

FROM R. L. Bourget

CC:

March 1, 1974

SUBJECT STATUS REPORT ON VCM HEALTH ISSUE

REFERENCE

TO PVC Personnel

Since the time we first alerted you of the Goodrich VCM health concern, there have been many developments that will be of interest to you. We shall attempt to cover the key points as we know them in this communication.

THE KEY FACTS

1. B.F. Goodrich has had four known cases of liver cancer (angiosarcoma) in past three years—since the original announcement, two additional cases have been identified for a total of six—all at their Louisville, Kentucky plant. The estimated B.F. Goodrich work force at Kentucky is 420 people.
2. In a worldwide search since the announcement, two additional cases have been reported—both in men who died of other causes (heart attack/auto accident) who previously worked with VCM. The estimated U.S. PVC work force is about 6500 people.
3. National Institute of Occupational Safety and Health (NIOSH) and the Kentucky Board of Public Health have visited the Goodrich facility—preliminary conclusion is that VCM is highly suspect but not definite cause of disease. Over 50 other chemicals used at B.F. Goodrich are to be studied.

from the desk of
G.W. Fletcher

Rudy,

Sorry I couldn't join previous letter. I've put together all that we discuss. Our medical evaluation done included extensive blood work. This was discussed with our NIOSH visitors.

Gay

4. A Professor Maltoni from Bologna, Italy, has presented data from experiments conducted using rats exposed to VCM. He has shown that VCM can cause cancer in rats at high exposures. He reported nothing at 50 ppm exposure or less. Conclusion must be drawn from this work that VCM is highly suspect.
5. NIOSH has initiated a total program for investigation of this disease to include:
 - A. 1. Government sponsored medical study.
 2. Determination of extent and use of VCM and PVC.
 3. Study on Vinyl U.S. General Population death causes.
 - B. 1. Potential occupational exposures to VCM and 50-60 other B.F. Goodrich chemicals.
 - C. 1. Use of PVC in consumer products.
 2. Coordination with National Cancer Institute.
 - D. 1. National surveillance program on angiosarcoma.

As part of this program they will visit several plants to obtain information. All of this information, plus that obtained in recent hearings from Industry, Public Health sectors and Labor groups, will be used to assure satisfactory PVC worker protection. Three areas for emphasis are:

- (1) Environmental Testing and Personnel monitoring for VCM exposure.
- (2) Work Practices which minimize VCM exposure
- (3) Medical testing and evaluation of exposed workers.

6. We do not know all the detail of the B.F. Goodrich, Louisville plant PVC process compared to our own or others in industry. However, Monsanto has two significant process advantages for VCM control over most every other plant in the industry--flare stack system for vent control and THF system for reactor cleaning.
7. The Occupational Safety and Health Administration (OSHA) has ruled that regulations for VCM will be developed via a regular rule making investigation rather than issue an emergency regulation. Nevertheless, recommended regulations tightening control over VCM exposure, analytical surveillance and medical testing will be immediately implemented by Monsanto. These regulations will be discussed separately.

In summary, no one knows for certain whether VCM is the specific cause of this problem. Industry, government and private health interest groups are hard at work to answer these difficult question. The collective evidence available, however, suggests that VCM must be regarded as a definite suspect, particularly at high concentrations for extended periods of time.

✓ Monsanto, as a result intends to cooperate fully in whatever action are required to insure that our own operation remains a safe and healthy place to work. We will need your cooperation as we move to implement some of the required changes in our work practices and operations to give maximum protection. As information is developed the changes may be modified--either relaxed or tightened, as the situation may warrant.

