

CHLORINATED METHANES
SAFE JOB PROCEDURE

Department: CMP

Title: R-1300 CONTROLLED SHUTDOWN FOR MAINTENANCE

Scope: TO PROVIDE THE NECESSARY INFORMATION NEEDED TO ASSIST THE OPERATOR WITH THE SAFE AND PROPER METHOD TO PREPARE R-1300 FOR MAINTAINANCE

Major Hazard(s): METHYL CHLORIDE, METHYLENE CHLORIDE, CHLORINE, CHLORINATED ORGANICS

Safety Equipment Required: BLOCK MINIMUM REQUIREMENTS

NOTE: ALL ITEMS ASSOCIATED WITH THE QUENCH SYSTEM WILL HAVE TO BE MANUALLY MANIPULATED SINCE THE QUENCH SYSTEM WILL STILL BE IN THE RUN STEP ON THE MOD.

1. Prepare to shutdown R-1300

- A. Call the Chlorine plant to let them know we will be shutting down R1300. Give them an estimated time limit we will be down.
- B. Check the amount of M1 we are using and determine if we will be able to handle the extra product forward. We may have to reduce R-250 rates.
- C. If we are running liquid injection, shut it off. Monitor the reflux drum level and the M1/M2 flow to the reactor. Let it stabilize before moving on.
- D. Move R-1300 to step 109 to begin reducing R-1300 to minimum feed rates. (SEE R-1300 SHUTDOWN PRO)

2. Ensure that the following automatically takes place when R-1300 is moved to step 109. (SEE R-1300 SHUTDOWN PRO)

- A. The M1 valve AO(112) begin ramping down to bring rates to a minimum load.
- B. M1/M2 recycle control valve will begin ramping down until shut. MONITOR D-1511 LEVEL TO ENSURE M1/M2 IS NOT RAMPING DOWN FASTER THAN D-1511 CAN HANDLE IT.
- C. The feed control valve to C-1500 should begin cutting C-1500 controlling D-1450 level. The controller will stop at a minimum flow setpoint.

If the level in D-1450 is dropping faster than C-1500 feed controller is reducing its rates, you can place C-1500 feed control valve on flow control by giving AK(825) a value.

3. Monitor the incoming HCL flow

- A. Reduce R-250 rates to maintain the incoming HCL flow at the rates it was running prior to shutting down.
- B. Monitor HCL purification recycle. The rates might not have to be reduced as much if we are recycling alot.

4. Shut down R-1300

- A. Ensure that D-1450, T-1500 & D-1525 levels are approx. 25-35%
- B. Once R-1300 has reached its minimum rates shut R-1300 down by placing it in step 110.
- C. Monitor the M1 header pressure, chlorine header pressure.
- D. Ensure that the Cl2 AOV's close and the N2 AOV opens. Also ensure that the N2 AOV closes after approx 1 min.

5. Ensure that the following automatically takes place in the distillation system when R-1300 is shutdown. (master distillation sequence)

- A. C-1500 overheads back to D-1450. DK(121) "FALSE"
- B. C-1510 overheads is going to T-1500
- C. C-1520 btms is rerouted to T-1500 DK(61) "FALSE"
- D. C-1530 btms is rerouted to T-1500 DK(72) "FALSE"
- E. C-1550 btms will be rerouted to D-1525 when D-1525 gets to a given low level setpoint.

OPERATOR OPTIONS.

- A. C-1540 bottoms to D-1525 by making DK(111) "FALSE"
- B. C-1550 bottoms to D-1525 by making DK(121) "FALSE"

5. Isolate R-1300 for maintenance.

- A. Place the quench system in step 204 from step 206.
- B. Isolate all feed streams:
- C. Block in the AIR to the following AOV's
 - a - Vapor organics from S-1300 AOV at R-1300
 - b - Chlorine to R-1300 AOV'S
 - c - N2 AOV'S
- D. Manually block in the steam to RE-1 reboilers (tarpot) and let the tarpot system just circulate.
 - * ENSURE THAT WE ARE NOT SENDING C1510/1520 REBOILERS TO THE TARPOT.
- E. Manually block in D-1320 to D-1 at the manual block valve upstream of the distillation tiepoints and also to T-1500.
- F. Manually block in E-1320 outlet 20" butterfly valve.
- G. Manually block in make-up feeds to D-1320:
 - a. D-1330 DRAIN
 - b. P-1555 A/B (T-1555 A/B)
 - c. P-1520 A/B (C-1520)

