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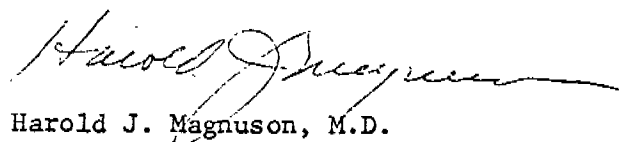
June 2, 1969

C. U. Dernehl, M.D.
Union Carbide Corporation
270 Park Avenue
New York, New York 10017

Dear Dr. Dernehl

Attached is an errata sheet listing corrections to the MCA-IIH report on acroosteolysis which we sent you on April 1, 1969. Would you please attach this to your copy of the report. We are sorry for these typographical errors which escaped our proof reading.

Sincerely yours



Harold J. Magnuson, M.D.

HJM:mld
ATT.

UCC 100729

MCA Report

Errata Sheet

1. Pg. 3, 2nd line also 4th line, 2nd paragraph: five years should be changed to six years.
2. Pg. 44, Table X: Asterisk beside Plant No. "V" should be deleted.
Asterisk should be placed next to "plant No." designated "U"
3. Pg. 65, Table XX: Delete "1" under Diagnostic Category "4" for Corporation No. 4.
Add "1" under Diagnostic Category "4" for Corporation No. 5.
4. Pg. 66, Table XXI: Delete "1" under Diagnostic Category No. 4 for Plant "K".
Add "1" under Diagnostic Category No. 4 for Plant L.
5. Pg. 70, Table XXIV: Delete present table, insert new Table as follows:

Table XXIV

Distribution of Raynaud's Phenomenon Between Plants with Probable, Possible and No Cases of AOL, Corrected For Male Population

	Dx Cat. 3*		Dx Cat. 0-2*	Total*
	Number	% Total Male Pop.		
Plants with AOL	41	2.5	1582	1623
Plants without AOL	19	0.82	2294	2308
Plants with ? AOL	14	1.7	817	830
Plants Compd only	1	0.23	438	439

*Includes males only

6. Table XXXII, Pg. 82, under "Job 19" first 3 lines should be deleted, and replaced as follows:

"	Total response per job	893	
	Total man-months per job	21171	
	Ratio, case/mos. Dx 5,6	$\frac{13}{21172} = \frac{1}{1629}$	"

7. Table XXXV, Pg. 85: First two columns on left in upper half of Table should be deleted, and replaced as follows:

Diagnostic Category	Case/Man-Months Incidence > 1/800
5,6	1
	3
	14
	17

NB: Note this correction deletes job 19 from this column

PREFACE—LIMITATIONS OF THE STUDY

This study was undertaken to determine the prevalence of acroosteolysis in the P.V.C. Industry and to identify those occupational exposures presenting a high risk of this disease. In interpreting the data that follows we would urge careful consideration of these cautions:

1. The fact that a company or plant does not seem to have any cases of the disease at the time of the survey does not rule out the possibility that cases may develop subsequent to the study.

2. Some of the early manifestations of the disease, e.g., Raynaud's phenomenon, and some nonspecific x-ray changes, may occur in diseases other than acroosteolysis. Thus, the interpretation of this symptom complex or of nonspecific x-ray changes presents particular difficulty in determining the presence or absence of the disease in a particular plant, cf. Table XXII.

3. The over-all prevalence rate of acroosteolysis determined in the present study is sufficiently low that the apparent absence of the disease in certain small plants may not reflect a true absence of the disease or hazard, but simply reflects insufficient experience.

Therefore, we strongly recommend that: (1) continuing medical surveillance and, (2) measures directed toward minimization of hand cleaning of reactors be undertaken in all plants regardless of presence or the apparent absence of cases of acroosteolysis.

PROPOSED A O L SURVEILLANCE

1. Sample one C-Autoclave per week to determine vinyl chloride concentration.
2. Sample one D-Autoclave per month, if available.
3. Take 3 samples per autoclave:
 - (a) After preparation is complete - at entry.
 - (b) 1 hour after cleaning has begun (C-Autoclaves only).
 - (c) At termination of cleaning.
4. Collect samples in breathing zones when possible.
5. Analyze for vinyl chloride by vapor phase chromatography or other suitable method.
6. When 10 C-Autoclaves and 5 D-Autoclaves have been tested, stop sampling and:
 - (a) Review all data.
 - (b) Calculate mean levels of exposure.
 - (c) Calculate exposure-time.
 - (d) Adjust ventilation program to keep levels below 50 ppm vinyl chloride, or
 - (e) Provide respiratory protection if (d) cannot be accomplished.
7. Any possible cases of A O L will be removed from exposure to monomer or resin.
8. Preplacement and pre-transfer exams will be performed before people begin a long-term work assignment in vinylite area. This exam will include:
 - (a) Hand x-rays
 - (b) Medical history of (1) trauma to hands; (2) scleroderma; (3) Raynaud's disease; and (4) abnormal cold response.
9. Annual examination of (1) operators; (2) pipefitters; (3) machinists; (4) laborers; (5) riggers; and (6) salaried supervision who are assigned to monomer or polymerization areas. Exams to include all items in 8 above, plus other procedures which may be indicated.

UCC 100733

10. In event of trauma to finger-tips of those employees under surveillance x-rays will be taken to up-date their file and keep a current picture of status of distal phalanges.
11. Other air sampling to be done as time permits:
 - (a) General work areas and control rooms.
 - (b) Tanks and vessels where slurry is stored.
 - (c) Resin storage areas.
 - (d) Bagging areas.
12. All employees working in autoclaves will wear non-porous gloves.
13. Document for files preparation procedures in use.

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