



Vault and manhole emergencies

Even a small fire in an underground vault or manhole can create an atmosphere that is immediately dangerous to life and health. Consider every vault and manhole incident a confined space emergency involving combustible and toxic gases, hazardous materials, energized objects and an explosive atmosphere.



First and foremost: Do not enter!

When an underground vault or manhole is emitting smoke or flames, let the fire burn unless instructed otherwise by the incident commander, and **DO NOT ENTER!** Establish a safe perimeter, reroute traffic and notify National Grid. Protect exposures while you wait for our personnel to isolate the electric circuit and/or shut off the gas.

Be alert for risks posed to nearby plastic gas pipes or cast iron mains. Underground fires or releases of high-pressure steam may compromise these pipes. In either case, natural gas may accumulate underground at flammable concentrations. Collaborate with National Grid emergency representatives to identify areas served by plastic pipes and cast iron mains.

If victims are involved

If you must assist a victim or downed responder who is in danger inside a manhole or vault, **do not enter until National Grid has confirmed that all underground electrical equipment has been de-energized.** Wear full PPE and SCBA, and follow your department's safety procedures for confined space entry and rescue.

Test the atmosphere

Electric cable insulation and other utility equipment that burns may release highly reactive, toxic and combustible gases, including elevated concentrations of carbon monoxide. These gases may travel through ducts to structures and other subsurface vaults. Monitor the atmosphere around manholes, and take these precautions:

- If you detect combustible gas at flammable concentrations near a manhole, keep fire personnel and vehicles away, eliminate spark hazards, reroute traffic and evacuate the area.
- Do not open vaults or remove manhole covers, as this could introduce oxygen and bring a flammable atmosphere into the explosive range.
- Never park over or near a manhole cover. An explosion in a manhole can propel the cover into the air with great force.