



COUNTY OF NORTHERN LIGHTS

POLICY

HYDROGEN SULPHIDE (H₂S)

CREATED: 2/9/2025

REVISED:

TOTAL PAGES: 2

INTRODUCTION

Hydrogen Sulphide (H₂S) is a colourless, toxic, flammable gas with the smell of rotting eggs. It often results when bacteria breaks down organic matter in the absence of oxygen, such as in swamps and sewers (a process of anaerobic digestion). It also occurs in volcanic gases, natural gas and some well waters as well as being a by-product of the oil/gas and pulp and paper industries. It is sometimes referred to as sulphur hydride, sour gas, sulphureted hydrogen, sewer gas, and stink damp. The gas has a rotten egg smell and exposure to lower concentrations can result in eye irritation, sore throat, and cough, shortness of breath, and fluid in the lungs. Long-term, low-level exposure may result in fatigue, loss of appetite, headaches, irritability, poor memory, and dizziness. Higher concentrations are potentially fatal.

The purpose of this policy is to ensure that all employees, contractors and subcontractors engaging in any work operations in a sour gas environment thoroughly understand the safe operating practices to be used and take reasonable measures to ensure there is no danger to their health and welfare.

COMPANY REQUIREMENTS

The following rules must be strictly adhered to by all employees for working in or in the vicinity of H₂S:

1. All employees must wear SCBA protective equipment for working with any amount of H₂S.
2. A backup safety person is required whenever an H₂S process is opened and the person opening the process must be in SCBA gear.
3. Employees must be fit tested for our SCBA and know the inspection, field fit testing and the care and maintenance of our SCBA.
4. Employees must be aware of the SDS information on H₂S and follow the safe handling, personal protection and exposure limits.
5. All employees must be trained in this H₂S procedure.
6. All employees who work with H₂S must be trained on the job with working with H₂S as well as maintain a current H₂S ticket.
7. Drivers must follow our procedures for loading and unloading sour products.
8. Any worker entering a H₂S atmosphere must have confined space training.
9. A backup safety person is required for any worker entering a H₂S atmosphere.
10. As per OHS exposure limits, workers must not be exposed to a concentration of H₂S exceeding 10 ppm over an 8 hour time period.
11. As per OHS exposure limits, workers must not be exposed to a concentration of H₂S exceeding 15 ppm at any time.

EMERGENCY RESPONSE PLAN

STEP 1 – EVACUATE

- Select the evacuation point which must be upwind or crosswind from the possible leak

STEP 2 – ALARM

- Do an alarm check to ensure that the phone is working and that the contact numbers are correct. Indicate that you are on site and that you will be checking in every few minutes.

STEP 3 – PREPARE FOR RESCUE (WHO PACKS HAZARDS TO SAFETY)

- Who – who is to perform the rescue. They must be knowledgeable and fit enough to perform this job.
- Packs – do the air pack checks to ensure that the packs are ready to go and position them at the evacuation point. Ensure that the rescuers are confident with donning the air packs and practice if necessary.



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- Hazards – ensure that you can deal with all hazards on the tailgate hazard assessment.
- Safety – ensure that you will be able to move back casualty to the safe area or evacuation point.

STEP 4 – PROTECT

- Reaffirm with the rescuers that they are to protect themselves prior to attempting any rescue.

STEP 5 – RESCUE

- Select the method of rescue such as the two men drag, the collar drag or the two man carry depending on the situation.

STEP 6 – REVIVE

1. Check Responsiveness
2. Open Airway
3. Give 2 (1second) breaths
4. Place heel of hand mid chest and give 30 compressions. (Push hard – Push Fast)
5. Repeat at a rate of 2 breaths to 30 compressions until revived or medical help arrives

STEP 7 – MEDICAL AID

Take the casualty to the hospital/doctor or wait for medical help to arrive.

COMMUNICATION

As per the company's Safety Management System Manual, and corporate communication policy, all applicable policies and procedures are reviewed with all new employees prior to engaging in any work activities (during orientation) and annually with seasonal/returning employees (refresher training).

Chief Elected Official

Chief Administrative Officer