

CONOCO CHEMICALS  
ABERDEEN PLANT SAFETY AUDIT  
1977

AREA OF INSPECTION: Compound Department

DATE OF INSPECTION: June 3, 1977

DESCRIPTION OF PROBLEMS: Following pages 1 - 4

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COMPOUND DEPARTMENT SAFETY AUDIT

JUNE 3, 1977

Plasticizer Tank Farm Area

1. Install Stewart R. Brown type grounding clamps for use in the loading and unloading areas and institute mandatory usage by procedure.
2. Water supply to safety shower and eyebath at the alcohol unloading area is inadequate. The supply volume to this unit can easily be increased by removing the short section of 1/2 inch line and replacing it with 3/4", thereby making the run all 3/4 inch.
3. Electrical supply conduit to the alcohol unloading pumps is not permanently secured to supporting steel. This has allowed the plastic coated seal-tite flexible conduit to contact the alcohol on the ground around the pumps. This has caused a softening of the seal-tite which may soon cause the pump wiring to short-out.
4. Label the alcohol unloading lines so as to indicate which tanks are fed by each line.
5. North outlet of an electrical junction box at the alcohol unloading area is open (install plug).
6. Install guardrails along the elevated concrete pad south of this tank farm to prevent falls along the east and north sides.
7. Remove or provide permanent start/stop station over trailer loading area on the plasticizer loading rack.
8. The pipe supports for the plasticizer loading line are inadequate. This lack of support has caused the north handrail to become severely bent.
9. Replace handpiece on outdoor service telephone extension 315.
10. The last station set on the southend of the plasticizer tank pipe rack has not been properly grounded. (The ground cable has come loose from its clamp.)
11. Several sections of pipe along the pipe rack appear to be improperly supported by rope rather than steel pipe hangers.
12. Condensate discharge from traced and insulated tanks and low level lines is not directed into any collection system or sewer. Condensate discharges directly into walkway. This is a burn hazard!
13. Many transfer pump coupling guards do not cover the coupling assemblies or their drive keys. These guards should be modified or relocated along the drive train so as to provide the proper coupling coverage.

14. Several oil material slicks were noted in low points along walkway areas that are slipping hazards. Falls in this area will most probably result in a serious injury due to the layout of alcohol and plasticizer transfer piping across the walkways.
15. Install cover on open pit at the southwest corner of the alcohol tank farm.
16. Repair piping and valve leaks in the caustic recirculation and transfer system.
17. Weather protection doors on the front of the outdoor switchgear cubicles were found open. These doors must be kept closed at all times.

Line I Area

1. ESAR Item - Palletized material is being stored too close to the south wall. Storage area limit lines have been painted along this wall to allow the electricians ample workspace to safely work on the switchgear located in this area.
2. Water leaking from valve located on wall north of Line I mill has caused a large puddle to accumulate on the floor. This is a slipping hazard. Valve should be repaired prior to startup of this line.
3. Large plasticizer slick on floor below the plasticizer hold tanks. If the leaks in this system cannot be repaired, the area below the tanks should be diked with a concrete or angle iron curb. This area should then be partially filled with a commercial adsorbent to eliminate the oil slicks.
4. Air conditioner condensate is being discharged from the compound office unit directly onto the smooth concrete surface of the dock. A very shallow trench or several narrow grooves should be cut into this surface to eliminate the slipping hazard.

Dry Blend Area

1. Midrail at Welex tops, on east side, needs to be rewelded.
2. Ladder to scale platform should be relocated away from the product transfer station to provide for unrestricted ladder access.
3. Florescent light fixture above scale tanks does not allow for minimum headroom clearance. This fixture should be relocated or guarded to prevent an employee from breaking the tubes as he stands up.
4. Remove existing 2 X 10 plank walkway and replace with properly guarded walkway so as to provide fall protection for any employee to gain access to top of northern section of the dry blend control room.
5. Several sections of grating on stairway landings going from the Dry Blend basement to hold tank level are held in place with aligator clips. These sections should be bolted or welded.

Dry Blend Area (Cont.)

6. Standing water on floor of Dry Blend basement is a potential electrocution hazard. If the present operating conditions do not allow for the proper removal of wash-down and cooling water, a sump system should be installed for the proper removal of water accumulations.
7. Coupling guards do not properly cover coupling assemblies in this area. The guards should be changed or modified so as to provide for the necessary coverage.
8. C-Blender cover needs to be regasketed to minimize or eliminate product leakage.
9. Remove obsolete (rope hung) piping and electrical service from southeast corner of basement.
10. Motor side of D-Blender drive guard has been worn away and should be repaired.
11. Roof exhaust fans above hold tanks need new belts. (Existing belts are worn well below the sheave.)
12. Hold Tank Level - Hole in floor at east wall needs to be covered.

Line III Area

1. Catwalks over entire roof are in need of repair.
2. Roof Skylights
  - a) "Danger - Will Not Support Weight of Man" signs should be installed on all skylights.
  - b) Replace broken skylight on east side of roof near the center.
3. Line III weight tank platform grating is held in place by aligator clips. Grating should be bolted or welded to support steel.
4. Replace broken window on north wall of weight tank penthouse.
5. Repair drive belt guard on transfer blower on Line III roof.
6. Install signs on Line III and plasticizer building elevator doors - "Notice - Freight Elevator Only - Not for Passengers".
7. Cover hole in floor at northwest corner of Line III blenders.
8. Product strip pull rollers require nip point guards. Should be done with expanded metal. Product strip should feed through slot surrounded by 3/8" angle iron.
9. Install belt drive guard on #5 dicer.
10. Reinstall cover over sump pit east outside of Line III.

Roof and Silo Area

1. Resin transfer lines on roof north of Line II substation are located too close to substation switchgear. A high priority must be placed on removing this substation from service by relocating feeder supplies to transformer north of east Warehouse.
2. Install cover plate on trolley mounted star valve variable-speed drive. Existing chain drive guard on this unit should fully enclose drive related equipment.
3. Belt driven transfer blowers should have guard that fully encloses drive belts and keys.

General Comments

1. Material storage and housekeeping in Line III and Dry Blend is still not as good as it could be. (New ventilation, vacuum system and Master Batch systems should lead to notable improvement in these areas.)
2. Numerous discarded maintenance and operations articles were noted on the ground in the Plasticizer Tank Farm areas.
3. Several dirty half-facepiece respirators were found throughout the second level areas of Line III and Dry Blend. Used respirators must be turned in for cleaning.
4. Wood planks under the compound silos should be examined for rot and physical damage, with planks being replaced on a need basis.
5. Automatic Bagging Machine will be the subject of a separate audit. (To be jointly done by Operations, Maintenance and Safety.)