicles keep moving.

The significant potential risks posed to both the natural environment and human health from the operation of gas stations and service stations (both on and offshore) means that the EPA has a major role in ensuring that these risks are managed, before an operation starts (for New Operations) and even projects that are in operation (Existing Operations). These however, can be avoided or minimised if waste management, spill control procedures and other pollution protection mechanisms are put in place. The potential avenues of pollution include: refilling of storage tanks, fuelling of vehicles, de-waxing and cleaning of vehicles, disposal of polluting liquids, i.e. oil wastes, paints solvents, other coolant additives, brake fluids and solid wastes, i.e. oil filters, exhaust systems, batteries and tyres.

Oil pollution is recognized as one of the most common types of water pollution. Oil spills and careless disposal of oil wastes into drainage systems can ultimately reach receiving surface water bodies, ground water and land areas. This can consequently have severe impacts on plant and animal life. Contamination of water courses by oils, chemicals or suspended solids and other such wastes can have negative impacts on birds and aquatic organisms such as fishes and ultimately on humans. Ground water pollution can affect plant life and land pollution can impact wildlife. In addition, used oils may have hazardous properties, which can have effects on human health.

Unmanaged transport, storage, use and disposal of petroleum products may result in several hazards, to human health as well as the natural environment. Because petroleum is a mixture of organic compounds, its properties may vary, but generally, it is a volatile liquid that gives off vapour at low temperatures. The vapour is heavier than air and has a tendency to sink and accumulate in tanks, pits and other hollows under still air conditions. When the vapour is present in air at certain proportions (between 1-8% petroleum in air), an explosive atmosphere is created. This is why the no smoking sign is prevalent in gas stations! Petroleum also floats on water surfaces and can be transported over long distances via drainage canals and other watercourses.

In Guyana, the primary petroleum products being used/distributed at filling stations include unleaded gasoline, dieseline, kerosene and lubricants.

Waste management

All protective measures should be taken to ensure that wastes management systems are put in place if pollution is to be avoided:

- Minimize waste production;
- Practice correct handling and disposal of all waste materials in an environmental friendly manner;
- Reuse and reclaim materials whenever possible;
- All hazardous materials (reactive, flammable, radioactive, corrosive), solvents, oils, process residues and wastes water must be disposed of in a manner so as to prevent contamination of soil and of surface and groundwater;
- Care should be taken in the handling and disposal of used engine oil, hydraulic fluids from lorries, buses or mechanical plants, which can be carcinogenic (cancer causing) and must never be discharged in surface waters. This and other hazardous wastes can be collected and sent to be recycled at garages, sponsors of stations or other facilities or registered contractors. This can be negotiated between the owners and sponsors, since it is possible for such wastes to be stored in drums and shipped overseas for recycling. Alternatively, if generated in small quantities these waste oils can be utilized for other purposes by the public, this requires special handling and must be agreed upon;
- Used oils may be burned for energy recovery; however, testing is necessary to ensure that it is free of hazardous contaminants;
- Used oil can also be treated before disposal either by solidification and stabilization which makes it less likely to be transported by water or by solvent extraction which reduces the volume of wastes to be transported. Wastewater from car wash bay should not pass through the interceptors;
- Promote continuous monitoring, assessment and improvement of the waste management plan and facilities, to recognize faults in the system or leakage in equipment, which should be promptly remedied;
- De-waxing, degreasing and cleaning of vehicles should only take place in designated wash bays. Such operations should never be carried out in open ground or areas where they can reach the drainage systems or watercourses;

- Wash bays, vehicle maintenance and dismantling activities must be carried out on an impervious surface and should be separated from other areas by a kerb. Effluent should be disposed of via oil separator; if however this is not installed then wastes should be sent to a sealed sump; and
- Precautions should be taken in the use of white spirits and paraffin as degreasers since they may poison aquatic life.

Spill response:

- In event of any spill all practical and reasonable actions must be taken immediately to minimize the effect of the spill on the environment and to safeguard the health of the public, self and employees. The EPA must be notified of a spill within 24 hours;
- All spills and leakage must be recorded, prevented from spreading, cleaned and disposed of in an appropriate manner. Such events must be reported to the EPA and other responsible agencies; and
- A spill kit should be provided at all sites that are prone to spills. Kits should contain absorbent material, drain seals disposal container and others appropriate tools.

The Gas Stations Programme Area of the EPA continues to work with developers to ensure that the best environmental practices are employed at gas stations, service stations and other facilities/operations of this nature. Remember to get authorized!

You can share your ideas and questions by sending letters to: “Our Earth, Our Environment”, C/O Communications Department, Environmental Protection Agency, Ganges Street, Sophia, GEORGETOWN, or email us at: eit.epaguyana@gmail.com, follow us on Facebook and Instagram, and subscribe to our YouTube channel.