

# SAFETY MATTERS



Safety Matters is intended to promote discussions of safety issues among underground construction professionals. You should always read and understand the operator's manual before operating any equipment. For additional information, please e-mail [safety@ditchwitch.com](mailto:safety@ditchwitch.com).

## TOPIC:

### Buried Hazards—PART 2: RESPONSE

#### POTENTIAL HAZARDS

- Electrocution
- Explosion
- Property damage
- Emergency communication hindered
- Burns
- Blindness

#### PRECAUTIONS

- Look for signs a gas line has been hit, which can include:
  - Rotten egg smell
  - Dirt, debris and/or gas escaping excavation
  - Fluid pit bubbling
  - Engine speeds up
- If a gas line is hit, do the following depending on the situation:
  - Immediately shut the machine off and remove any sources of ignition, IF it can be done safely and quickly.
  - Leave the area as quickly as possible and go upwind of the gas leak and contact the gas company and/or 911.
  - Warn others in the area and in buildings nearby of a possible gas leak and keep traffic diverted from area.
- Look for signs of an electric strike, which can include:
  - power outage
  - alarm/strobe on machine
  - smoke
  - explosion
  - popping noises
  - arcing electricity
- If an electric line is hit and you are on a machine, take the following steps:
  - Stay on the equipment. (If it is imperative that you leave the machine, jump off the machine so that you are no longer in contact and try to land having both feet hit the ground close together and then follow the directions below for "off the machine.")
  - If still on machine, attempt to break contact with the electric line by moving cutting device away from contact point and drive away. If drilling, reset electrical strike device and do not touch drill rod.
  - If in doubt, assume that you are still in contact with electricity.

- Keep everyone away from area and machine.
- Contact the utility provider or 911.
- If an electric line is hit and you are off of the machine, take the following steps:
  - LEAVE AREA. The ground surface may be electrified, so take small shuffle steps with feet close together to reduce the hazard of being shocked from one foot to the other.
  - Contact utility company to shut off power.
  - DO NOT touch equipment or anything that may be connected to or touching equipment.
- Be prepared with an emergency plan in case of a utility strike for each type of hazard and location.
- Know the phone numbers to contact local utilities and/or call 911.
- Anytime a utility is struck, do not return to jobsite or allow anyone into area until given permission by utility company.
- If a fiber optic line is hit, contact the provider immediately. Do not look into the ends of the cut line.

#### INFORMATION/FACTS

- A cell phone can be an ignition source for leaking gas. Go upwind of leaking gas before using a cell phone.
- Gas may travel through the ground into nearby buildings. Frozen or snow-covered ground can prevent gas from escaping the ground surface.
- The ground can become electrified in the event of an electric line strike. The voltage will be higher closer to the broken line and machine and will decrease farther away from the strike. Therefore, when you walk away from the strike, you are creating "step potential" from one foot to the other. This will allow current to flow through your body. Small shuffle steps will minimize the step potential.
- Electricity follows all paths to ground, not just the path of least resistance.
- Pipes, hoses and cables will conduct electricity back to all equipment. If other equipment is attached to the machine that struck an electric line, that equipment will also be electrified.
- Low voltage current can injure or kill. Many work-related electrocutions result from contact with less than 440 volts.
- Fiber optic lines carry emergency communication. A cut line can have far-reaching consequences for emergency services.
- Looking into a cut fiber optic line can result in blindness.

**DON'T LEARN SAFETY  
BY ACCIDENT**

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