

Egg Harbor Fire Department and First Responders Standard Operating Guidelines

SUBJECT: SILO and GRANARY RESCUE OPERATIONS

SOG 825

PURPOSE: The purpose of this Standard Operating Guideline is to provide a guide for conducting silo/granary rescue operations.

SCOPE: This policy shall apply to all members of the Egg Harbor Fire Department.

INCIDENT RESPONSE:

1. The standard response to any silo/granary emergency shall be a minimum of Ladder 21 and Engine 6.
2. An ambulance shall be dispatched to all silo/granary emergencies.

PROCEDURE:

A. Upon arrival:

1. Give the exact location of the incident if different from the one given by dispatch and a complete size-up report.
2. Determine any rescue problems involved and request additional equipment/manpower that may be necessary.
3. The Incident Commander shall conduct a risk assessment of:
 - a. The developing and potential risk.
 - b. Hazard identification.
 - c. Deciding upon a safe system of work as far as is reasonably practicable before personnel are committed.

B. Safe System Of Work

1. Unloaders, conveyors and/or feeders shall be stopped, isolated and locked-out (**SOG 215**). Particular attention should be given to the power supplies of automatic self-actuating control devices.
2. Structure shall be checked with the four gas detector before entry into the structure. There shall be a detector with the entry team at all times while in the structure. Personnel shall don SCBAs.
3. Increased ventilation will have an effect on the presence of any flammable, harmful or suffocating gases or dusts inside the silo and may or may not improve the conditions within the silo. The prospect of improved conditions needs to be weighed against the possibility of creating greater risk from the movement of dust or greater volatility of flammable gases.

4. Constant watch should be kept on any contents, which are lodged up against the silo walls. These may be dislodged by vibration, caused by internal or external movements or by heating or wetting, which may alter their behavioral characteristics or cause them to release or give off vapor or dust which may be toxic or explosive.
5. It is essential that ropes and harness be used to protect each person entering the silo. Ropes should be attached to fixed anchorage points and care must be taken to avoid sharp objects or stress to the rope. The harness of the rescuer should be checked for proper fit and security of fastening before entry into the silo. When possible, ropes should be routed to avoid clutter near the entry point, vertically above the working areas so as to minimize the distance that a rescuer might slip or fall.
6. When a harness is worn, the rescuer shall have received training in its use and be satisfied of its condition and fit before entry into the silo.
7. The area at the top of the silo should be illuminated before any person is allowed to enter the silo. Lighting should be augmented where necessary with hand lamps or electrically protected portable lights, while being mindful of their potential to act as an ignition source.
8. A rescue rope or harness must be securely attached to each person entering the silo. The use of ropes applies for all incidents involving silos or containers of a similar nature irrespective of whether it is anticipated that the rescuer is likely to be in the silo for a short period. The rope must have its other end secured to a suitable anchor point outside the silo.
9. It is essential that the Incident Commander ensures that all ropes employed under such circumstances are under the effective control and supervision of a competent person for the full duration of the incident. In the event of a hand-over of control, effective briefing is a fundamental requirement.
10. The use of a harness or stokes basket may be particularly beneficial if it is necessary to lift a casualty from the silo.
11. It is important that personnel are adequately trained in confined space entry techniques which includes guidance on the procedures for removal and re-donning of breathing apparatus and the use of ropes.

12. Entry into a Silo/Granary while attending an incident involving persons collapsed or trapped within a silo. Some of the ideal safety procedures may have to be adjusted following a dynamic risk assessment. However, it is essential that Incident Commanders of such situations adopt the following safe practices:
- a. No firefighter or rescuer is to enter the silo/granary unless wearing and operating a breathing apparatus set which has been donned in fresh air.
 - b. No firefighter or rescuer is to enter the silo/granary unless protected by ropes.
 - c. Breathing apparatus shall be used when entering a silo/granary. The entry control officer should be mindful of the type of rescue being attempted and the effect this will have on duration times and the amount of air needed.
 - d. It is likely that access to the interior of the silo/granary will be difficult and possibly only through a small opening at a high level. The officer-in-charge should consider this when setting up the rope system to allow a raising system to be employed. The attendance of an aerial ladder may be useful depending on circumstances. At no time should the equipment or operator be redeployed whilst personnel are in the silo.
 - e. When a rope rescue team is requested, it will utilize its specialized equipment to carry out the rescue. Care should be taken by them to observe the general advice given in this guidance.
 - f. Resuscitation equipment should be immediately available.