

LAB

Revised 10-15-76

Methods of Compliance
to the Permissible Exposure Limits
OSHA Regulation 1910.93 q - Standard for Exposure to VCI

BFG Technical Center

OSHA regulation 1910.93q requires that employee exposures to vinyl chloride shall be controlled to 1 ppm or less of VCI averaged over any 8 hour period and that no employee shall be exposed to vinyl chloride at concentrations greater than 5 ppm averaged over any period not exceeding 15 minutes. If exposures are above this, feasible engineering and work practice controls shall immediately be used to reduce exposures to at or below the permissible exposure limits.

At the Technical Center we have on going programs in both the engineering and process departments. Written plans for these programs are attached and will be furnished upon request for examination and copying to authorized representatives of the assistant Secretary of Labor and the Director of OSHA. These plans will be updated at least every six months.

These plans will also be shown to employees who are exposed in excess of the permissible exposure limits to show them the steps being taken to reduce their exposure to within the permissible exposure limits.

Lee Bennett

VCM OSHA Administrator

LAB:jj

NGC 22837

AVON LAKE TECHNICAL CENTER VCM EMISSIONS CONTROL REPORT
STATUS REPORT

Rev: 10-15-76

SPECIAL OBJECTIVE	PROJECT	COMP. DATE	PERSONNEL ASSIGNED	ENG	COST TOTAL	REMARKS
<u>A. Engineering Projects</u>						
Divert VCM vapors now vented to room	Spot Ventilation	Complete	Gary Wilson Jim Ego	\$50,000	\$150,000	Extended local exhaust under 1100 gal. polys. Made canvas hoods for containing vapors from leaky valves & gaskets. Installed bench hood for matr. work up. This job is essentially complete.
Disperse exhausted vapors higher in atmosphere	Bldg. 414 exhaust stack	Hold	Gary Wilson Jim Ego	\$33,000	\$120,000	Stack has been approved for Hydrin. The Geon Vaclets will be tied into this stack.
Insure adequate bldg. ventilation	Building ventilation a) B/414 E Emergency & Normal b) B/414 W " c) B/414 S " d) B/417 "	3/77	Gary Wilson Jim Ego	\$75,000	\$600,000	Design is on HOLD. Working on improving performance of existing heating system at a cost of \$23,000.
Reduce or eliminate environmental emissions	RD & RV discharge control a) small polys. b) large polys.	1976	Gary Wilson	\$50,000	\$200,000	No action.
Same as above	Design & Construct a VCM recovery & disposal system for West process.	1977	Cahill Houston	\$30,000	\$100,000	Budget estimate complete. Using post polymerization plus high pressure condensation (40°F). Working on layout and detail designs. Completion of first phase planned for second quarter, 1977.
Replace high emission source pilot plant equipment.	Replace present 15 gal. polys with 55 & 110 liter polys.	1977	Gary Wilson Jim Ego	\$150,000	\$600,000	Installation of two new 55 liter polys with blow down tanks and stripping and drying system. 10% complete. Reactors received. Process engineers are seeking a better definition of the process.
Remove VCI from 15 gal. poly charges prior to filtering or drumming.	Design & install a 15 gal. slurry steam stripper.	12/76	A. Siverling			EA approved and shop work started. Starting up in fourth quarter of 1976.
Eliminate employee exposure	Install a safe sample analysis station in B/414	1/76	A. Siverling	\$ 2,000	\$ 12,000	Completed.
Eliminate use of buckets of solvents for poly cleaning.	Design & install a safe solvent cleaning system in B/414	1/77	Smith	\$ 2,400	\$ 24,000	20% complete. ON HOLD.
Reduce VCI in air	Leak control	Cont.	Process & Maint:			Continuing
a. Install a Bendix GC monitoring system in B/414 for VCI & ECH. b. Install a Bendix total hydrocarbon monitoring system in B/413 for PVC Laboratories.	Monitoring System	Complete	Wilson	\$ 6,400	\$ 44,270	a. Increased number of sampling points to 10. Also tied in wind direction & velocity to area monitoring program. b. Lab GC has been placed on hold because of an insufficient number of erroneous excursions.
Eliminate VCM exposure while centrifuging and traying resin from wash tank.	Properly strip charge in wash tank to eliminate residual VCM	1/76	F. Zieber	0		We have not been centrifuging. Centrifuge has been removed from VCM building.
Prepare SOP's for PVC processes in B/414		1/78	F. Zieber	0		A number have been written and are ready for approval.

cc: R. M. Kreager, D. J. Barnicki, F. Zieber, P. DeChant, A. Alten, G. Wilson, F. Krause, C. Orben, V. Carson, D. Popovich, N. Wearsch, L. Bennett