

Fire and Rescue NSW

Operations Bulletin 2012/03

Natural gas network leaks



Issue

When large quantities of water are used by fire service personnel at natural gas network leaks, it creates problems for gas company repair crews and the community.

This bulletin outlines procedures to follow to reduce the impact of natural gas network leaks.

Gas company repair crew concerns

Gas company repair crews have raised concerns about FRNSW using large quantities of water to disperse natural gas at network leak incidents. It delays repairs and can potentially lead to major gas supply problems.

The water collects in trenches, depressions, and in the soil around the leak. Gas company repair crews cannot enter the trench in case the trench collapses. Before they can start the repair work, they have to pump out the water, dry the wet earth surrounding the leak, and then clean the pipe so it can be effectively repaired.

The mud can also enter the pipe system, causing damage to the pumping system.

Natural gas properties

Natural gas is:

- a fossil fuel which contains 95% methane (CH₄)
- naturally odourless but has an organic sulphur compound added to make it more readily detectable
- non-toxic but it is an asphyxiant (excludes air)
- highly flammable and has explosive limits of 5 – 15% in air
- lighter than air and disperses rapidly.

Dealing with a natural gas leak

Manage a natural gas network leak (without fire) as a hazmat incident, following instructions in [SOG 10.1, Guidelines for all hazardous materials incidents](#). Additional considerations are:

- As far as reasonably practicable manage all risks and record on a risk assessment worksheet.
- Use the MSA Orion four-head gas detector to help determine the size of the hot zone.
- Minimise personnel within the hot zone. Ensure firefighters in the hot zone wear full structural firefighting ensemble with SCBA. Consider the need for hearing protection.

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- In accordance with In Orders 2001/19, *Use of non-operational personnel at emergency incidents*, ensure all those onsite, including the gas company repair crew, are wearing appropriate PPE and are supervised.
- Where practical, eliminate ignition sources within the hot zone.
- Lightly dampen the ground around the area of the leak to reduce the risk of ignition from static electricity. Do not tie off lines of hose and leave them on spray. The gas should disperse of its own accord.
- Position charged lines of hose (shut off), for life and property protection.
- Liaise with onsite gas company repair crews.

In the event of ignition

- If the leak does ignite, protect exposures. Do not extinguish, but allow to burn in a controlled manner.

This Operations Bulletin rescinds Safety Bulletin 2006/18, *Safety at Natural Gas Incidents*.

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	A	B	C	D	Other
Noted: Station Commander					
Checked: Duty Commander					

Previous Operations Bulletin: 2012/02 *Recovering bogged appliances*