

1699 L17
Peterson v. UCC
COURT PAPERS
3/1/89

LEVINSON, AXELROD, WHEATON & GRAYZEL
2 Lincoln Highway
P.O. Box 2905
Edison, New Jersey 08818-2905
Attorneys for Plaintiff

SUPERIOR COURT OF NEW JERSEY
LAW DIVISION
MIDDLESEX COUNTY
DOCKET NO. L-060148-87

JOHN PETERSON et ux,

Plaintiff, :

vs.

CIVIL ACTION

UNION CARBIDE CORPORATION:
ETC.

SUPPLEMENTAL
INTERROGATORIES

Defendant.

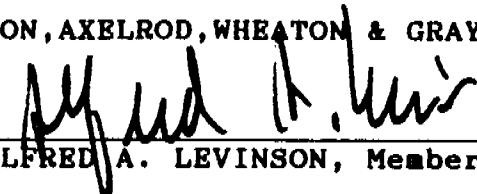
TO: PITNEY, HARDIN, KIPP & SZUCH, ESQS.
ATTORNEYS FOR DEFENDANT
163 Madison Ave.,
Morristown, N.J. 07960-1945

S I R S :

PLEASE TAKE NOTICE that the plaintiff requires of the
defendant answers under oath to the following set of
Interrogatories within the time prescribed by the Rules
of the Court.

LEVINSON, AXELROD, WHEATON & GRAYZEL

By


ALFRED A. LEVINSON, Member of Firm

Dated: March

1989

UCC 089113

X

AMBOY TERMINALING COMPANY - hereafter referred to as - OTD and ATC

POLYVINYL CHLORIDE - hereafter referred to as - PVC

VINYL CHLORIDE MONOMER - hereafter referred to as - VCM

1. What do the words OTD mean setting forth the title at length.
2. Who established the OTD Company.
3. Who paid for the purchase of the property where OTD was established.
4. Set forth the name of the first manager or supervisor of this plant.
5. Was this manager previously employed by Union Carbide and if so, give the date of the inception of his employment and the last date of his employment.
6. Did this defendant arrange or give Neuborne Brown the position of superintendent of OTD.
7. Did OTD or ATC have any other customers or clients who used the facilities for trans-shipping other than Union Carbide and if so, set forth their names.
8. Set forth the reason why this company was used by Union Carbide for trans-shipping rather than Union Carbide arranging for its own shipping and trans-shipping of PVC.
9. Was OTD a corporation and if so, set forth and attach hereto a copy of the corporation franchise.
10. Set forth the name and address of each and every officer of this corporation at the time of the inception in 1960.
11. Were these officers of this corporation former employees of Union Carbide and if so, set forth the date of their employment with Union Carbide and starting date with OTD.

UCC 089114

X

12. Set forth the relationship between OTD; ATC and Union Carbide throughout the period of the existence of OTD and ATC and how many bags were filled from these hoppers during the course of a working day.

13. When did the plant known as OTD close.

14. When did the plant known as ATC close.

15. Were inspections made by OSHA between 1966 and 1986 at OTD and ATC and if so, were these inspection reports provided to Union Carbide attach hereto copies of same.

16. Were OSHA inspections made of the manufacturing process of PVC at the Union Carbide plant in Texas City which PVC was subsequently shipped to Perth Amboy between 1966 and 1986 and if so attach hereto those inspection reports made.

17. Were any inspections made by NIOSH during those years of the Perth Amboy plant and if so, attach hereto copies of those reports.

18. Were any inspections made by NIOSH during those years of the Union Carbide plant in Texas and if so, attach hereto copies of those reports.

19. Set forth copies of any correspondence of Union Carbide to ATC or from ATC to Union Carbide in connection with the safety on the premises of ATC with reference to PVC or VCM dust.

20. Set forth copies of any and all data sheets promulgated by Union Carbide and or ATC covering the years from 1966 through 1986.

UCC 089115

X

21. Set forth in detail information relative to the composition of PVC in relation to any other chemical besides PVC that was shipped from Union Carbide.

22. In Rider 51 to defendant's answers to plaintiff's interrogatories, the defendant referred to the fact tht PVC contained an organic peroxide along with acetylides and other contamination including chlorinated hydrocarbons. What were the compositions insofar as this contamination in the PVC and VCM during the years 1967 through 1986.

