

To: D. W. Dworak - Spec. Chem. - 41-1
From: L. Zobel, M.D. - Medical - 220-2E-02
Subject: Medical Examinations
Date: March 20, 1987

3M

Examinations were done on 64% (204/320) of the Specialty Chemical employees offered the opportunity last fall.

A first level of analysis of this data shows no significant problems in the group as a whole. Individuals with potentially significant abnormalities have already been referred to personal physicians.

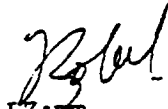
Marginal abnormalities in lab tests occur with an expected frequency depending on how normal limits are defined. Normal is often defined as between the 5th and 95% percentile of the test values in the general reference population.

In the Specialty Chemical group 17 had at least one high liver function test and 31 had at least one low liver function test. Since there are 5 liver function tests, these are not unexpected numbers. The spirometry is also reassuring. There is no lower limit to the kidney function test. Ten people had a marginally high kidney function test, almost exactly 5% of the tested group. Liver and kidney function tests are most closely examined because these two organs metabolize most toxins entering the body and are often the first to show subclinical change.

Three new cases of pleural thickening were found. The pleura is the lining of the lung. Pleural thickening can be a consequence of asbestos exposure. It fortunately is not a "disease" in itself, but rather a sign of exposure in the distant past (usually 20 years or more.) It does not result in disability or clinical symptoms. It does not indicate an increased risk of developing asbestosis or asbestos related cancer. We do record it on the OSHA log and suggest these individuals continue to participate in examination programs.

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We plan to do more specific and detailed studies of the relationship of blood fluorine levels (current and past) and examination results. We are in the process of obtaining appropriate consultation and developing the means to do the needed data analysis. I cannot give you a timetable yet, but hope to be able to in the next few months.


LZ:rm

ORGANIC FLUORIDE IN THE BLOOD

SOURCES

- FC-143, FC-126, FC-95, FC-98, FC-120

REMEDIES

- ENGINEERING CONTROLS
- PERSONAL PROTECTION EQUIPMENT
- OPERATOR TRAINING/AWARENESS

RESULTS

- FROM 1976 – 1984 LEVELS DECREASED FROM 30 PPM TO 10 PPM.
- FROM 1984 – PRESENT LEVELS HAVE REMAINED CONSTANT OR INCREASED.

CONCERNS

- EMPLOYEE HEALTH
- CORPORATE LIABILITY

COMPLICATIONS

- 3-4 MONTH DELAY IN TEST RESULTS.
- INCREASE IN TEST REFUSAL.
- LACK OF ENTHUSIASM FOR HEALTH SCREENING EXAMS.
- DIFFICULTY IN IMPLEMENTING COMPUTER CORRELATION PROGRAM.

SOLUTIONS

- GIVE EMPLOYEES A SMALL INCENTIVE FOR GIVING BLOOD SAMPLES - TRANSPORT TO 3M CENTER/BUY LUNCH.
- SPEED UP TURNAROUND ON TEST.
- SUPERVISOR INCENTIVES FOR REDUCING READINGS OF HIGH PERSONNEL.

LARPL 3

Blue 3 (4)

Orange 8

Black 1

LEVELS OF CONCERN

36 EMPLOYEES > 5 PPM

13 EMPLOYEES > 10 PPM

PPM EMPLOYEES

31	2	
19		
18	2	(1) TERMINATED (1) OLD RESULTS
14		NON-BUILDING 15
13	2	
12	2	(2) NON-BUILDING 15
11	2	(1) SUPERVISOR
10		FEMALE

BUILDING 15

FREE FLUORIDE LEVELS

