

Energy Safety Canada is the national safety association for the oil and gas industry. We develop and support common industry safety standards, deliver effective learning systems, share data analysis and safety expertise with workers and employers, and advocate for worker health and safety. Our goal is the same as industry's – zero injuries, zero incidents.

**Share and Collaborate /** Energy Safety Canada works collaboratively with organizations to develop Safety Alerts that improve hazard awareness and injury prevention. Canada's leading oil and gas industry trade associations support the sharing of information to help companies of all sizes improve safe work performance.

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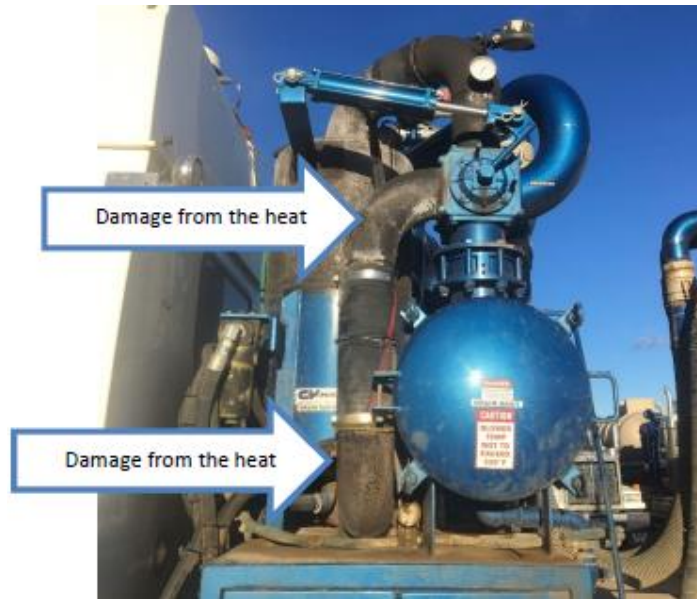
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# SEMI VAC TRUCK FIRE

**CATEGORY:** Equipment Damage

**DESCRIPTION:**

A company contracted services to clean out a production tank containing hydrocarbons. Hydrocarbons are highly volatile and, under certain conditions such as agitation, can flash off-gases or fumes. In this case, fumes were ignited by the operating vac truck equipment and a flash fire occurred.



DAMAGE FROM FLASH FIRE



CLOSE-UP OF HOSING FAILURE

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**CAUSE:**

- Not all hazards were adequately controlled, allowing migration of hydrocarbons in the work space
- Inadequate air movement at the production tank
- High temperature alarm on vac truck was ignored

**CONTRIBUTING FACTORS:**

The worker did not report the hydrocarbon hazard to the site supervisor or the employer, and hand-held gas detection equipment was not used.

**CORRECTIVE ACTIONS:**

- » Ensure a Safe Work Permit or Work Authorization Permit is in place. These documents detail the nature, and scope of the work, and identify site hazards in the area of the intended work. Safe Work Permits specify the precautions in place and/or to be implemented to mitigate risk to workers.
- » Understand the potential travel path of any vapours discharged during loading. Before starting operations, consider atmospheric and wind conditions; topography of the surrounding area, including low spots where vapours may collect; and potential ignition sources. Exercise caution as vapours may reach the flammable range during low flow periods.
- » Review product safety information including, but not limited to: toxicity, corrosiveness, flammability, reactivity and combustibility. When the material being transferred is a mixture of many products, a contaminated product or a waste product, additional information may be required such as Safety Data Sheet for blended product. Keep in mind that under vacuum the risk of higher flashpoint can be realized dependent upon the product.
- » Before starting any operations, workers should conduct a job hazard analysis to: identify additional hazards not already controlled; ensure suitable PPE is used, and confirm procedures and plans are in place to mitigate risks associated with the identified hazard(s).
- » Workers may refuse to do work they believe (on reasonable grounds) is dangerous to them or others. Worker must promptly report the refusal to the supervisor or employer.
- » If the supervisor or employer cannot remedy the hazard immediately, work is to be stopped and re-assessed, and controls must be put in place.