

CHECKLIST (ATTACHMENT 1)

NOTIFICATION OF PROCESS CHANGE CHECKLIST

Record Number 460552

Type Change Major ☐ Moderate ☒ Minor ☐

Originator: Colleen Tice Date of Origination: 8/19/96

Proposed Date of Change 8/22/96 Area: Hydrochlorination Followup Required: ☐ Yes ☒ No

Permanent ☒ Temporary ☐ From ☐ To ☐ Temp MOC Returned to Original Status: ☐ Yes ☐ No

Description and Location of Change Add steam to feed ratio Mod V control to C-600

Technical Basis for Change: The new program will better control the steam to C-600 to improve optimization on the column.

Impact on: ☐ Safety ☒ Loss Prevention ☒ Environment ☐ Health
 Type of Change: ☐ Alarm ☐ Addition or Removal of Equipment ☐ Job Procedure
☐ Instrument ☐ Equipment/Material Modification ☐ Chemical
☐ Shutdown Point ☐ Piping Modification ☐ Other
☒ Process Computer Control

Pre-Modification Checklist:

Applicable	N/A	Initials	
☒	☐		Consult piping and equipment specifications.
☒	☐		Perform Reactive Chemicals testing. 8/19/96 In-Progress?
☒	☐		Add materials involved to Toxic Substance Control Act (TSCA) inventory.
☒	☐		Calculate impact on F&EI and CEI
☒	☐		Comply with Engineering Practices.
☒	☐		Comply with Technology Center guidelines.
☒	☐		Comply with Dow LAD Environmental Project Checklist.
☒	☐		Comply with Safety and Loss Prevention requirements.
☒	☐		Consult maintenance. (Name) _____
☒	☐		Consult instrument and electrical technician. (Name) _____
☒	☐		Consult parts technician. (Name) _____
☒	☐		Evaluate and modify relief system. (Name) _____
☒	☐		Contact Industrial Hygiene. (Name) _____
☒	☐		Contact Process Engineering. (Name) _____
☒	☐		Complete required reviews. (Name them) _____
☒	☐		Consult Computer programming support (Name) <u>James V. Henry</u>
☒	☐		Consult Operations (Name) _____
☒	☐		Contact Environmental (Name) _____
☒	☐		Champs work order (List) _____
☒	☐		Review Training Needs With Operations Supervisors or Technologist (Name) _____
☒	☐		Consult With Quality Person to determine if product MOC Required (Name) _____
☒	☐		Other _____

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Approvals: Colleen Tice Signature 8/19/96 Date First Reviewer James V. Henry Signature 8-19-96 Date Final Reviewer James V. Henry Signature 8/19/96 Date

Post-Modification Checklist: (Before startup)

	App	Na	Init	
☒	☒	☒		Perform pre-startup audit.
☒	☒	☒		Complete or update training program.
☒	☒	☒		Job procedures written and approved.
☒	☒	☒		P&ID's, process flow sheets and plot plans updated.
☒	☒	☒		Personnel trained on the change. Training Documentation Attached ☒ Yes ☐ No ☐ Na
☒	☒	☒		Critical instrument checklist updated.
☒	☒	☒		MOD check sheet completed, computer code and documentation changed.
☒	☒	☒		Complete and Update Plant Files and equipment files

James V. Henry 9/1/96

CHLORINATED METHANE PRODUCTS COMMUNIQUE

Review & Initial

DATE: Tue, Aug 20, 1996

FROM: Rizzo

SUBJECT: Please read the following attached changes made to system A

AO(503) - Steam to feed ratio was added

AO(502) & AO(512) - ramp down when disabled

This form is used to insure the attached information is communicated to the appropriate plant personnel.

INITIATOR: Place a check mark by the group(s) needing to review.

EMPLOYEE: Please initial and date when you have reviewed and understood the material.

PERSONS NEEDING TO REVIEW

Day Staff	Coaches <u>X</u>	SOS's <u>X</u>	OS's	Loaders
Init. Date	Init. Date	Init. Date	Init. Date	Init. Date
Clebert	Cook J. <u>AK</u> <u>8/22</u>	Breaux <u>AK</u> <u>8/21/96</u>	Bishop	Armand
Haney <u>AK</u> <u>8/22/96</u>	Dugas <u>AK</u> <u>8/24</u>	Beieler <u>AK</u> <u>8/22</u>	Bourg	Doucet
Kelley	Day Oper.	Bickham <u>AK</u> <u>8/25</u>	Davis	Instruments
Tice		Cook F.	Ekey	
McMurray	Init. Date	Cavalier <u>AK</u> <u>8-27-96</u>	Harrison	Init. Date
Michel		Grant <u>AK</u> <u>8-27-96</u>	Jack	
Rizzo	Donatto	Gravouilla <u>AK</u> <u>8-28-96</u>	Looney <u>AK</u> <u>8-23</u>	Hunt
Taylor <u>AK</u> <u>8/26</u>	Grace	Jackson <u>AK</u> <u>8-24</u>	Wolfe	Shanklin
Witt	Johnson	Metrejean <u>AK</u> <u>8/26</u>	Millender	
Young	Simonson	HARRISON <u>AK</u> <u>8/26</u>		
	Vavasseur			

