



Date January 5, 1972

INTER-OFFICE
MEMORANDUM

Subject PVC Operations

Acroosteolysis (AOL) Program

To Distribution Below

(Location, Organization, or Department)

From T. L. Carey

Valley Forge

(Location, Organization, or Department)

Effective immediately, the attached AOL PROGRAM shall be implemented for PVC operations at the Escambia plant and the Calvert City plant.

This program for monitoring AOL has been developed as a result of studies made by John Barr in consultation with Martin Spurlock, Ron Beech and Dick Harvey.

TLCarey/d
attachment

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T. Carey

1-5-72

1-21-72

A. K. McMillan

PVC OPERATIONS
CALVERT CITY AND ESCAMBIA PLANTS
AOL PROGRAM

1. X-ray the hands of present PVC production workers who have participated in reactor cleaning to establish a base line for present conditions. Those to be included are polymer building operators, pilot plant operators, laborers (utility men or trainees) and dryer operators, if they have been involved in reactor cleaning. Not included are baggers, maintenance men, compound operators, or supervisors.
2. As a part of pre-employment physical examinations, include hand x-ray studies for all personnel to be assigned to PVC operations. This shall include personnel transferred from other operations who may be involved in reactor cleaning.
3. An annual x-ray examination shall be performed on the specified employees and the records maintained on each plant with the work histories of the employees involved.
4. Each plant shall have x-ray films read by a competent radiologist. Background information on AOL shall be furnished him. Such information would include MCA report and article by Dr. Dinman. If required, a consulting arrangement should be developed with the University of Michigan Institute of Environmental and Industrial Health or other competent specialist.
5. Review and update existing work procedures, protective equipment and instructions for reactor cleaning and establish formal procedures which contain requirements for operator compliance. Emphasize enforcement to supervisors.
6. Continue work on plant modifications such as solvent cleaning, that will reduce personnel exposure.
7. Continue participation in the MCA and Vinyl Chloride Safety Association studies to enable us to provide maximum protection for personnel.

AP00042545

Mr. T. L. Carey

February 23, 1971

A. K. McMillan

Occupation AOL from PVC Operations

The Archives of Environmental Health Study Report of January, 1971, indicates the AOL condition is clearly associated with hand cleaning of PVC reactors. Of the 5,011 employees examined there were 25 definite cases of AOL and all had been involved in hand cleaning reactors. The probability of developing AOL is one case in 32 for workers in reactor cleaning and one case in 140 workers for the total PVC study population. Work practices such as (1) use cleaning methods used, (2) use of gloves, (3) reactor evacuation procedure have a strong influence on the occurrence of AOL. Method of entry of the agent causing AOL is also not established and the writers were inclined toward the respiratory method of entry rather than absorption through the skin.

The report recommends:

- (1) More extensive use of high pressure water and solvent cleaning
- (2) Good ventilation of reactors
- (3) Use of gloves in reactor cleaning

Our reactor evacuation and cleaning procedures strongly favor good experience with regard to AOL. Use of chemical cleaning for all reactors will be accomplished this year. As additional precautions, we will see that gloves are worn by reactor cleaners (this is now required but may not be rigorously followed) and that explosimeters used to check reactors are calibrated on pentane as recommended in the study. I suggest that base line X-rays of the hands of PVC personnel be taken at the time that all reactors are converted to the chemical cleaning process. The medical questionnaire (in study) should also be

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-2-

February 23, 1971

completed at this time. X-rays should be repeated on an annual basis until such time as we consider AOL not to be a problem in our operation.

A. K. McMillan

/ms
attachment

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