



CINCLANTFLT SAFETY NOTE

FIRE

Brief: Calcium hypochlorite is a dangerous material and will explode when heated to 212 degrees fahrenheit. It will also cause combustion if in contact with certain common shipboard materials.

What Happened:

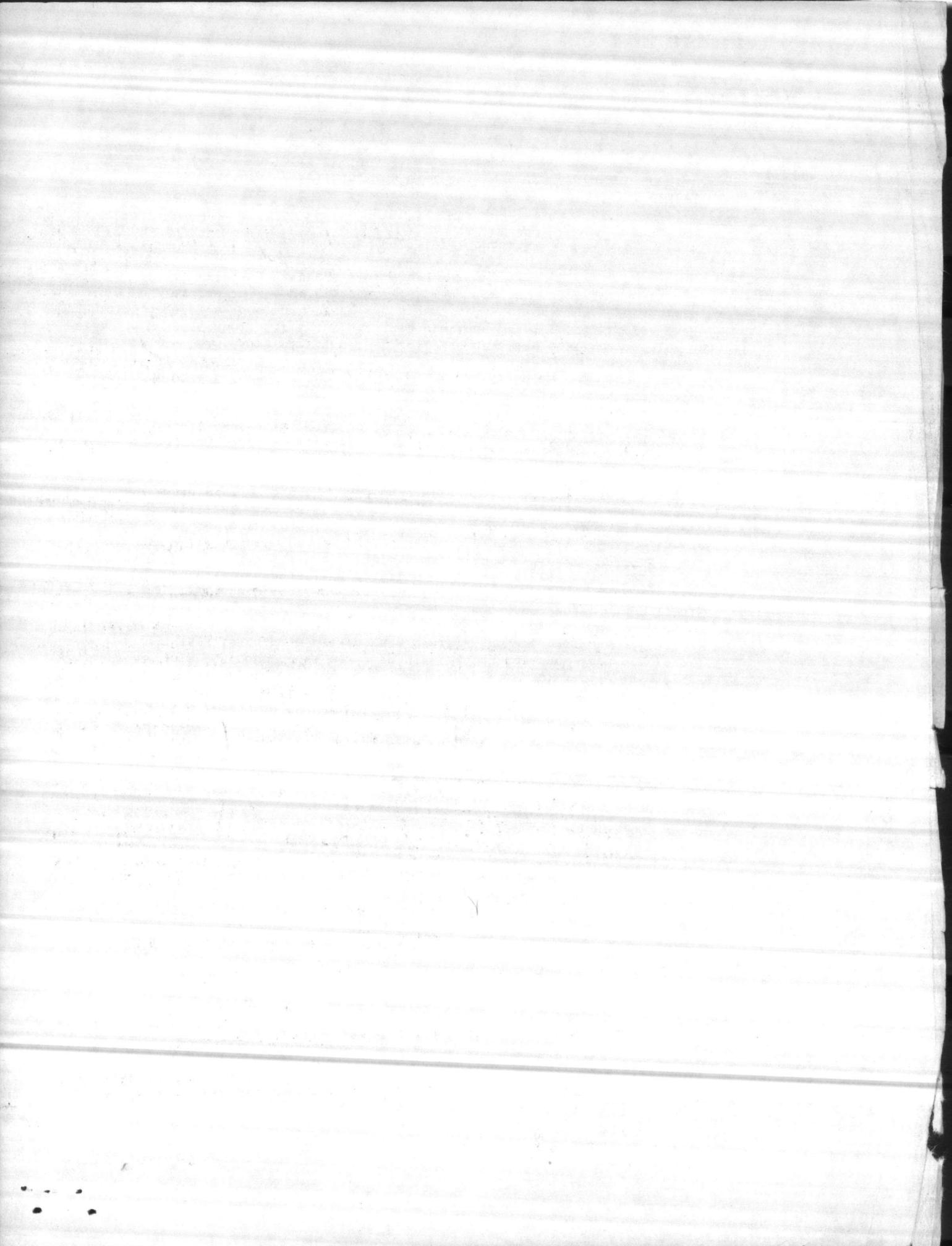
1. Just prior to an underway replenishment between a CVA and an AKS, a working party on the CVA, under the supervision of a first class petty officer was engaged in shifting paint and other flammable stores from an authorized storage space to an unauthorized space through a common trunk. During the evolution a quantity of red lead was spilled down the sides and at the bottom of the trunk. The working party made an effort to partially clean up the spilled paint; rags were spread over the wet paint on the deck. An accumulation of paint, thinner and an oil like substance was also observed on the deck from previous spills. Heavy fumes were present and ventilation was poor.
2. The UNREP between the AKS and the CVA commenced and a total of sixty-five tons of stores were transferred to the CVA. Among the stores received were large quantities of paint, grease and calcium hypochlorite. Some of the paint cans were damaged in handling as well as individual white plastic containers of calcium hypochlorite. During the movement of the nets containing the calcium hypochlorite, a white powder was seen spilling down on the lower levels of the trunk. This white powder had the odor of bleach. The nets were bumped against the sides of the trunk because the hoist was located off center in relationship to the trunk.
3. A short time after completion of the UNREP and while the working party was still engaged in striking stores below a fire accompanied by intense heat and smoke broke out at the base of the trunk, one hour later the fire was extinguished, eight men were dead, and sixteen others were injured.
4. The investigation that followed revealed that many of the supervisory personnel left their assigned stations prior to completing the placing of stores into the storerooms. Quantities of calcium hypochlorite had been stored in the paint locker for many months, prior to the fire and contrary to existing instructions.

