

FROM C.D. Riggs/D.L. Gendron

cc

June 7, 1974

SUBJECT Status Report-VCM/Medical Issue
Activity in Springfield Manufacturing

REFERENCE

TO R. L. Bourget
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This is to summarize action taken since April 1, 1974, in PVC Manufacturing, Springfield, related to the VCM/Medical issue and to report data on VCM exposure levels.

I. SUMMARY:

Since April 1, 1974, several low cost engineering changes have been made and work procedures have been changed in 88 and 84 Bldgs. with the objective of reducing worker exposure to below 50 ppm VCM. The result of the changes has been to reduce worker exposure on an 8-hour time weighted average from an estimated <100 ppm (88 Bldg.) and <200 ppm (84 Bldg.) to an estimated <15 ppm (88 Bldg.) and <15 ppm (84 Bldg.). Spot sample measurements since the modifications show VCM concentrations in work areas to be below 50 ppm. with few excursions, whereas data collected prior to April 1 showed several excursions above 500 ppm. Data from 10 minute personal sampling (per OSHA emergency standard) show most current worst-case worker exposures at <50 ppm with a few excursions slightly above 50 ppm.

II. ENGINEERING AND EQUIPMENT:

Action since April 1 as follows:

- a) Temporary Coppus blower vent systems have been installed on 88 and 84 Bldg. kettle floors as a means of providing negative pressure to the kettle domes, thus reducing vapor evolving from open kettle manholes.
- b) 88 Bldg. slurry tank manholes and inspection ports have been closed up and fitted with sight glasses. 84 Bldg. latex tanks have been closed up and fitted with sight glasses.
- c) Plastic wall panels have been removed from 88 and 84 Bldg. compressor rooms in order to improve ventilation.

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II. ENGINEERING AND EQUIPMENT: (Cont'd.)

- d) Permanent local ventilation systems to replace temporary Coppus blower systems have been designed for 88 and 84 Bldgs. and installation initiated 6/4/74.

III. WORK PRACTICES AND PROCEDURES:

- a) Work rules have been established for all manufacturing personnel in 88 and 84 Bldgs. with explanation of rules and explanation of VCM test data. Work rules have also been set for PVC maintenance personnel.
- b) Additional Scott Air-Pak equipment has been installed in 88 and 84 Bldgs. and additional training conducted to insure compliance with work rules which require use of the Scott Air-Pak.
- c) Procedures have been issued and training conducted on the use of the kettle floor Coppus blower vent systems.
- d) Procedures for kettle entry have been changed to require "sucking out" with Coppus blower and discharging out-of-doors rather than "blowing in."

IV. VCM SAMPLING:

- a) Since 4/2/74, 84 "spot" VCM samples and 69 time weighted samples (most TWA samples taken for 10 min. as specified by OSHA) have been taken in 88 and 84 Bldgs. Summary of data appears in Section V.
- b) Four "Sipin" model personnel sampling pump devices have been purchased and used for 10 minute personnel samples.
- c) Two "Century" meter devices for instant spot determination of VCM concentration have been purchased. One unit has been delivered and calibrated for use in 88 and 84 Bldgs.
- d) Two Monsanto gas chromatographs have been sent to Bendix Corporation for modification leading to two eight-point fixed sampling and analyzing systems for installation in 88 and 84 Bldgs. Delivery is scheduled for August, 1974.
- e) Since April 1 approximately 20 TWA samples per week have been taken in 88 and 84 Bldgs. combined. Staffing of two college students for summer work will enable increased sampling to approximately 80-90 TWA samples per week plus required "spot" sampling to control leak sources and provide engineering guidelines.

V. VCM EXPOSURE DATA:

A summary of the VCM data taken since recent modifications appears in Tables 1 and 2.

Table 1 compares spot sampling results in 88 and 84 Bldgs. after the recent engineering efforts and work practice changes with results obtained prior to April 1.

Table 2 shows an estimated 8-hour TWA operator exposure as of June 1, 1974, compared with the estimated 8-hour TWA prior to March 1, 1974. Also included are actual 10 minute TWA personnel sample data (per OSHA standard) taken since recent modifications. Cases a, b, c, e, f were chosen for sampling as they represented potential "worst" cases for operator exposure.

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