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V DESCRIPTION OF CHANGE



A

System

C-600

Equipment Number

500

Can

Loss of Communications

If communications is lost between the VAX and the MOD, indicated by ALM(700) becoming true, the steam flow setpoint will hold the last value it had prior to the loss of communication. (See AC(1519))

When communications are restored, TA(51) & TA(52) values should be checked to ensure they are reading correctly before clearing the alarm.

Lead /lag Calculation

A lead / lag calculation was written, AC(1842) and AC(1843). This logic works like ramp code. Since feed increases/decreases can occur at a fast rate, to prevent the ratio calculation from resetting the steam flow setpoint at a fast rate, the lead lag ramps up/down to the incoming feed flow.

AK(503)

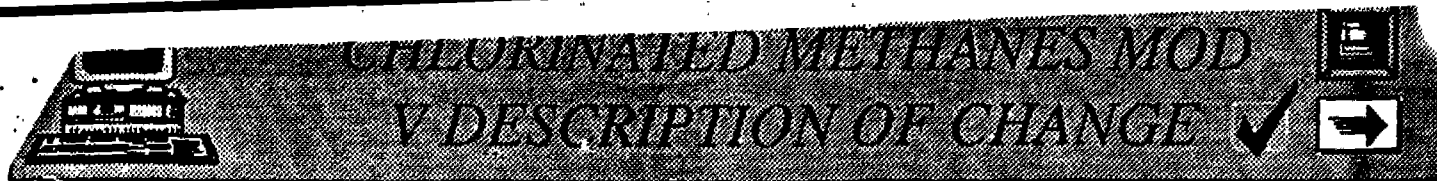
Since we use AK(503) during start up, logic was added to TERM(502) which require that the AK have a value greater than zero before termination. This prevent the logic from coming up on ratio control before the reactors are started up.

Also, alarm(514) will activate if seq(50) is in step(502) and AK(503) is equal to zero.

IF a high pressure condition exist which activates WARN(503), the steam will ramp down. When cleared, WARN(526) activates, notifying the board operator sets AK(503) equal to AC(576). This disables the steam to feed and clears the alarm. Once everything looks OK, you can go back to steam to feed ratio control by setting the AK to zero.

AO(502) & AO(512)

Presently, when AO(502) or AO(512) are disable, the valves immediately close, swinging the level in the column. To prevent this, logic was written, which will ramp down the controller. See DC(1298) & DC(1299)



A

System

C-600

Equipment Number

500

Can

AO(503) - C-600 Steam Control Valve

A steam/feed ratio controller was added to the steam controller.

C-200 & C-201 btms flows are being transferred from the PICSVAX to the mod as TA(51) & TA(52) where they are re-scaled from 25 to 25000 to keep the same scale factors that are on C-600.

Failure Logic

A type of failure logic for these flow has been written, DC(1257) & DC(1258). These DC's only become true if there is a sharp decrease in one or both flows. When a sharp decrease occurs, one of the above DC's will become true and hold the total flow calculation, AC(1846) at the value it had prior to the event, preventing the steam flow setpoint, AC(1519), from responding and disrupting the column operations even more.

When one of the DC's activate WARN(515) will activate. **To clear the DC you have to set DM(188) true. However, this shouldn't be done until a flow has been reestablished.** When DM(188) is set true, the logic that initially set the DC true will line up with the actual flow, clear the alarm, and begin recalculating the new flow, thereby cutting steam to maintain the current ratio setpoint.

Enable Logic - DC(1254)

To enable the feed/steam controller, first make sure you are in step(503) or step(504), then check AC(1519) value to ensure that the calculated ratio steam flow setpoint is lined up with the current steam flow. Then set AK(503) to zero.

NOTE: The feed/steam has a minimum steam flow setpoint based on AP(1655). When enabling the controller, if the calculation is below the minimum it will take the minimum flow setpoint.

AK(504) is the steam to feed ratio setpoint which is currently set at a .2. If a ratio setpoint is set outside the parameters as set by AP(1651) & AP(1652), REQ(514) **will activate** indicating and invalid setpoint. When the steam to feed is disabled, the **controller will** track the actual steam to feed ratio.