Comments/Lessons Learned/Food for Thought:

1. Day to day housekeeping is an essential part of preventing fires. Some hazardous conditions result directly from a lack of orderliness. "A place for everything and everything in its place AND NOTHING ELSE." A few of the more obvious examples are:

- a. Leaking and rusted containers.

(OVER)



- b. Overcrowding of storerooms to the extent that strong odors cannot be traced to the source.
- c. Insufficient ventilation creating unsafe working conditions.
- d. Missing light guards.
- e. Paint spills that go unattended.
- f. Lack of systematic storage procedures.
- g. Automotive gasoline stored in various unauthorized spaces.

2. The shifting of inflammable materials from an authorized storage space to an unauthorized space may have been occasioned by the desire to maintain stock levels established by higher authority, or the ships' own desire to prevent "running short". Care must be exercised in ordering hazardous material in excess of available and approved storage space. (Attention is invited to para 2.a. and 2.b. (3) Annex F of CINCLANTFLT OPOD 1-YR).

3. Calcium hypochlorite cartons and individual containers therein, should have applied the following cautionary note in addition to all other regulatory requirements: CAUTION: Do not allow dry calcium hypochlorite to come in contact with acids, organic materials or oxidizable materials such as fuels, oils, grease, cellulose, pulp products, paint products, alcohols, disinfectants and wetting agents. Do not mix with anything except water. Keep cover tightly closed. Store in a cool dry place.

4. Instructions contained in NAVSHIPS Technical Manual Article 9300.10 are quoted as follows:

"9300.10 CALCIUM HYPOCHLORITE AND BLEACHING POWDER (Chlorinated Lime)

