

The environmental management of operating and closed gas stations

Background of formulating the management policy for gas stations

Common sources of petroleum contamination at gas stations include carelessness while filling tanks, ruptures of tanks and pipelines, loose connections at the bottom of fuel dispensers and other circumstances. If the soil and groundwater pollution caused by spilt oil is not dealt with immediately, it may cause harm to the environment and human health. In view of this, the Taiwan EPA has developed relevant management mechanisms, including those outlined in the Proactive Declaration Management to Prevent Contamination; Supervision and Management of Pollution Control to manage gas station operations; and Pollution Cleanup Regulations to manage contamination incidents after they occur.

Proactive Declaration Management to Prevent Contamination

To implement autonomous gas station management and front-end pollution prevention, the Taiwan EPA promotes the program of Proactive Declaration Management to Prevent Contamination. Gas stations must carry out regular monitoring and reporting of underground storage tank systems through a network. In addition, the Taiwan EPA has set up an underground storage tank system reporting center as a fundamental management tool to promote industry self-management and EPA supervision. The Taiwan EPA also set up a telephone consulting system to help the industry get answers immediately.

Supervision and Management of Pollution Control

To control potential sources of soil and groundwater pollution, the Taiwan EPA promotes the program of Supervision and Management of Pollution Control. Potential pollution investigations by official surveys have been completed at Taiwan gas stations that may be sources of pollution. Furthermore, the Taiwan EPA monitors the network for reporting audits and gas station on-site checks to spot irregularities in

any reports. Focus is placed on on-site checks of facilities to prevent contamination of underground water bodies, monitoring equipment compliance with regulations, and soil gas monitoring probes to detect vapor concentration. The Taiwan EPA provided advice to enterprises inconsistent with the regulations to help them improve their management and efficacy of pollution prevention. The Taiwan EPA adopts rolling management, declarations and following audits three times a year, to enhance the management of underground storage tank systems. If check results are irregular, the EPA then triggers on-site checks and specifies the potential pollution classification according to check results. In addition, if there are any concerns at gas stations with high pollution potential an investigation is immediately done to clarify the environmental pollution liability.

Pollution Cleanup Regulations

As of August 2015, there have been 253 contaminated gas station sites found with soil and/or groundwater pollution as defined by the Soil and Groundwater Remediation Act, of which 69 sites have been announced as control sites, 14 sites have been announced as remediation sites, and 24 sites have taken the immediate remediation measures. A total of 146 sites have completed clean-up and are no longer under supervision. Regarding the progress on remediation, 12 remediation site gas stations are undergoing remediation, representing 9.3% of the remediation progress under supervision; 34 control site gas stations are being remediated, accounting for 26.4% of the remediation progress under supervision; and the remaining sites are proactively undergoing improvements stipulated by the Act. Nationwide, the rate of gas stations undergoing some type of remediation progress in Taiwan is 96.9%.

To accelerate the remediation of soil and groundwater contamination, in addition to the traditional regulatory instruments, the Taiwan EPA promotes a program of environmental pollution liability insurance. With risk management strategies to reduce/transfer financial risk, the environmental pollution liability insurance can assist industry and the Soil and Groundwater Pollution Remediation Fund Management Board to assume responsibilities. In addition, the environmental pollution liability insurance can also protect pollution victims and ensure rapid restoration of polluted environments.