RLB
R. L. Bourget

/m

RSV0025278

<u>Bldgs</u>		
1 -	Offices	asbestos
2 -		noise areas
4 -	Warehouse	100 degree heat stress
6 -	Warehouse	IR ovens
8 -	production styrene	no UV
8B -	" "	vinyl chloride monomer
8D -	" "	Beta Gamma radiation
9 -	" "	no lead
10 -	Offices & Lab	HCHO
11 -	" "	acrylonitrile
12 -	Insulation	urea melamine
14 -	Offices	phenolic
15 -	"	allyl alcohol
19 -	Offices	welding
20 -	fire station	
21 -	steam generation	
22 -	Warehouse & Garage	
23 -	Stores & Receiving Warehouse	
24 -	Warehouse	
26 -	Storage	
29 -	styrene production	
30 -	pipe shop	
31 -	Warehouse	
36 -	Maintenance	
38 -	Warehouse	
39 -	"	
40 -	"	
42 -	out	
43 -	Research Complex	
43A -	" "	
44 -	phenolic resin & research lab	
49 -	steam generating plant	
52 -	Warehouse	
59 -	"	
60 -	fork truck repair - charge batteries	
61 -	Warehouse	
62 -	"	
63 -	Offices	
64 -	Warehouse	
67 -	"	
68 -	pilot plant	
69 -	" "	
70 -	Warehouse	
79 -	water tower	
80 -	instrument bldg - electrical substation	
81 -	urea melamine	
82 -	pump house	
83 -	main gate house and co. store	
84 -	PVC paste resin emulsion process	
85 -	warehousing formerly PVC repair lab	
86 -	styrene operations	
87 -	warehouse	
88 -	PVC suspension	
89 -	warehouse	
90 -	allyl alcohol additive	
91 -	HCHO	
92 -	nothing at present	
93 -	catalyst storage area	
94 -	" " "	
96 -	west gate house	
97 -	warehouse	
98 -	office	
99 -	Saflex - acetate laminate	

