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Waterloo Vol Fire Department Standard Operating Guidelines

Oxygen-Limited Silo Fires

Purpose: The purpose of this standard operating guideline is to properly and safely extinguish oxygen-limited silo fires and to prevent any injury or death to all first responders.

Emergency Response: An engine, the rescue and depending on the location of the silo, the tanker and additional engine may be requested per the personnel in charge. Additional Resources may be requested if needed (ie: aerial apparatus).

Scene Size Up: Is always required to:

- Determine the location of the silo fire
- Determine what type of the (ie: oxygen-limited silo vs conventional)
- Determine if there are any exposure hazards
- Determine what materials may be involved
- What and if any other resources may be required.

Firefighting Operations: All firefighters who are actively engaged in fire suppression shall wear complete personal protective gear including the usage of an SCBA.

- Water and Foam **SHOULD NOT** be directed onto the fire through the top hatches, since this may allow oxygen to enter the silo and cause the suspension of explosive dust.
- If roof hatches are open. **NO** attempts should be made to close them if there is no smoke or steam coming from the hatch or if the silo is vibrating.
- If all hatches are closed. Leave them closed. **DO NOT OPEN!**
- Lockout and tag out the electrical service to the silo.
- If extinguishment is to be performed use large quantities of carbon dioxide or liquid nitrogen **SHOULD** be injected into the silo to extinguish the fire.
- The roof hatch should be closed if the silo is quiet and there has been **NO** smoke or steam coming from the hatch for several hours.