23. The defendant in its answer to interrogatory #56 states that resins contained the following amounts of unconverted vinyl chloride when produced. Suspension process PVC homopolymer resin 200-1000 ppmw and copolymer resin 500 - 2000 ppmv after 1974. Please set this information down on an annual basis from 1966 to 1986. Also set forth the breakdown of the percentage of respirable particles during this period.

24. Set forth the manufacturing process used between 1966 and 1986 in the manufacturing of PVC.

25. Set forth what if anything was done to reduce the residue monomer in PVC powder and/or pellets during those years.

26. How long did this defendant keep the PVC in storage before shipping it to OTD/ATC.

27. How was it stored at the Texas City plant before shipping.

28. Was there any ventilation in the storage area at the Texas City plant and if so, describe said ventilation.

29. How was the PVC shipped to Perth Amboy.

UCC 089116

X

30. What was the average time of shipping between Texas City and Perth Amboy by (a) rail (b) boat (c) truck.

31. Were radon samples made to determine the residual monomer in the power and /or pellets prior to shipping to Perth Amboy and if so, set forth this information for each year from 1966 through 1986.

32. Were air samples taken at any time after the product PVC left the Texas plant up to the time it reached the Perth Amboy plant and if so, set forth the results of these amounts of PVC monomer.

33. Where was this evaluation done and describe the instrumentation used for such sampling.

34. Were any analytical laboratory facilities or inhouse facilities used to quantitate and measure the free monomer on the premises of the Texas City plant and upon arrival at the Perth Amboy plant and if so, set forth:

(a) the amount of free VCM in parts per million of volume in air

(b) the amount of free VCM in resin in parts per million by weight

35. Was a heat sealing process used in sealing the bags in the packing plant in Perth Amboy.

36. Was any analysis made of VCM in the air in the bag room prior to the heating sealer being used.

UCC 089117

37. Did this defendant have any other claims from its employees in its own manufacturing plants at any time prior to 1986 for injuries or illnesses sustained as a result of PVC or VCM exposure and if so, set forth the name and address of the claimants as well as the nature of same.

38. This defendant provided VCM and PVC toxicology abstracts for the years up to 1978. Please update this information up to 1986.

39. This defendant in Answer to question 70 of the original Interrogatories sets forth that protective clothing was upon premises of OTD/ATC in 1968 but use was not mandatory. Describe the type of clothing used and attach hereto a photograph of such clothing.

40. Were any respirators provided and if so, describe same giving the name and address of the manufacturer.

41. Where were these respirators to be used on these premises and was the use voluntary or mandatory.

42. Were the employees trained in the use of such respirators.

43. Were there any instructions on the use of such respirators. If so, set forth and attach a copy of said instructions.

44. Where were these respirators stored before given to the employees and after use by said employees.

UCC 089118

45. Were they cleaned after each use and if so, who did the cleaning and how were they cleaned.

46. What material were they made of.

47. How long a period of time could they be used at one time.

48. Were they disposal or could they be reused after each use.

49. Was there a face shield on said respirators and if so, was it a tight fit between the nose and outside air.

50. Was the defendant corporation aware of any hazards created by VCM in the air between the years 1966 and 1986 and if so, describe what those hazards were to the people and proximity thereto.

51. Did the defendant provide any respirators on its premises in Texas City where the PVC was manufactured and if so, set forth and describe the clothing given to its employees and type of respirators used.

52. Did this defendant have a library on PVC and/or other chemicals and if so, where is it located and when was it started.

UCC 089119

X

53. If the above question is answered in the affirmative set forth where this library was located and when was it started.

54. Were any written pamphlets on chemicals provided for the employees of either plant by Union Carbide between 1936 and 1986 and if so, attach a copy of same hereto.

55. Were any meetings held at either plant for the purpose of discussing the working conditions with the employees and if so, set forth when they were held and what they disclosed.

56. Did Union Carbide in any manner make the employees of OTD aware of any danger by virtue of exposure to PVC and/or VCM either from toxicity or physical presence of dust and if so, when was it made aware to them and by whom and the nature of such warning.

UCC 089120

57. Set forth for each year between 1966 and 1986 the amount of PVC shipped from Union Carbide to the Perth Amboy plant on a month to month basis.

