

Interoffice Communication

To : Distribution
From : A. H. Sather
Date : January 10, 1977
Subject : MEETING--WEDNESDAY, JANUARY 12, 1977

On Wednesday at 9:00 AM, there will be a brief meeting in #1 Training room for the purpose of preparing you for a work sampling tour of the plant. This will be the first of a series of safe work sampling tours that will be used to evaluate the implementation of our in-plant safety programs. In addition, your group will be asked to spot check work productivity in all plant areas. Please plan to spend 1½ to 2 hours on this.

Thanks.


Al Sather

tp

cc: GGD, RWS, RBM, DEM, GDB, JLC, ELK, KWC, SJV
Attachments

CONOCO CHEMICALS ABERDEEN PLANT
SAFETY AND HEALTH MANUAL

SUBJECT:

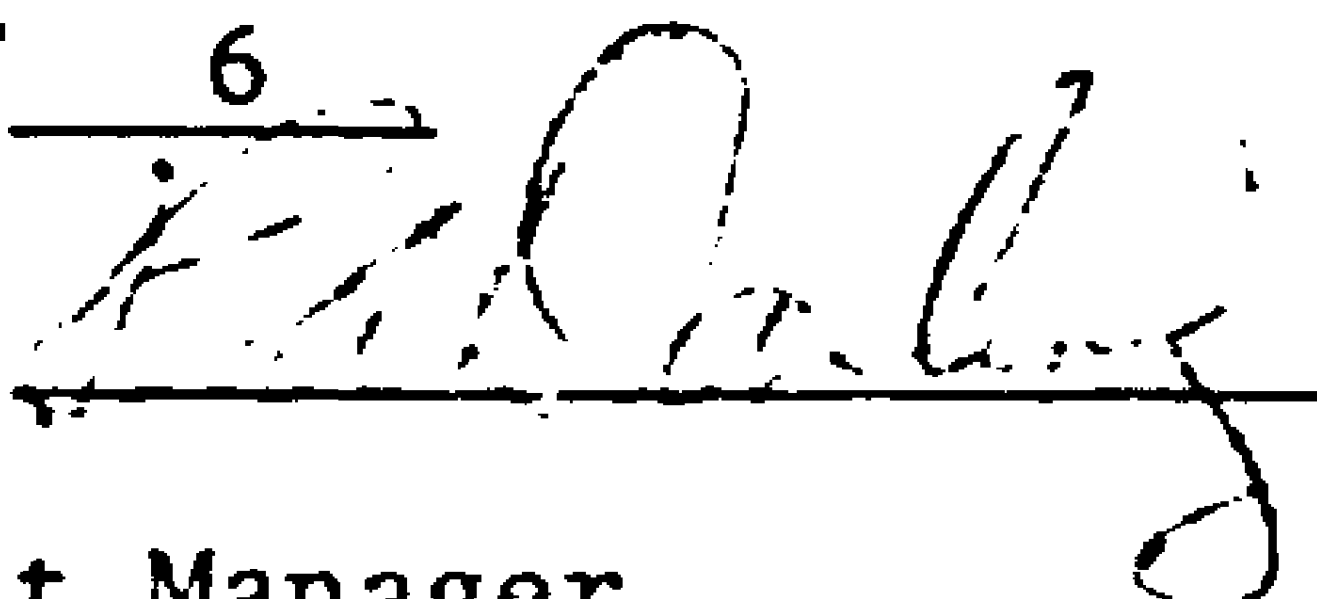
SAFETY CONTROL PERMIT SYSTEM

NO: II-D-1

EFFECTIVE DATE: 1/31/76

SUPERSEDES: 6/10/75

PAGE 1 OF 6

APPROVED BY: 

TITLE: Plant Manager

REFERENCE:

I. GENERAL

A. The Permit System's Purpose is to:

1. Prevent personnel injury.
2. Prevent physical damage to equipment.
3. Fix responsibility for maintaining a safe work area.
4. Keep all people informed on what is going on.

B. Responsibilities:

1. Operating Departments have overall responsibility for safety in their areas, making their equipment safe for mechanical work, and issuing a work permit.
2. Mechanics are responsible for obtaining a permit and following all instructions.
3. The Safety Inspector is responsible for providing assistance as required or requested.
4. Project Engineers and Mechanical Department are responsible for having their contractors know and abide by this procedure.

C. All Permits Are Issued and Signed By The First-Line Supervisor Whose Area Or Equipment Is Involved.

D. Permits Written During a Shift are Good Only to 15:30 on the Day Issued.

1. Permits written on 2nd. and 3rd. shifts are good only till the end of the shift.
2. Permits written for Contractors may be issued to expire up to 20:00.
3. A permit may be extended to the end of the next shift if resigned at the end of the shift by the incoming Supervisor.
4. It is the Lead Mechanic's responsibility to have the permit extended.

