

Appendix I

Cleanout Operations

Clean all concrete placing pipelines using one or more of the following procedures:

1. Suction. Insert a soft, sponge rubber ball into the end hose. Use the pump to suck the concrete and ball back into the hopper.

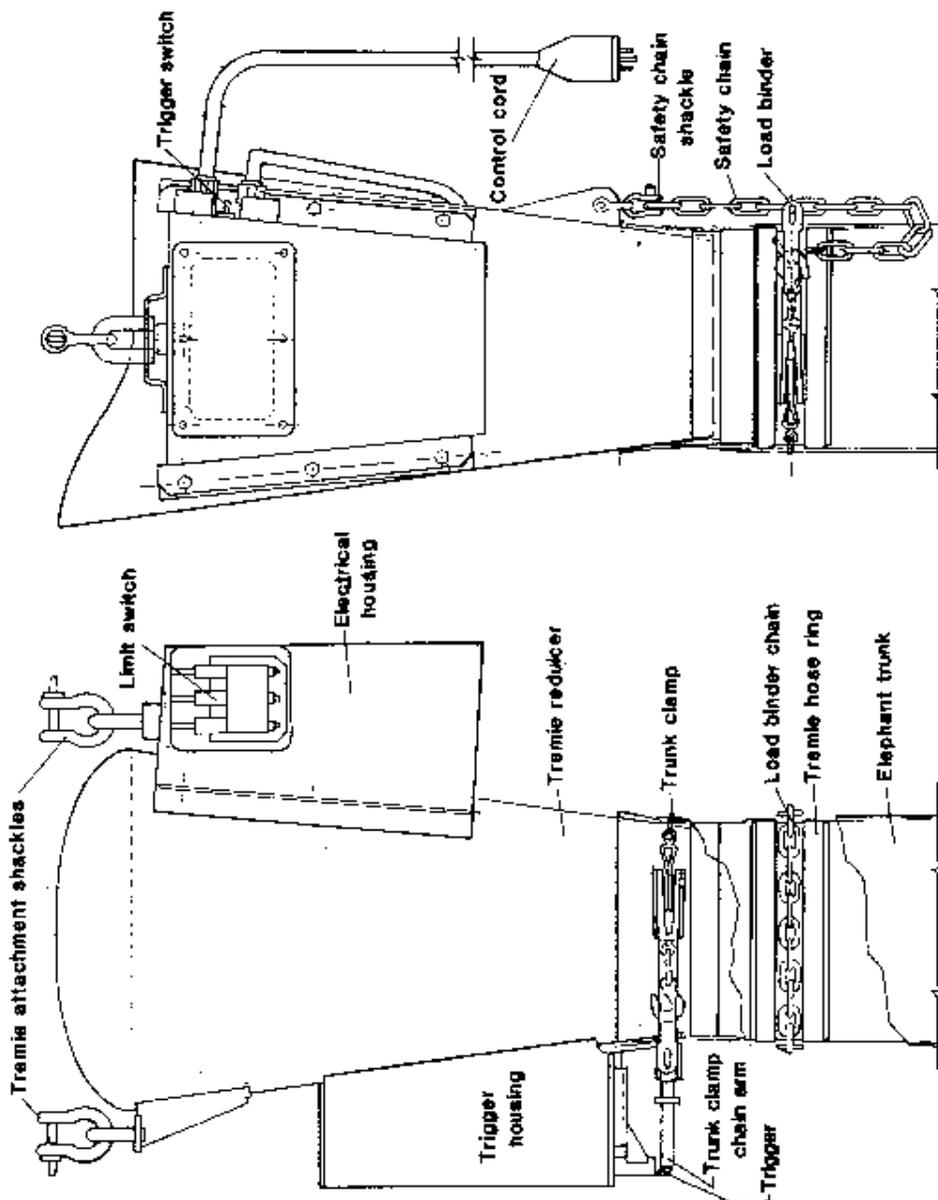
2. Water Pressure Procedure. Attach a specialized pipe cleaning head to the pump side of the pipeline. Make a paper plug from wet, double-folded, close-furled empty cement bags; place it in the head, followed by a sponge rubber ball; and arrange it so the bags contact the concrete. Apply water pressure to the ball through a head connection.

If the concrete and water are to be wasted at the discharge end, leave the bends and end hoses in place. If the water is to be retained in the pipe and returned to the pump, remove the elbows and end hoses and attach a catch basket to the end of the pipe. Arrange the catch basket so the plug and ball remain in the end of the pipe and seal in the water. Then, use air or water pressure to force the water back through the pipe to the pump.

3. Compressed Air Procedure. This procedure for cleaning pipelines is very hazardous and requires exact methods and special equipment to ensure safety of personnel. Only use this procedure with the approval of the Contracting Officer's Representative or office head and in accordance with the following, or equivalent, safe methods:

- a. Have a trained employee supervise blowing out operations.
- b. Move all nonessential personnel to a safe location.
- c. Equip the pipeline inlet end with a blowing hood, complete with ball and plug.
- d. Remove bends and end hose from pipeline discharge end. Attach a catch basket to the pipeline discharge end. The catch basket must be correctly sized to allow the concrete to flow freely, while preventing the plug and ball from exiting the pipeline and breaking the hermetical seal that keeps the compressed air in the line.
- e. Slowly build up pressure in the pipe until the air gauge indicates movement of concrete, but never beyond 150 pounds per square inch. Constantly monitor the air pressure until the plug enters the catch basket.
- f. Relieve the air pressure to zero gage pressure through an air relief cock in the blowing head before working on the line or removing the catch basket and plug.

Caution: Exercise extreme care when cleaning vertical pipes with compressed air. High-pressure air pockets that cannot be relieved through the relief cock can be created in the line where the concrete column separates. Column separation occurs when the bottom of the line is disconnected before the blowing head is attached.



CAUTION: Elephant trunk must be freely suspended and must not rest on any surface at placement level.