



## **Work Safety Alert**

### **Worker Collapsed in an Underground Sewage Facility**

- 1. Date of Accident :** August 2015
- 2. Place of Accident :** An underground sewage facility
- 3. Summary :**

A worker entered an underground sewage facility to switch off valves of sewage pipes. He was found collapsed inside the facility and passed away subsequently.

#### **4. Work Safety Alert for Contractors/Employers :**

Workers working inside an underground sewage facility may be exposed to various specified risks relating to confined space work. Among others, gas poisoning may occur as a result of improper identification of the atmospheric hazards in sewage facilities and disregard of safety procedures.

Contractors/employers undertaking work inside an underground sewage facility, especially when the ventilation therein is poor, should:

- appoint a competent person to conduct task-specific risk assessments, taking into account the nature of the work, emergency situations and rescue operations, before commencement of the work;
- if the assessments identify risks of serious injuries, loss of consciousness or asphyxiation, avoid man-entry into the facility;



- if man-entry into the facility posing risks of serious injuries, loss of consciousness or asphyxiation cannot be avoided, formulate and implement an effective safe system of work which should include, but are not limited to, the following:
  - implementing a permit-to-work system, having all necessary safety precautions taken and certified in writing with the period during which workers may remain safely inside the facility specified, before any workers are allowed to enter the facility;
  - conducting effective purging and thereafter air monitoring to ensure that any hazardous gases, fumes or vapours have been removed before allowing workers to enter the facility and work therein;
  - taking effective steps to prevent ingress of any hazardous gases, fumes or vapours into the facility;
  - providing forced ventilation to remove any hazardous substances and to maintain sufficient fresh air supply while workers are at work in the facility;
  - ensuring that only those workers with suitable training and experience are allowed to enter the facility for work and providing them with adequate information and instruction;
  - ensuring that workers entering the facility use suitable personal protective equipment as appropriate, including approved breathing apparatus and safety harnesses connected to lifelines that are strong enough to enable each of them to be pulled out;
  - avoiding workers working alone and assigning a stand-by person to station outside the facility throughout the time of operation to maintain communication with the workers inside;
  - ensuring effective communication among the workers working inside and outside the facility;



- formulating and implementing proper emergency procedures, including provision of sufficient and suitable rescue equipment and presence of a rescue team that commensurate with the scale of the task;
- instructing the standby person not to enter the facility even in case of emergency, who should remain stationed outside the facility and summon assistance of the rescue team and public emergency services (i.e. the Police and the Fire Services); and
- exercising effective monitoring and supervision to ensure that the above safety measures are fully implemented and strictly followed.

## 5. Reference :

- [Five Steps to Risk Assessment](#)<sup>1</sup>
- [Safe Systems of Work](#)<sup>1</sup>
- [A Brief Guide to the Factories and Industrial Undertakings \(Confined Spaces\) Regulation](#)<sup>1</sup>
- [Code of Practice for Safety and Health at Work in Confined Spaces](#)<sup>1</sup>
- [Prevention of Gas Poisoning in Drainage Work](#)<sup>1</sup>
- [Breathing Apparatus approved by the Commissioner for Labour for use in confined spaces](#)<sup>1</sup>

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<sup>1</sup> Click to view the document



職業安全及健康部  
**Occupational Safety and Health Branch**  
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