E. The "Safety Control Permit" Form will be used for all Work Permits. The Pink Permit Copy is given to the Lead Mechanic who will hang it

in the Job's Area Until the Job is Finished.

1. The Yellow permit copy is retained by the issuing department and posted in the operating area's control room, or the Warehouse/Yard office.
2. When the job is complete, the Lead Mechanic will take the pink copy to the Control Room/Office. When the pink copy is returned, the yellow copy is taken down.

F. Any Deviation from these Procedures Requires Operating Department Head and Safety Director Approval.

Special procedures for major turnarounds and new construction may be established with Operating Department Head and Safety Director approval.

II. TYPES OF PERMITS

- A. Work Permits
- B. Hot Work Permits
- C. Entry Permits

III. WORK PERMITS

A. When -

1. Any time process, loading or utility equipment is opened.
2. New work; lubrication; opening electrical equipment for resetting and lockout; and work that does not require opening existing facilities does not require a Work Permit.

B. Where - Anywhere in the plant, except the shop.

C. By Whom - Everyone, except an operator, as part of his regular duties who works on equipment in his own sections. However, he is expected to make the equipment safe to work on just as though a written permit were issued.

D. Required Signatures

1. First line Supervisor or equivalent of affected area or equipment.
2. Mechanic (or Contractor) in charge of job.

E. Work Permits may be Prewritten, but Must be Signed and Given to the Mechanic at the Job Site, Along with Instructions and Special Precautions.

F. Special Precautions

1. The person issuing the permit should assume the equipment to be opened contains hot, corrosive, toxic, and flammable material, under pressure. Until proven otherwise, the permit should not be issued. Drains used to check the system should be rodged to make certain they are open.
2. Valves isolating equipment from hazardous (hot, corrosive, flammable) material will have "Do Not Operate" tags attached.

Only the person who was issued the permit (or his relief) may remove the tag.

3. The "Lockout Procedure" (see Section III of "Equipment Entry Procedure", #II-D-2) must be followed on all work involving work on or associated with electrically driven equipment.

IV. HOT WORK PERMITS

A. When and Where Required

1. Vinyl Department and VCM Tank Farm - Required when following ignition sources are used:
 - a. Welding
 - b. Brazing
 - c. Torch or arc cutting
 - d. Soldering
 - e. Any non-explosion or non-intrinsically safe proof electrical device
 - f. Any electric power tool
 - g. Explosive cartridge powered tool
 - h. Any internal combustion engine used within 50 feet of process and diked areas or within confined areas.
 - (1) Fork lift trucks do not require permits unless operated within Vinyl Reactor or tank farm areas.
 - (2) Railroad and main road traffic do not require permits.
 - i. Any power operated chipping or cutting tool.
 - j. Sandblasting
 - k. Cleaning or purging of open process vessels or tanks by steam.
2. Shop
Process equipment that has been in service and is brought to a shop for hot work repairs requires a permit. Once the permit is issued, it is valid for as long as the equipment stays in the shop.
3. All Other Plant Areas - Required when following ignition sources are used:
 - a. Welding
 - b. Brazing
 - c. Torch or arc cutting
 - d. Soldering

B. By Whom - Everyone

C. Hot Work - Shall not be done in an operating process area when it is practical to do the job cold or take it to the shop.

D. Signatures on Permit are Required by -

1. First-line Supervisor or equivalent, of affected area or equipment.
2. Mechanic (or Contractor) in charge of job.
3. In Vinyl Reactor and Vinyl Dryer Department additional signature by the Operations Supervisor is required.

E. Fire Permits - Will not be prewritten except during major shut

down when all area process equipment is idle.