58. Did this defendant at any time receive any complaints from persons inside the area of the Perth Amboy plant concerning itself with any powder in the air affecting their lives and property. If so, set forth the following:

- (a) attach a copy of such complaints received
- (b) attach a copy of any complaints and/or summons received from the City of Perth Amboy
- (c) attach a copy of any complaints received from any local or federal agencies.

59. Set forth the name and address of the person or persons sending such letters and/or complaints; the disposition of each and every complaint received and the manner in which it was handled and who handled same.

60 Did the employees of OTD/ATC ever submit a request to NIOSH requesting a health evaluation at the Perth Amboy facility and if so, set forth the following:

- (a) when was the request made
- (b) what was the outcome
- (c) what was done about it
- (d) was this defendant notified of the outcome

61. Did Union Carbide receive a copy of all memorandums made by the supervisor at OTD/ATC.

62. What was Emil Borch's position at the Perth Amboy plant.

63. Was Emil Borch ever given any instruction by Union Carbide concerning any danger of exposure to PVC or VCM and if so, set forth what information was given to him and when.

64. Did Union Carbide bring an action as a member of a Society of Plastic against OSHA to seek a modification or recision of OSHA regulations and standards set in connection with the manufacturing, shipping and exposure to VCM and PVC which case was heard in the U.S. Court of Appeals, 2nd Circuit, December 13, 1974 and decided January 31, 1975 and if so, set forth the following:

(a) what was the OSHA regulation or standard in connection with the PVC and VCM that Union Carbide was attempting to stop or modify.

(b) why was Union Carbide attempting to bring this action

(c) set forth and attach a copy of the opinion of this hearing.

65. Did Union Carbide at any time indicate to the workers directly or indirectly prior to 1975 that PVC was inert".

UCC 089122

66. Set forth the following information relative to the amount of PVC shipped to the Perth Amboy plant from 1966 to 1986.

- (a) the amount that was shipped in each container
- (b) the amount handled in bulk
- (c) the type of resin shipped
- (d) was it suspension PVC or other
- (e) was the resin type PVC shipped in bulk
- (f) was the suspension type PVC shipped in bulk
- (g) did the suspension type PVC contain more free monomer than resin produced by the solvent and nonsolvent
- (f) was the bag material produced by the solvent and/or nonsolvent free of monomer

67. Were readings ever taken between 1966 and 1986 of free monomer in the area of the resin produced by the solvent and nonsolvent process and the bag material produced by the solvent and nonsolvent process.

68. Set forth these readings and give the difference in the years 1966 through 1986.

69. Describe what is meant by bag material and by bulk resin.

70. Was this resin powder or pellet.

UCC 089123

71. This defendant answered a previous Interrogatory in the case of Maliko et al v. Union Carbide, bearing docket No. 76-1533 in the United State District Court for the District of New Jersey to wit, as follows:

Q. DID THIS DEFENDANT HAVE ANY KNOWLEDGE OF THE HAZARDS OF PVC RESIN DUST PARTICLES TO ANIMALS ANY TIME SUBSEQUENT TO 1940 AND IF SO, NAME THE ARTICLES IN WHICH IT FIRST BECAME FAMILIAR WITH SUCH HAZARDS EITHER BY INJECTION OF DUST PARTICLES, ACUTE TOXICITY, OR INHALATION OF MONOMERS.

A. Union Carbide is aware that one study has concluded that PVC resin dust is harmful to animals, but Union Carbide's evaluation of that conclusion has not yet been finalized. That study is "Influence of PVC dust on the respiratory system in the rat." by J. Popow (1969).

Did this defendant ever finalize any conclusion as to the influence of PVC dust on the respiratory system of an animal and in that case, a rat.

72. What was the conclusion and when did it finalize it.

73. Prior to commencing the manufacturing of PVC and VCM in 1930, did defendant perform any tests or studies to determine if this product would pose any danger to the worker who handled the product and give the following:

- (a) what tests were done, setting forth in detail.
- (b) what studies were done, setting forth in detail.
- (c) when were they made.
- (d) give the name and address of the person who made them.

UCC 089124

74. Prior to distribution of PVC and VCM in the stream of commerce did the defendant perform any tests or studies to determine if the product would pose any danger to the worker who would handle such product and if so, give the following:

- (a) what tests were done, setting forth in detail.
- (b) what studies were done, setting forth in detail.
- (c) when were they made.
- (d) give the name and address of the person who made them.

