

REDACTED

Exposed To MSF

REDACTED

Monitor them more often environmentally

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Interoffice Correspondence



Subject: Fluorochemicals in Blood

November 3, 1977

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FROM: J.W. BELISLE - 201-1S

Introduction

A 50 ml whole blood sample was drawn (using multiple 10 ml Vacutainers) and serum isolated from eight 3M employees at Chemolite, seven of which were sampled previously. An analysis for organic and inorganic fluoride (reported in this letter) and FC-143 and FC-95 content (to be reported later) on each serum sample was requested.

Results

Sample	1976		1977	
	RF (ppm)	F ⁻ (ppm)	RF (ppm)	F ⁻ (ppm)
Literature Range	0.002-0.13	0.003-0.17	0.002-0.13	0.003-0.17
Literature Average	0.03	0.02	0.03	0.02
E1 <i>Formosa</i>	REDACTED	38.8	40.5	0.03
E2 <i>Formosa</i>	REDACTED	24.7	20.1	0.02
<i>Formosa</i>	REDACTED	42.3	28.8	0.01
<i>Formosa</i>	REDACTED	16.2	11.0	0.02
<i>Formosa</i>	REDACTED	13.9	9.6	0.02
<i>Formosa</i>	REDACTED	5.9	5.8	0.02
<i>Formosa</i>	REDACTED	9.3	6.1	0.04
S	-not sampled-		13.8	0.01

① Serum samples received between July and November, 1976.

② Serum samples received October, 1977.

REDACTED 25.4 0.03

6 years in FC Production
1 year Clinical - King Shury Cole Corless - Ind. Hy.

Exhibit 1146
 State of Minnesota v. 3M Co.,
 Court File No. 27-CV-10-28862

Discussion

Somewhat surprising, all 7 persons who were previously sampled had the same or a slightly lower organic fluoride (RF) content a year later. This can be interpreted in one of several ways:

(a) the employees were not exposed to any high RF levels as they have been in the past.

(b) different people, when exposed to the same level of RF, retain the compound(s) to a different degree (homeostasis).

(c) since the levels reported range to 1000 times the "accepted" average in the general public for RF in human serum/plasma and since the levels have remained fairly constant, it takes the body a long, long time to clear bound RF. *But are not these individuals being exposed to Fes as before??*

(d) since it is understood that the health of these employees is normal, it is not clear what biological or chemical test, other than our RF analysis, would indicate the employee is carrying such a high level of bound fluoride and especially the significance of the finding.


Jon Belisle
/jz