F. Special Precautions

1. All flammable material in the work site area must be removed or protected. The work site area is considered a circle whose radius is the distance hot sparks can travel, plus ten feet. Often the work site area can be reduced by asbestos trap or wind screens.
 - a. Ordinary combustibles, such as trash, wood or paper will be removed.
 - b. Combustible liquids on the ground, or in open containers, will be removed.
2. Before hot work begins, the job area will be surveyed for VCM or other combustible vapor and all such sources eliminated.
3. All sewer drains within the work site area will be covered or water flooded. They will be uncovered right after the job is completed.
4. If hot work is to be done in an enclosed system, such as a vessel, tank, or piping, the enclosed space must be gas freed and steps taken to be sure it remains gas freed.
 - a. The space must be isolated from all connecting vessels or piping by blinds or physical disconnection.
 - (1) The blinds must be installed on the flange located closest to the enclosed space.
 - (2) The blinds must have the same pressure rating as the flange.
 - (3) Operations will see that all blinds are removed before start-up.
 - b. The space will be water washed and/or steamed until the combustible gas is removed (zero, as measured by combustible gas analyzer).
 - (1) Check for anything that could trap or retain combustible material, such as: scale, sludge, lining, double walls, structural members or piping, or pools.
 - (2) Steam hoses must be bonded or grounded by:
 - (a) Direct connection of the nozzle to metal piping.
 - (b) Bonding wire attached between the nozzle and ground.
 - (3) When using a steam hose to purge or clean an open vessel, any internal metallic object that is electrically insulated and subjected to steam impingement or condensation, must be: removed, bonded, or grounded.
 - (4) If the space is to be inerted or flooded, the job will be considered a procedure deviation and therefore the Operating Department Head and Safety Director approvals are required.
 - (5) A Fire Guard is required whenever hot work is done in an operating process area. The Fire Guard duties are:

- a. Continuously wet down the work area to quench welding cutting sparks.
 - b. Continuous monitoring for combustible gas intrusion, using an explosimeter.
 - c. Be alert for intrusion of liquid into the work area.
 - d. Warn any other person in the area who appears about to do something that could permit combustible gas or liquid to come into the area.
 - e. Use fire equipment on hand to extinguish any small fire that may start.
 - f. The Fire Guard may aid the mechanic by such as handling tools as long as it does not interfere with his specific Fire Guard duties.
 - g. The Fire Guard must know how to operate 30# dry powder extinguishers and monitor nozzles.
 - h. Follow any specific instructions.
6. All hot work anywhere requires a 30# dry powder fire extinguisher within fifteen (15) feet.
7. To prevent stray electric current, arc welder ground return lines will be attached directly to equipment being welded.

G. Sandblasting

Fire permits written for sandblasting must include provisions for grounding the hose nozzle to the work surface.

V. ENTRY PERMITS

Note: All entries must be in accordance with "Equipment Entry Procedure", #II-D-2.

- A. When - Any time an enclosed space is entered or partially entered by personnel.
- B. Where - Anywhere in the plant.
- C. By Whom - Everyone.
- D. Signature on Permits are Required by:

1. First-line supervisor, or equivalent, of affected equipment or space.

During all shifts on weekends:

- a. The Dryer Shift Supervisor signs permits for hopper cars going into resin service.
- b. The Compound Shift Supervisor signs permits for hopper cars going into compound service.

2. Mechanic (Or Contractor) in charge of job.

E. Special Safety Rules Apply When Entering VCM Equipment:

See Section XII, "VCM Safety Rules", of "Employee Conduct and Safety Rules" booklet.

F. Entry Permits Will Not be Prewritten:

They will be written and given to the mechanic (or Contractor) AB.0001073771

on the job site.

G. Special Precautions

1. As stated above, all entries must be in accordance with "Equipment Entry Procedure", #II-D-2.
2. The entered area must be isolated by blinding or disconnecting all lines leading to it.
 - a. The blinds must have at least the same pressure rating as the flange.
 - b. The blinds must be installed on the flange located closest to the entered area.
 - c. Operations will double check to see that all blinds are in place. Operations will see that all blinds are removed before startup. Appropriate checklists (see "Equipment Entry Procedure", #II-D-2) will be used.
3. All corrosive material such as acid, caustic, sludge, will be removed before entry. Special protective clothing will be worn.
4. The area will be tested for breathable atmosphere.
 - a. The oxygen content will be at least 20% as tested by O₂ analyzer.
 - b. Toxic or corrosive vapors will be removed.
 - c. Each day after the first permit is issued, the first-line supervisor in charge of the equipment or space will check the entered area for oxygen and combustibles prior to issuing an entry permit for the equipment or space to be entered.
5. Where welding or other work may release harmful vapors continuous ventilation is to be provided. Multiple openings will be provided in the area when possible and air movers will be installed.
6. A vessel guard will be provided on each Entry Permit job. The guard duties are:
 - a. Maintain continuous visual contact with the man (or men) in the entered area.
 - b. In the event something happens to the man inside, the guard's job is to call for help. All vessel guards at remote locations (such as on towers) will have a radio or audible alarm device.
 - c. If the man inside loses consciousness, the guard will not enter until help arrives and has pressure demand respirator with egress cylinder or self contained breathing apparatus. All vessel guards will know how to use this equipment.
 - d. The vessel guard may assist the man inside as long as it does not remove him from visual contact and does not require him to enter.
7. Acetylene and Oxygen cylinders and electrical transformers (for low-voltage equipment) will not be taken into the entered area. Each time a mechanic leaves the entered area, he will remove cutting and welding torches and hoses.