75. What was the residual content of VCM hereinafter referred to as RVC in the PVC shipped to the terminal in Perth Amboy by Union Carbide for each and every one from 1967 to 1986.

76. What was the residual content of VCM in bulk resins shipped to the terminal in Perth Amboy from 1967 to 1986.

78. Did Union Carbide's own employees ever perform any test or studies to determine if the VC resins posed any potential dangers to the health of the workers who were to handle the product during the years 1967 to 1979 and 1979 to 1986 and if so, set forth the following:

- (a) who performed the tests, setting forth their name and address.
- (b) what the test disclosed, setting forth a copy hereto.

79. Did this defendant ever perform any toxicological test on VC resins in its own laboratory between 1967 and 1968 and if so, set forth a copy of such test performed and who did such test.

80. Did this defendant know of the existence of VC monomer in its resins as shipped to OTD/ATC from 1966 to 1987 and if so, give the date it first knew of such existence.

81. Did this defendant read those published scientific studies which concerned itself with the toxicity of VC during the years the Perth Amboy plant was in operation to 1986.

82. Was this defendant aware of the study by J. Popow entitled "INFLUENCE OF PVC DUST ON THE RESPIRATORY SYSTEM IN THE RAT", which concluded that PVC dust was harmful to animals and if so, did defendant make an evaluation of that conclusion setting forth the results thereof.

83. Was this defendant familiar with those cases of angio carcinoma developed in the plant of B.F. Goodrich that manufactured PVC and if so, when did it become familiar with that information.

84. What did it do in relation to having received such information in connection with its own manufacture and distribution of its resins.

85. Did this defendant ever provide any safety engineer to inspect the facility in Perth Amboy and if so, set forth:

(a) copy of such report.

(b) name and address of the person making such report.

UCC 089126

86. Set forth the levels of VCM in the bagging room in OTD/ATC between the years 1966 and 1986.

SET FORTH AND DESCRIBE THE FOLLOWING IN DETAIL AS TO LABEL WARNINGS AND HEALTH INSTRUCTIONS.

87. Set forth and attach hereto any and all warning labels of any kind placed on walls, equipment, shipping packages or given to employees indicating PVC to be a carcinogenic agent in its Texas City plant and at its Perth Amboy plant.

88. Did this defendant provide any labels of any kind on bulk containers being shipped to OTD/ATC between 1966 and 1986 and if so, set forth the following:

(a) attach a copy of the label placed on said container.

(b) if not attached to the bulk container, was any written material provided to OTD and if so, attach a copy of same.

(c) Did Union Carbide ship any labels through the mail to OTD to be placed on the bags that were being shipped and if so, set forth and attach such label.

(d) Did these containers have any other label between 1967 and 1986 indicating "For Industry Use Only" and attach copy of same.

89. Did this defendant at any time issue any labels to be placed on the pallets which contained the bags that were to be shipped from OTD/ATC to any other point.

90. If the above question is answered in the affirmative, set forth (a) where were these labels directed to be placed (b) who printed the labels, ie., who paid for the printing costs.

UCC 089127

91. Attached hereto is a label 10 3/4 inches wide by 6 1/4 inch high which has the following statement "POLYVINYL CHLORIDE CONTAINS VINYL CHLORIDE VINYL CHLORIDE IS A CANCER-SUSPECT AGENT". Was this the label that was to be attached to the pallets and which contained the subscription of UCC-6005-4.

92. When was this label first directed to OTD/ATC.

93. Why was this label printed for the first time and directed to be placed on PVC in trans-shipping.

94. Attached hereto is a smaller label 3 1/2 by 2 inches which has the same statement. Was this label also printed at the cost of UC and when was it directed to OTD to be placed on bags.

95. When were these labels printed and where were they to be placed.

96. Why were these labels printed in the year above given.

97. Who directed these labels to be printed and promulgated.

98. Was there ever an order from any Federal agency to promulgate this particular sign or one similar to it and if so, what is the name of the agency.

UCC 089128

99. Was this defendant a member of the Manufacturing Chemists' Association Inc. at any time between 1966 and 1986 and if so, set forth the dates of such membership.

100. What is the MCA.

101. Attached hereto is a copy of a MCA chem card which has the statement in the upper righthand corner CC-46 February 1976. Was this defendant aware of this transportation emergency guide and if so, when did it become aware of it.