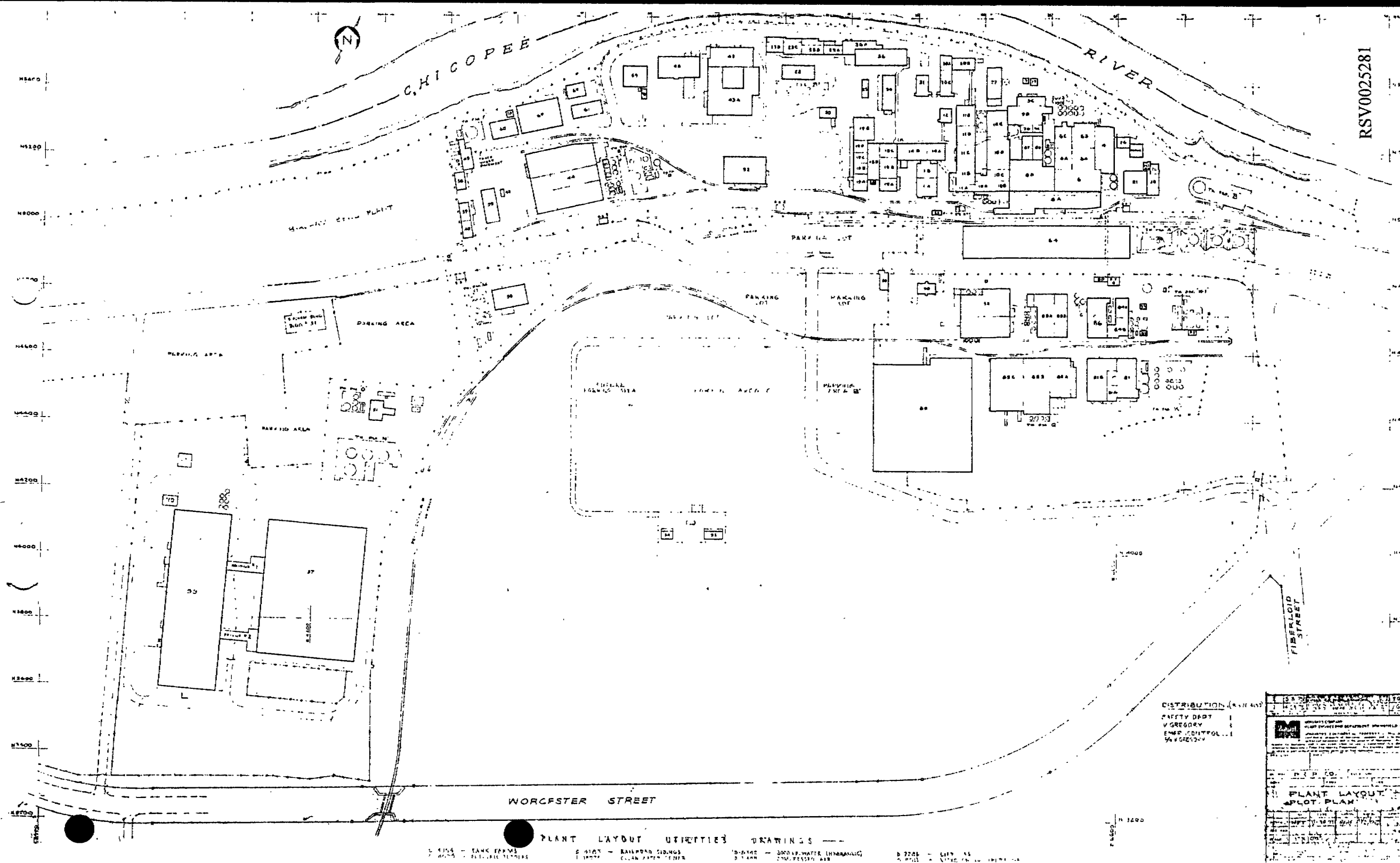
63 Bldgs

Bldgs

82 - pump house
87 - warehouse
84 - PVC paste resin emulsion process
86 - styrene operations
81 - urea melamine
80 - instrument bldg - electrical substation
85 - warehousing formerly PVC repair lab
88 - PVC suspension
92 - nothing at present
89 - warehouse
98 - office
83 - main gate house and co. store
93 - catalyst storage area
94 - " " "
90 - allyl alcohol additive.
91 - HCHO
97 - warehouse
99 - Saflex - acetate laminate
79 - water tower
96 - west gate house
40 - warehouse
39 - "
38 - "
59 - "
42 - out
49 - steam generating plant
60 - fork truck repair - charge batteries
44 - phenolic resin & research lab
61 - warehouse
62 - "
67 - "
69 - pilot plant
70 - warehouse
68 - pilot plant
43 - research complex
43A - " "
22 - warehouse & garage
23 - stores & receiving warehouse
36 - maintenance
52 - warehouse
20 - fire station
19 - offices
15 - offices
14 - "
1 - "
63 - "
24 - warehouse
31 - "
12 - insulation
30 - pipe shop
29 - styrene production
10 - offices & lab
11 - " " "
8 - production styrene
9 - " "
8D - " "
8B - " "
64 - warehouse
6 - "
4 - "
26 - storage
21 - steam generation
2 -

asbestos
noise areas
100 degree heat stress
IR ovens
no UV
vinyl chloride monomer
Beta Gamma radiation
no lead
HCHO
acrylonitrile
urea melamine
phenolic
allyl alcohol
welding

