

# HAZARD ALERT

## FATAL EXPLOSION AND FIRE IN SERVICE STATION

*Two workers were killed as a result of an explosion and fire at a service station. The explosion resulted from the ignition of vaporized flammable liquid in the garage's basement.*

The incident occurred while the workers were installing a sump pump to remove ground water that had accumulated on the basement floor.

Investigations suggest that flammable liquid had accumulated in the basement over a period of time, either from petroleum spillage inside the garage, or petroleum-contaminated soil adjacent to the basement floor.

The spark that ignited the vaporized flammable liquid may have originated from either the sump pump that was being installed, or a water pump already located in the basement area.

### Recommended Preventive Action:

- If possible, basements and/or crawl spaces in garages should be filled in to eliminate a potential accumulation of flammable liquid.
- Where flammable liquid may accumulate, the employer should:
  - a) Use only electrical equipment that is designed to be explosion-proof.
  - b) Install an explosion-proof ventilation system to keep vaporized flammable liquid well below the explosion level.
  - c) Install a continuous-monitoring device to alert workers of the presence of flammable vapours.
- All employees must be trained to recognize the hazards associated with the handling, storage and use of flammable liquids.