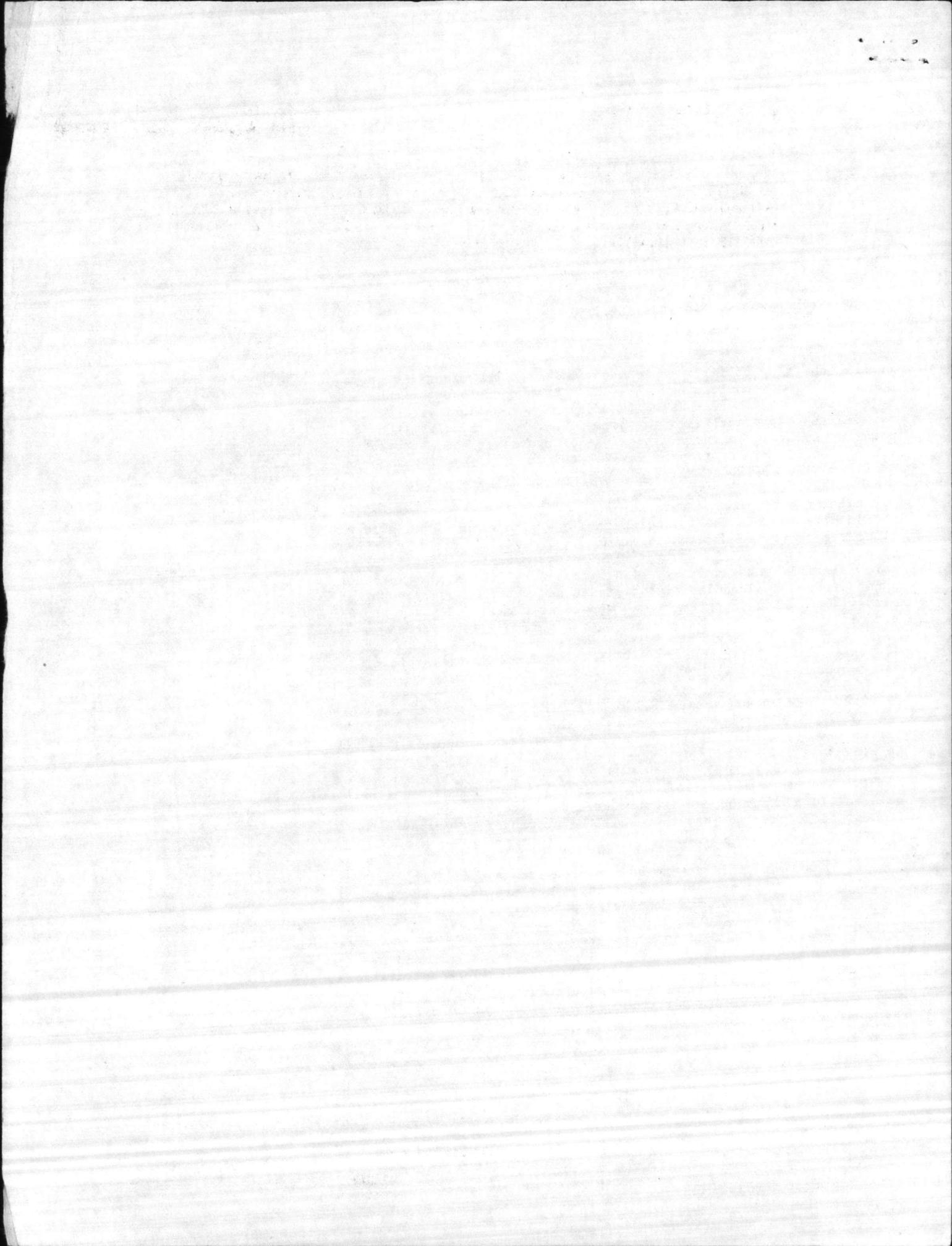
Calcium hypochlorite and bleaching powder (chlorinated lime) must be stowed as follows:

1. Stow in a clean, cool dry compartment or storeroom which is not adjacent to a magazine and is at a safe distance from any heat source. It must be located so that there will be no danger of exposure to moisture.

2. These materials are to be isolated from any flammable material or material which will support combustion. They are not to be stowed in the same compartment or storeroom with acids or other chemicals.

3. They may be stowed in a storeroom or other suitable space above the waterline, provided the conditions specified under 1. and 2. above are met. Weather deck stowage in watertight lockers is also considered satisfactory in this respect, provided that the other conditions specified above are met, and provided that the location is sheltered and protected from the direct rays of the sun.

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FOR OFFICIAL USE ONLY

Refer to:
CINCLANTFLTINST 5100.4 (series)

4. Periodic inspections must be made to ensure that all stowed containers of calcium hypochlorite or bleaching powder are tightly sealed and that exteriors of cans are free from corrosion. All defective containers must be removed from the storage and either consumed by immediate use or otherwise disposed of."

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