RSV0025281



DISTRIBUTION (BY HAND)
FACTORY DEPT
V GREGORY
ENERGY CONTROL
SA GREGORY

PLANT LAYOUT
PLOT PLAN

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

PLANT LAYOUT UTILITIES DRAWINGS

1. 1" = 10' - TANK FIELDS
2. 1" = 10' - ELECTRICAL UTILITIES
3. 1" = 10' - RAILROAD SIDINGS
4. 1" = 10' - CLEAN WATER SYSTEM
5. 1" = 10' - 3000 PSI WATER (HYDRAULIC)
6. 1" = 10' - 200 PSI WATER
7. 1" = 10' - 100 PSI WATER
8. 1" = 10' - 50 PSI WATER
9. 1" = 10' - 25 PSI WATER
10. 1" = 10' - 10 PSI WATER
11. 1" = 10' - 5 PSI WATER
12. 1" = 10' - 2 PSI WATER
13. 1" = 10' - 1 PSI WATER
14. 1" = 10' - 0.5 PSI WATER
15. 1" = 10' - 0.2 PSI WATER
16. 1" = 10' - 0.1 PSI WATER
17. 1" = 10' - 0.05 PSI WATER
18. 1" = 10' - 0.02 PSI WATER
19. 1" = 10' - 0.01 PSI WATER
20. 1" = 10' - 0.005 PSI WATER
21. 1" = 10' - 0.002 PSI WATER
22. 1" = 10' - 0.001 PSI WATER
23. 1" = 10' - 0.0005 PSI WATER
24. 1" = 10' - 0.0002 PSI WATER
25. 1" = 10' - 0.0001 PSI WATER
26. 1" = 10' - 0.00005 PSI WATER
27. 1" = 10' - 0.00002 PSI WATER
28. 1" = 10' - 0.00001 PSI WATER
29. 1" = 10' - 0.000005 PSI WATER
30. 1" = 10' - 0.000002 PSI WATER
31. 1" = 10' - 0.000001 PSI WATER
32. 1" = 10' - 0.0000005 PSI WATER
33. 1" = 10' - 0.0000002 PSI WATER
34. 1" = 10' - 0.0000001 PSI WATER
35. 1" = 10' - 0.00000005 PSI WATER
36. 1" = 10' - 0.00000002 PSI WATER
37. 1" = 10' - 0.00000001 PSI WATER
38. 1" = 10' - 0.000000005 PSI WATER
39. 1" = 10' - 0.000000002 PSI WATER
40. 1" = 10' - 0.000000001 PSI WATER
41. 1" = 10' - 0.0000000005 PSI WATER
42. 1" = 10' - 0.0000000002 PSI WATER
43. 1" = 10' - 0.0000000001 PSI WATER
44. 1" = 10' - 0.00000000005 PSI WATER
45. 1" = 10' - 0.00000000002 PSI WATER
46. 1" = 10' - 0.00000000001 PSI WATER
47. 1" = 10' - 0.000000000005 PSI WATER
48. 1" = 10' - 0.000000000002 PSI WATER
49. 1" = 10' - 0.000000000001 PSI WATER
50. 1" = 10' - 0.0000000000005 PSI WATER
51. 1" = 10' - 0.0000000000002 PSI WATER
52. 1" = 10' - 0.0000000000001 PSI WATER
53. 1" = 10' - 0.00000000000005 PSI WATER
54. 1" = 10' - 0.00000000000002 PSI WATER
55. 1" = 10' - 0.00000000000001 PSI WATER
56. 1" = 10' - 0.000000000000005 PSI WATER
57. 1" = 10' - 0.000000000000002 PSI WATER
58. 1" = 10' - 0.000000000000001 PSI WATER
59. 1" = 10' - 0.0000000000000005 PSI WATER
60. 1" = 10' - 0.0000000000000002 PSI WATER
61. 1" = 10' - 0.0000000000000001 PSI WATER
62. 1" = 10' - 0.00000000000000005 PSI WATER
63. 1" = 10' - 0.00000000000000002 PSI WATER
64. 1" = 10' - 0.00000000000000001 PSI WATER
65. 1" = 10' - 0.000000000000000005 PSI WATER
66. 1" = 10' - 0.000000000000000002 PSI WATER
67. 1" = 10' - 0.000000000000000001 PSI WATER
68. 1" = 10' - 0.0000000000000000005 PSI WATER
69. 1" = 10' - 0.0000000000000000002 PSI WATER
70. 1" = 10' - 0.0000000000000000001 PSI WATER
71. 1" = 10' - 0.00000000000000000005 PSI WATER
72. 1" = 10' - 0.00000000000000000002 PSI WATER
73. 1" = 10' - 0.00000000000000000001 PSI WATER
74. 1" = 10' - 0.000000000000000000005 PSI WATER
75. 1" = 10' - 0.000000000000000000002 PSI WATER
76. 1" = 10' - 0.000000000000000000001 PSI WATER
77. 1" = 10' - 0.0000000000000000000005 PSI WATER
78. 1" = 10' - 0.0000000000000000000002 PSI WATER
79. 1" = 10' - 0.0000000000000000000001 PSI WATER
80. 1" = 10' - 0.00000000000000000000005 PSI WATER
81. 1" = 10' - 0.00000000000000000000002 PSI WATER
82. 1" = 10' - 0.00000000000000000000001 PSI WATER
83. 1" = 10' - 0.000000000000000000000005 PSI WATER
84. 1" = 10' - 0.000000000000000000000002 PSI WATER
85. 1" = 10' - 0.000000000000000000000001 PSI WATER
86. 1" = 10' - 0.0000000000000000000000005 PSI WATER
87. 1" = 10' - 0.0000000000000000000000002 PSI WATER
88. 1" = 10' - 0.0000000000000000000000001 PSI WATER
89. 1" = 10' - 0.00000000000000000000000005 PSI WATER
90. 1" = 10' - 0.00000000000000000000000002 PSI WATER
91. 1" = 10' - 0.00000000000000000000000001 PSI WATER
92. 1" = 10' - 0.000000000000000000000000005 PSI WATER
93. 1" = 10' - 0.000000000000000000000000002 PSI WATER
94. 1" = 10' - 0.000000000000000000000000001 PSI WATER
95. 1" = 10' - 0.0000000000000000000000000005 PSI WATER
96. 1" = 10' - 0.0000000000000000000000000002 PSI WATER
97. 1" = 10' - 0.0000000000000000000000000001 PSI WATER
98. 1" = 10' - 0.00000000000000000000000000005 PSI WATER
99. 1" = 10' - 0.00000000000000000000000000002 PSI WATER
100. 1" = 10' - 0.00000000000000000000000000001 PSI WATER

