

SUSPENSION/NON-SOLVENT/VINYL REFRIGERATION UNIT

VCM ACTION PLAN FOR COMPLIANCE

<u>Emission Source</u>	<u>Project Description for Compliance</u>	<u>Status as of 3/14/75</u>
Non-Solvent H. P. vent	Modify No. 1 VCM rec. system to allow recovery of contained vinyl chloride (3,000 lbs VCl/day) in the H. P. vent by scrubbing in Solvent Vinyls acetone stripping system.	Complete
Suspension H. P. vent	Modify #2 VCM rec. system to send H. P. vent stream (2,500 lbs/day VCM) to the #1 Powerhouse for burning in boilers as fuel.	Complete
Off-gas H. P. vent	Modify Off-gas rec. system to send H. P. vent (528 lbs VCM/day) to the #1 Powerhouse for burning in boilers as fuel.	Complete
Suspension VCl Solvent scrubbing system	Recover contained VCl in Non-Solvent, Suspension, & Off-Gas HP vents by scrubbing in MEK stripping system.	Engineering design calculations are complete. Engineering/Production team to expedite system installation by Oct. 1975 has been assigned. Operation by Nov. 1. Accountability: Leroy Dampman/D. Walthal, A. A. Peterson
Nos. 3 & 4 Stripping Tank effluent	Recirculate #4 st. tk. effluent and increase temperature of #3 st. tk. to minimize atmospheric releases of VCM (400 lbs/day).	Steam addition system was installed on #3 st. tk. on 11/26. Presently repairing recirculation pump for use by 3/31. Accountability: R. P. Keefe
Off-Gas Recovery System	Install spare vacuum pump to improve vacuum stripping of slurry.	Capital budget request has been prepared. Delivery expected by 5/1/75. Accountability: R.Q. Payne, A. A. Peterson. Estimated cost: \$100 M

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2.

<u>Emission Source</u>	<u>Project Description For Compliance</u>	<u>Status as of 3/14/75</u>
Decant Tanks 14107, 14108, 14111 & 14112 (Non-Solvent)	Eliminate decanting of Non-Solvent rec. monomer tks. to the atmosphere. (144 lbs VCM/day).	Piping modifications to allow decanting of rec. monomer tks. to a closed vessel instead of the sewer were completed on 10/3. Instrumentation for automatic decanting will be completed by 4/15. Accountability: G. Pyle
Boil-off sampling	Eliminate operator exposure during boil-off sampling.	Complete
Decant Tanks C-10, C-11 (Suspension)	Eliminate decanting of Suspension rec. monomer tks. to the atmosphere. (100 lbs VCM/day)	Complete
Autoclave rupture discs	Replace autoclave rupture disc type PLDV w/more reliable type RB-90.	Complete
BDT/VST rupture discs	Eliminate BDT/VST rupture discs ruptures by installing DMV's on blowdown tank feed headers to avoid autoclave blowdowns during vacuum stripping.	A DMV was installed in the feed header to the #1 BDT on 11/4 w/ a dramatic decrease in number of blown rupture discs. Five remaining BD tk. feed headers will be modified by July 1975. Accountability: A. A. Peterson
Autoclaves-high reaction pressure	Eliminate atmospheric releases of VCM during high reaction pressures.	Issued new SOP.
Suspension surge tks, dryer exhausts	Batch vacuum strip resin to minimize atmospheric releases of VCM and re- duce VCM content of resin.	Batch stripping with #5 BDT was started 3/5 with impressive re- duction in residual VCM. Other BDT's are being checked by T&I before revising. Account- ability: A. Peterson
Non-Solvent surge tanks, dryer exhausts	Continuous strip resin to minimize atmospheric releases of VCM.	Complete
VCI filters	Install piping to vent VCI filters to the #3 st. tk. prior to opening for maintenance.	Complete

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3.

<u>Emission Source</u>	<u>Project Description For Compliance</u>	<u>Status as of 3/14/75</u>
Priming VCM pumps	Evaluate several means of priming VCI pumps to eliminate atmospheric releases of VCI during priming.	Complete and new procedure implemented
C-autoclave agitator packing failures	Test several packing designs to minimize packing failure frequency.	Discovered & corrected quality control problem w/vendor of existing packing. Also evaluating new packing design for this service. New seal design complete & ready to run. Autoclave w/H ₂ O & N ₂ pressure to be tried before production. Accountability: R. H. May
Autoclave resin sampling	Redesign autoclave resin sampling equipment to minimize operator exposures.	Have installed samplers on all lines. Accountability: R.P. Keefe, F. L. Johnson
Maint. food preparation & eating facilities	Install a temporary bldg. to relocate maintenance food preparation and eating facilities.	Complete
Fresh/rec. VCM feed pump seal replacement	Eliminate VCI packing leaks from fresh & rec. VCI feed pumps.	Replace packing w/mechanical seals by 5/75. Accountability: R. P. Keefe
Install 20-point VFA sequential VCI analyzer in B-120 control room	Provide additional monitoring capability in the Suspension/Non-Solvent department.	Delivery - April, 1975
Install "data-logger" for VFA sequential VCI analyzer	Improve VCM exposure data analyses and reporting capability in the Suspension/Non-Solvent department.	Delivery - April, 1975
Surge tanks atmospheric vents	Purchase & install compressor to transfer atmospheric surge tank vents to the #2 VCM rec. system.	No action to date
Bird Effluent recovery system	Re-use Bird effluent water rather than dump to the sewer.	Mechanical portion of project is complete. Electrical drawings to be issued March 21 - SOP being written.

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4.

<u>Emission Source</u>	<u>Project Description For Compliance</u>	<u>Status as of 3/14/75</u>
VCl underground barrel pump seals	Install double-seal arrangement on underground VCM pump seals to minimize seal leakage.	Double-seals have been received Engineering is presently designing seal lube system. Plan to have on seal in service 4/15.
VCM loss in MEK	Reduce MEK washings & hence, VCM loss by installing direct steam injection system on each D-autoclave	Direct-steam injection tests on D-3 autoclave since 2nd Qtr '74 indicate the usefulness of this technique. An OIP for converting all D-autoclaves has been written. Eng. to begin on 3/1/75. Accountability: A. Peterson/J. T. Tannos
Nash-Hytor seal water	Recover VCl & VAc contained in seal water	Complete
Nash compressor seal replacement	Eliminate VCM packing leaks from Nash compressor.	Complete
VCM compressors packing vents	Install exhaust fan on compressor room to minimize personnel exp.	Complete
Pilot Plant VCM emissions	Recover VCM emissions from the Pilot Plant	Operating procedures revised to send VCM emissions to the #2 Rec. System.

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