Service stations

Service stations are one of several industries that pose significant risk to our environment. They are of particular concern because:

- There are so many service stations in the region
- Each service station is, in effect, a bulk hazardous chemical storage facility, accessible by the public and operated with varying degrees of efficiency and diligence
- In the past, some sites have not complied with environmental standards and have caused severe damage to aquatic environments, killing fish, insects and plants in streams and destroying their habitats.
- Underground tanks and pipes are not visible.

This guideline will help service station operators to protect natural waterways through best management practices for site design, management, drainage systems and monitoring, at both new and existing facilities.

Photo 1: A service station has many sources of potential pollution. Follow the best management practices outlined in this information sheet

Pollutants

Service stations produce pollutants from many sources. They range from drips and spills from fuel dispensers and waste oil storage areas, to wash water from windscreen and forecourt cleaning, through to spills while filling underground tanks.

Specific elements of hydrocarbon fuels and oils, such as polycyclic aromatic hydrocarbons (PAH's), benzene, toluene, ethylbenzene and xylene (BTEX) are extremely hazardous when discharged into the environment. Each of these can cause both short and long term adverse effects even when discharged in small quantities.

Experience shows that a majority of these pollutants gain access to the local stormwater either through direct discharge or by being washed off the site by rainfall or by poor forecourt cleaning practices.

Pollution minimisation

The Taranaki Regional Council recommends the following service station requirements as best management practices. Check this information when operating your service station and when establishing or upgrading daily site operational procedures. If all of the items on the list are fully addressed then the potential for pollution from activities on service stations is minimised.

Service station requirements

Spill response plans

Make sure you have a spill response plan tailored to the site's operation and drainage system, outlining action to be taken to prevent spilt material entering storm water or sewerage systems. At least the plan must include:

- Readily accessible containment and clean-up materials or spill kits. Keep the kit/s fully stocked always and stored near the places of highest risk, ideally on the forecourt, to enable an immediate response when a spill occurs
- A set of instructions and a list of emergency telephone numbers displayed in a prominent position, ideally by both the spill kit and in the site office
- Keep a set of accurate site drainage plans in or by the spill kit
- All staff members trained in spill response procedures and equipment use
- A shut-off valve incorporated in the site's stormwater drainage system or a similar mechanism to prevent spilt material from leaving the site.

Note: any spills over 20 litres or that enter the stormwater system must be reported to the Taranaki Regional Council's Pollution Hotline 0800 736 222 immediately – day or night.

Forecourt management

Never allow forecourt rinse water to enter the site's stormwater system. If required, daily forecourt cleaning should be done by broom. As modern covered forecourts receive minimal rainwater, this area should not be connected to the stormwater system. All

wastewater from this area must be collected for recycling or disposal as a trade waste. A consent is required.

Windscreen cleaning

Dispose of windscreen wash water as a trade waste to the sewerage system, don't tip it into a stormwater drain.

Vehicle cleaning

Recycle all wastewater from car washing or dispose of it as a trade waste or off site via a reputable waste contractor. Wash areas must be graded to ensure all wastewater is directed to the collection system and to prevent stormwater contamination from over spray and vehicle tracking.

Waste oil storage

Make sure that waste oil is collected and stored in accordance with *Guidelines for the Management and Handling of Used Oil, 2000*. Contact the Ministry for the Environment (phone 04 917 7400, website www.mfe.govt.nz) if you need a copy.

Photo 2: Stormwater runoff from the forecourt area flows to an interceptor system to remove potential contamination.

Uncovered diesel dispensers

Drain these facilities to an approved oil-water separator or other suitable stormwater treatment device and clean them regularly.

Mixed fuels accidents

Establish a procedure, with equipment located on site, to deal with this commonly occurring situation. Clear sign posting and customer education are necessary. Be prepared for the appropriate disposal of recovered batches of mixed fuel.

Chemical storage

Check that all chemicals on site, such as lubricating oils, kerosene, tyre repair and hydraulic fluids, are stored in a covered and contained area.

Stormwater quality management

Make sure that where stormwater treatment devices exist on site they are regularly inspected and maintained to ensure the effective treatment of all received stormwater run-off.

Remote filling design and procedure

For new sites all remote fill points must drain to a device that is designed to fully capture and contain a spill volume of at least 2500 litres.

For existing sites, spill protection procedures must be set for fuel deliveries. At the least, these must include readily available spill containment equipment.

The Taranaki Regional Council recommends also that:

- Fill points be located in an area able to be isolated from the rest of the site drainage system. This area needs to have a containment capacity at least equal to the largest tanker compartment likely to be delivering fuel to that site. In most cases this can easily be worked into the original site design by utilising site contours, landscaping features, a stormwater sump and a shut-off valve
- Procedures be set requiring the driver or site manager to isolate the loading area from the public stormwater system prior to the transfer of product taking place and then inspect the catchment for spills upon completion of the transfer, before reconnection
- On existing sites, a shut-off valve and / or spill containment device should be installed where practical.

Underground fuel storage

All underground tanks used for the storage of hydrocarbon products or wastes must be regularly monitored for signs of material escape. Regular bore monitoring for free phase hydrocarbon should be carried out. There is less need to monitor double skinned tanks.

Remember:

- Even small quantities of seemingly harmless materials can damage the environment
- It is illegal to cause stormwater pollution
- Always have a current, site-specific spill response plan. Keep the pollution control equipment handy and make sure that your staff members are well trained so that all spilt material can be cleaned up immediately and safely.

For further advice or information contact:
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