Bldgs

82 - pump house
87 - warehouse
84 - PVC paste resin emulsion process
86 - styrene operations
81 - urea melamine
80 - instrument bldg - electrical substation
85 - warehousing formerly PVC repair lab
88 - PVC suspension
92 - nothing at present
89 - warehouse
98 - office
83 - main gate house and co. store
93 - catalyst storage area
94 - " " "
90 - allyl alcohol additive.
91 - HCHO
97 - warehouse
99 - Safflex - acetate laminate
79 - water tower
96 - west gate house
40 - warehouse
39 - "
38 - "
59 - "
42 - out
49 - steam generating plant
60 - fork truck repair - charge batteries
44 - phenolic resin & research lab
61 - warehouse
62 - "
67 - "
69 - pilot plant
70 - warehouse
68 - pilot plant
43 - research complex
43A - " "
22 - warehouse & garage
23 - stores & receiving warehouse
36 - maintenance
52 - warehouse
20 - fire station
19 - offices
15 - offices
14 - "
1 - "
63 - "
24 - warehouse
31 - "
12 - insulation
30 - pipe shop
29 - styrene production
10 - offices & lab
11 - " " "
8 - production styrene
9 - " "
8D - " "
8B - " "
64 - warehouse
6 - "
4 - "
26 - storage
21 - steam generation
2 -

asbestos
noise areas
100 degree heat stress
IR ovens
no UV
vinyl chloride monomer
Beta Gamma radiation
no lead
HCHO
acrylonitrile
urea melamine
phenolic
allyl alcohol
welding

Bldgs

82 - pump house
87 - warehouse
84 - PVC paste resin emulsion process
86 - styrene operations
81 - urea melamine
80 - instrument bldg - electrical substation
85 - warehousing formerly PVC repair lab
88 - PVC suspension
92 - nothing at present
89 - warehouse
98 - office
83 - main gate house and co. store
93 - catalyst storage area
94 - " " "
90 - allyl alcohol additive.
91 - HCHO
97 - warehouse
99 - Saflex - acetate laminate
79 - water tower
96 - west gate house
40 - warehouse
39 - "
38 - "
59 - "
42 - out
49 - steam generating plant
60 - fork truck repair - charge batteries
44 - phenolic resin & research lab
61 - warehouse
62 - "
67 - "
69 - pilot plant
70 - warehouse
68 - pilot plant
43 - research complex
43A - " "
22 - warehouse & garage
23 - stores & receiving warehouse
36 - maintenance
52 - warehouse
20 - fire station
19 - offices
15 - offices
14 - "
1 - "
63 - "
24 - warehouse
31 - "
12 - insulation
30 - pipe shop
29 - styrene production
10 - offices & lab
11 - " " "
8 - production styrene
9 - " "
8D - " "
8B - " "
64 - warehouse
6 - "
4 - "
26 - storage
21 - steam generation
2 -

asbestos
noise areas
100 degree heat stress
IR ovens
no UV
vinyl chloride monomer
Beta Gamma radiation
no lead
HCHO
acrylonitrile
urea melamine
phenolic
allyl alcohol
welding

Monsanto:-

Guth Griffith no home phone
Monsanto 788-6911-x2119 Bldg #99
x2078 Safety Center
Bldg.

John Kenderian: Member of negotiating Comm
617-347-3911 Local 248 14E
(Chet Kowalick):

Monsanto

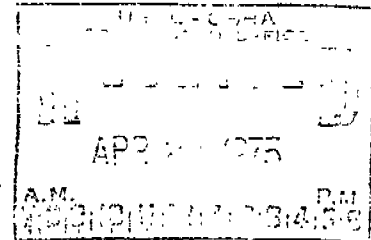
*Keep from
7/1/75
J.W.C.*

MONSANTO POLYMERS & PETROCHEMICALS CO.
730 Worcester Street
Indian Orchard, Massachusetts 01051
Phone: (413) 788-6911