7. Drain D-1320

- A. Place D-1320 pump (P-1320) and D-1320 level control valve AO(213) in manual and pump the contents of D-1320 to E-1450. shut down the pumps.
- B. Hook up tubing from the low point on D-1320 back to E-1450 and pressure any residual liquid to E-1450 by placing the N2 AOV (DO-103) in manual and open it up (or by using a N2 hose).
- C. Manually block D-1320 to E-1450.

8. Depressure and clearing the system.

- A. Shutdown all fans (EC-1320's). DK(61) through dk(66)
- B. Hook up 3/4" tubing from E-1320 fans banks to a throx drop and depressure the system.
- C. After the system is depressured, pressure the system back up with nitrogen to 70 psig using DO(303/313) and again depressure to vent recovery/throx.
- D. Continue to pad and depad until the system is clear.
- E. Once clear of organics, put a N2 purge to atmosphere.??????????
- F. Tag the system out as needed

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R1300CSD.PRO

CHLORINATED METHANES
SAFE JOB PROCEDURE

Department: CMP

Job Title: MOD V FANS (prepare for maintenance)

Scope: To properly take down and get ready any of the MOD V operated fans For Maintenance.

Major Hazard(s): Heat, electrical, column pressure.

Safety Equipment Required: Minimum block standards. Fuses have to be pulled if the fan motor is to be worked on, or if entering the fan shroud/housing area.

NOTE: Do the following if the "FAN" is to be taken out of service.

1. Check out the fan and determine how many tags are necessary to tag the fan out properly.
2. MOD V operated fans require a DK function to disable the fan. Initiate this (DK) function: (A LIST OF THE FANS AND THEIR DK VALUES IS AT THE END OF THIS PROCEDURE OR YOU CAN CHECK THE DOWTRAN CODE BY CALLING UP THE (DO) ITSELF).
3. The board operator should then operate the disconnect switch on the front of the mod can and tag.
4. Once the fan has been disabled by the board operator, the outside operator can place the field switch in the "OFF" position.
5. Rack out the " VARIABLE SPEED DRIVE " in the motor control center first. Then rack out the " MAIN SWITCH GEAR ".
6. Pull the fuses, if we have to work on the motor or enter the fan shroud/housing area.
7. The field switch should always be checked by two (2) different people to make sure the fan won't run. One of these people must be the person performing job or their foreman and the other must be the operator who is issuing the permit.

The operator will have to check the field switch by placing it in the " HAND " position.
8. If everything checks out O.K., the maintenance personnel can begin working on the fan.
9. Once finished, the outside operator should rack in the " MAIN SWITCH GEAR " first and then the " VARIABLE SPEED DRIVE GEAR ".
10. Place the field switch in the " AUTO " position.

11. The board operator can then place the disconnect switch to its proper run condition and if he wants the fan to run he can initiate a (DK) function.

The following is a list of each system which has variable speed drive fans or MOD V operated fans.

E-1320 SYSTEM	ME-1320 A	DO(202)	DK(61)
	ME-1320 B	DO(212)	DK(62)
	ME-1320 C	DO(222)	DK(63)
	ME-1320 D	DO(232)	DK(64)
	ME-1320 E	DO(203)	DK(65)
	ME-1320 F	DO(213)	DK(66)
E-1420 SYSTEM	ME-1420 A	DO(201)	DK(54)
	ME-1420 B	DO(211)	DK(55)
	ME-1420 C	DO(221)	DK(56)
	ME-1420 D	DO(231)	DK(57)
E-1510 SYSTEM	EC-1510 A	DO(106)	DK(6)
	EC-1510 B	DO(116)	DK(16)
	EC-1510 C	DO(126)	DK(26)
	EC-1510 D	DO(136)	DK(36)
	EC-1510 E	DO(107)	DK(7)
	EC-1510 F	DO(117)	DK(17)
E-1520 SYSTEM	EC-1520 A	DO(201)	DK(53)
	EC-1520 B	DO(211)	DK(59)
	EC-1520 C	DO(221)	DK(60)
	EC-1520 D	DO(231)	DK(66)
E-1525 SYSTEM	EC-1525 A	DO(230)	DK(73)
	EC-1525 B	DO(240)	DK(75)
C-1540 SYSTEM	EC-1540 A	DO(301)	DK(103)
	EC-1540 B	DO(311)	DK(109)
	EC-1540 C	DO(321)	DK(110)
	EC-1540 D	DO(331)	DK(116)
BOTTOMS FANS (E-1530/40/50)		DO(328)	DK(123)
		DO(338)	DK(125)
COOLING TOWER	FA-1020 A	DO(501)	DK(200)
	FA-1020 B	DO(511)	DK(202)

