

Saskatchewan

Regulations for Oil and Gas Operations in H₂S Areas

Saskatchewan Ministry of Energy and Resources

1. Are there any devices/alarms required of operators that have H₂S on location, and if so, at what ppm H₂S are they required to be set?

All workers are to be equipped with person protective monitors that measure for H₂S.
All alarms are set to go off at 10 ppm

2. Are there any postings required of operators that have H₂S on location, and if so, under what circumstances?

When H₂S is present companies are required to post "Poison Gas" signs at a wellsite when H₂S concentration is greater than 10 ppm.

3. How are facilities at which H₂S is present tracked?

When facilities are licensed they are required to provide an estimate of H₂S concentration that will be encountered. Gas samples are taken to determine H₂S concentration.

4. What level or levels of H₂S are considered actionable and under what circumstances?

Companies are cited for non-compliance if H₂S readings above 10 ppb are detectable off lease as stated in Saskatchewan's ambient air quality guidelines.

5. Are any additional standards for rules implemented for H₂S other than the following?
 - a. ANSI- American Nation Standards Institute.
 - b. API – American Petroleum Institute.
 - c. EPA – Environmental Protection Agency.

No

6. Does your state have any specific H₂S safety regulations? If so, please list them below.

Saskatchewan has Occupational Health & Safety Regulations, governed by the Ministry of Labour Relations and Workplace Safety, which prescribes the exposure limits for workers in an 8-hour work day (14 mg/m³) and a 15-minute exposure (21 mg/m³). The regulations can be viewed <https://publications.saskatchewan.ca/#/products/112399>.

7. What are the purposes of the H₂S regulations?
 - a. Public safety
 - b. Worker safety
 - c. Other: _____

The Occupational Health and Safety Regulations are to protect worker safety. A number of our operational directives deal with H₂S releases intended to protect public safety.

Safety Procedures for Field Inspectors

8. What type of training is required for Field Inspectors?

All inspectors are trained with H₂S Alive and First Aid/CPR.

9. Are certifications required for Field Inspectors?

Field inspectors are provided certifications for both H₂S Alive and First Aid/CPR which they are required to carry with them when conducting field work.

10. Do you have an H₂S safety specialist, and if so, what is the specialist's level of expertise?

No we do not have a specialist but they may fall under the jurisdiction of Occupational Health and Safety.

11. Do state inspectors check H₂S levels, or do they require operators to check?

Operators are responsible for the safe operation of oil and gas sites and facilities which includes adhering to H₂S requirements. The Ministry of Energy and Resources checks H₂S levels as it relates to odours on and off lease.

12. If state inspectors check H₂S levels, what are the required procedures/protocols for checking to determine H₂S levels?

Inspectors use FLIR cameras to identify fugitive emissions at a well or facility site. If fugitive emissions are identified, inspectors will use the Jerome 605 which is a gold film Hydrogen Sulfide Analyzer to measure concentration. The Jerome 605 will read H₂S levels as low as 2 ppb. If a non-compliance is discovered, the information is documented in our reporting system and the company is notified.

13. How often are readings required to be made? By whom? How/who keeps up with those readings?

Anytime a complaint is made to the Ministry of Energy and Resources, inspectors will attempt to identify sources of the potential infraction. When conducting inspections, locations within known H₂S fields will routinely be observed with a FLIR camera to

determine for leaks. Any site may be randomly inspected which could include determining presence of H₂S.

All operators should be checking their facilities regularly and identifying/rectifying any issues.

14. Where are Field Inspectors most likely to check for H₂S?
- Top of stock tanks
 - Wellheads
 - Gas streams
 - Other: _____
 - Not applicable

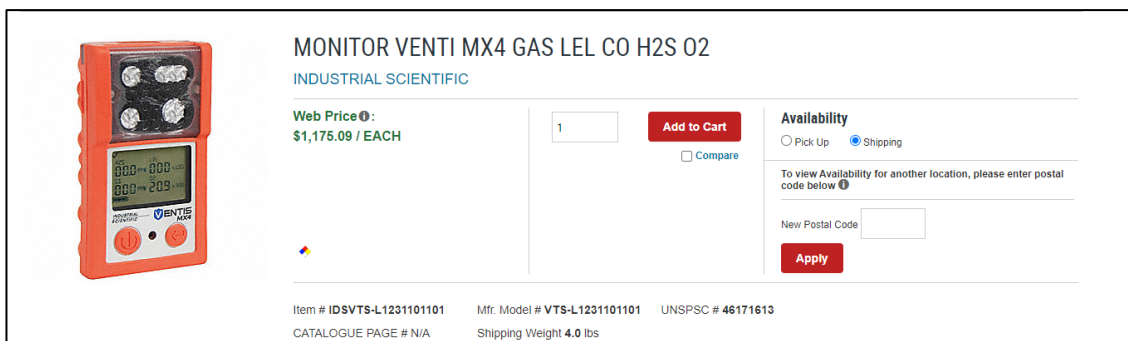
Tops of tanks, wellheads or other visible infrastructure will be assessed using a FLIR for fugitive emissions. If identified staff will check lease edges or other locations on lease, if safe to do so, with the Jerome 605 for presence of H₂S.

15. How do Field Inspectors respond to an H₂S complaint? (Please include in the response information on any requirements about when the Field Inspector must be accompanied by another person.)

- Information is collected on the complaint (location of encounter, date/time, description of odour, any details about weather).
- Staff assess location and possible infrastructure points of source.
- Gather data which may include information on production, the company, past history of compliance issues or complaints.
- Assess location of other receptors in the area that could be impacted.
- Determine a plan to evaluate the area based on the information provided.
- Conduct a hazard assessment prior to entering any sites.
- Take air quality samples with the Jerome 605 and document location of sample, concentration reading and environmental conditions.
- Use the FLIR camera to identify any fugitive emission points.
- Document any information observed which may include description of where evidence was collected, reference numbers, photographs and FLIR video.
- Any non-compliances are communicated with the company.

16. Are inspectors required to wear H₂S monitors? If so, what type of equipment?

Yes, all inspectors must wear personal multi-gas detectors that monitor for H₂S but also, CO, LEL, and O₂. We have been using the following type:



MONITOR VENTI MX4 GAS LEL CO H₂S O₂
INDUSTRIAL SCIENTIFIC

Web Price: \$1,175.09 / EACH

1 Compare

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Item # IDS VTS-L1231101101 Mfr. Model # VTS-L1231101101 UNSPSC # 46171613
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