*Company
Cited for
1910.95(b)(1)
Noise*

April 22, 1975

Mr. Rudolph Bayerle, Director
Occupational Safety & Health Administration
Room 501
436 Dwight Street
Springfield, Massachusetts 01103



SUBJECT: Regulated Areas.
Regulation 1910.93q VCM

Dear Mr. Bayerle:

Per the requirements set forth in Paragraph n of OSHA regulation 1910.93q, Exposure to Vinyl Chloride, please be informed that Monsanto Company has established two regulated areas in accordance with Federal requirements. Both of these regulated areas are at Monsanto's Springfield plant located at 730 Worcester Street, Indian Orchard, Massachusetts and are related to our polyvinyl chloride emulsion resins manufacturing operation. During normal operations there are approximately ten employees, including maintenance personnel, per eight hour period in the manufacturing area (regulated area No. 1) and approximately six employees in the warehouse area (regulated area No. 2). The manufacturing plant is operated continuously, seven days per week, and the warehouse operation is conducted on a five day, eight hour per day basis.

Cordially,

A handwritten signature in cursive script, appearing to read 'G. M. Ellsworth'.

G. M. Ellsworth
Plant Manager
Monsanto Company

/th

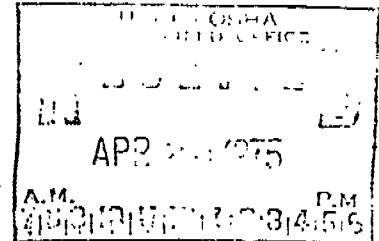
25V0025285

A small handwritten mark or signature in the bottom right corner of the page.

Monsanto

MONSANTO POLYMERS & PETROCHEMICALS CO.
730 Worcester Street
Indian Orchard, Massachusetts 01051
Phone: (413) 788-6911

April 22, 1975



*Company
Cited for
1910.95(b)(1)
Noise*

Mr. Rudolph Bayerle, Director
Occupational Safety & Health Administration
Room 501
436 Dwight Street
Springfield, Massachusetts 01103

SUBJECT: Regulated Areas.
Regulation 1910.93q VCM

Dear Mr. Bayerle:

Per the requirements set forth in Paragraph n of OSHA regulation 1910.93q, Exposure to Vinyl Chloride, please be informed that Monsanto Company has established two regulated areas in accordance with Federal requirements. Both of these regulated areas are at Monsanto's Springfield plant located at 730 Worcester Street, Indian Orchard, Massachusetts and are related to our polyvinyl chloride emulsion resins manufacturing operation. During normal operations there are approximately ten employees, including maintenance personnel, per eight hour period in the manufacturing area (regulated area No. 1) and approximately six employees in the warehouse area (regulated area No. 2). The manufacturing plant is operated continuously, seven days per week, and the warehouse operation is conducted on a five day, eight hour per day basis.

*#82 Pump house
84A + 84B
#95 EPO
#81 recovery room
/th*

includes rail car

1 sign in pool

Tank farm

*VCM
flare
stack*

Cordially,

G. M. Ellsworth
G. M. Ellsworth
Plant Manager
Monsanto Company

a unit of Monsanto Company

310025286

DEVIATION	DETECTED BY	CORRECTIVE ACTION	STATUS
levels high at seed ainer when dumping seed ch (1/2 days)	G. C.	Extend kettle spot exhaust fan system to remove vapors	In progress expected completion W/E 4/27/75 <i>DONE</i>
levels high in east er kettle floor trench n dumping kettle sh water	G. C.	Cover trench	Done
escapes from latex k manholes when covers open, especially dur- transfer operations	G. C., Century Meter	1. Close covers, upgrade gaskets and dogs, provide sight glasses, lights and water washers to allow inspection of tank contents without opening manholes 2. Improve flame arrester maintenance. 3. Provide for mandatory respirator wear when entering or cleaning tanks	1. Done 2. Continuous 3. PVC work rules in draft stage
escapes from sewer trench in RVCB building in compressor seal er is being dumped	G. C., Century Meter	1. Cover trench 2. Evacuate covered trench by tying into existing building exhaust fan	1. Done 2. In progress - expected completion W/E 4/27/75
erous minute leaks velop in VCM valve ems, kettle gaskets l VCM pipeline ange gaskets	Century Meter	Tighten, replace, etc.	Continuous