CHLORINATED METHANES
SAFE JOB PROCEDURE

Department: CMP

Job Title: EMERGENCY PROCEDURE IN THE EVENT OF A MOTHER BOARD FAILURE

Scope: General information on possible ways to determine which mother board has failed and corrective measures

WAYS TO DETERMINE WHICH MOTHER BOARD FAILED

1. DS LIGHT #7 indicates which computer is driving the graphics display and alarm scan. This DS light is lit all the time when the left computer is driving the graphic display and when the light is off the right computer is driving the graphic display. They will automatically swap this job backwards and forwards on a time basis.

Another check that can be done is open the door on the MODV can and on the inside you will see rows of DO CARDS with lights on them. In each row of cards the left row is for the left computer and the right row is for the right computer. All the lights should be on (may be dimly lit) if any of the lights are off or blinking then that computer is probably having problems.

By knowing the above information, if the system is acting up when the DS #7 light is on then it is likely the left computer (mother board) is the problem or if the system has problems with DS #7 light off it is likely the right computer is the problem.

2. If you can determine which computer is giving problems then that computer can be halted by using the switch below the computer and the other computer will continue to run the process. In the event the wrong computer was halted just turn the switch back on and halt the other one.

NOTE: If system is acting strange, the system can be shutdown and problems with the computer can be repaired and system restarted.

NOTE: If you halted a computer always contact the area engineer as soon as possible so he/she can notified the proper people to have it repaired or contact the MOD 5 hardware group directly. the mod hardware group is on call on a 24 hour basis.

NOTE: MOD 5 hardware group

phone #6248 after hours 295-6770

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MODMOTHER.PRO

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CHLORINATED METHANES
SAFE JOB PROCEDURE

Department: CMP

Title: Quench Start Up Procedure

Scope: To Provide The Operator With The Necessary Information Needed
To Assist The Operator With The Safe And Proper Method To Start-up
The D-1320 System

Major Hazard(s): Chemical Exposure, Hot Piping, Inert Atmosphere.

Safety Equipment Required: Minimum Block Standards.

* NOTE: REMEMBER THAT BOTH THE QUENCH SYSTEM AND R-1300 ARE TIED *
* TOGETHER DUE TO THE FACT THAT THERE ARE NO BLOCK VALVES TO *
* ISOLATE ONE FROM THE OTHER. *

1. Ensure that the following transmitters are line up

- * AI(223) pressure trans on D-1320.
- * AI(201/211) D-1320 level
- * AI(222) Quench recycle
- * AI(233) P-1320 discharge pressure
- * AI(207) D-1320 blowdown to E-1450

2. Line up the following control valves, fans and P-1320's. Also place
P-1320A/B in automatic.

- * AO(203) Recirculation control valve
- * AO(213) D-1320 to D-1450 blowdown control valve
- * AO(223) M3/M4 from T-1555 or C1520 btms
- * Ensure that the fans and variable drive on fans are racked
in and ready for use.

3. Start up at least THREE fans on E-1320 using DK(61) through DK(66).

NOTE: Be sure at least 2 fans running on E-1420 to
terminate to step 205.

4. Place the quench system in step 205.

5. Add about 45% level to D-1320 from either C-1520 bottoms or from
T-1555 (must manually line up in the field). Open AO(223) by making
DK(71) "TRUE".

- * P-1320 A/B will energize and recirculate back to D-1320
when the level gets to within 10% of the level setpoint AK(201).

6. Line up D-1320 manual block valve and control valve to D-1 and
start up the D1 system. (see D1 start up procedure).