102. The sign sets forth "Cancer Suspect Agent". When did this defendant first become aware that VC was a cancer suspect agent.

103. Did this defendant ever notify the employees of OTD that VC was a cancer suspect agent and if so, set forth the following: (a) the year they first notified such employees (b) the manner in which they notified such employees and (c) what this defendant did to minimize the exposure of the employees to such VC material.

104. Attach hereto any and all OSHA standards from which this defendant learned further that VC was a cancer suspect agent.

105. Did this defendant become aware on or about November 1976 that a complaint was made to Dr. Jerome P. Flesch of the National Institute of Occupational Safety & Health that the employees of ATC were concerned with PVC hazards as being carcinogenic.

106. Attached hereto is a copy of a request for a health hazard evaluation signed by William Fodor of ATC along with his covering letter. Did this defendant receive a copy of this letter and application.

UCC 089129

107. Set forth any and all inhouse laboratory studies made or studies made by private analytical laboratories to determine the carcinogenic properties of PVC.

108. Attach hereto the following Exhibits as submitted in the case of Maliko et al v. Union Carbide at the time of Pre-trial.

D-1 Bibliography on Vinyl Chloride, prepared by the Office of Occupational Health Surveillance and Biometrics and Office of Research and Standards Development, dated May 22, 1974.

D-2 List entitled "References and Other Data Sources" and the individual papers listed therein.

D-3 Representative product descriptions of various types of polyvinyl chloride resins.

D-4 Material Safety Data Sheet for PVC and VC.

D-5 Sample labels attached to Union Carbide products.

D-6 OSHA Vinyl Chloride Standards.

D-7 Chart entitled "Union Carbide Corporation Material Through ATC".

D-8 Polyethylene Toxicity Studies Conducted by Mellon Institute for Union Carbide.

D-9 Bis-phenol-A Studies Conducted by Mellon Institute for Union Carbide.

D-10 Polystyrene Studies Conducted by Mellon Institute for Union Carbide.

D-11 Reference list of all literature studies by Union Carbide concerning PVC, VCM and other resins.

D-12 Paper: "Industrial Hygiene and Toxicology" by F.A.Patty Vol.II Toxicology, Fusselt and Irish.

D-13 Paper: "Dangerous Properties of Industrial Materials" by N.I.Sox.

D-14 Paper: "Handbook of Toxicology" by W.S. Spector.

D-15 Paper: "Practical Toxicology of Plastics" by Lefaux.

D-16 Sample weight tickets.

D-17 Hndling Guide for Potentially Dangerous Materials.

D-18 Material Safety Data Sheet for Phenol.

D-19 Paper: "Scientific and Technical Assessment Report on Vinyl chloride and Polyvinyl Chloride", EPA-600/6.75-004, June 1975.

D-20 Material Safety Data Sheets for the following resins:

UCAR Bis-phenol-A
Polyethylene resins

D-21 Sample Warning Label for Polyvinyl Chloride.

D-22 List: "Vinyl Chloride - Polyvinyl Chloride Toxicology:."

D-23 Volume entitled "Attachment A", containing Residual VCM Analysis and related documents concerning VCM levels in Union Carbide Resins.

D-24 Volume entitled "Polyvinyl Chloride - Vinyl Chloride Monomer/Literature Survey and Engineering Opinions/Attachment B".

D-25 Paper: "Chemical Safety Data Sheet SD-56 - Properties and Essential Information for Safe Handling and Use of Vinyl Chloride" by Manufacturing Chemists Association (R.N.Wheeler, Jr., Chairman)

D-26 Paper: "Control of Vinyl Chloride Emissions in Distribution Operations" by M.E. Sutherland and R.N. Wheeler, Jr.

D-27 Paper: "Specialty Vinyl Chloride Resin Processes/Effects of Governmental Regulations" by R.N. Wheeler, Jr.

D-28 Paper: "Automatic Monitoring Systems for Vinyl Chloride" by R.N.Wheeler Jr.

D-29 Paper: "Monitoring the Concentration of Vinyl Chloride in the Work Place or Ambient Air" by R.N. Wheeler Jr.,

D-30 Paper: "Exposure to Vinyl Chloride", Fed. Register, Vol. 39, No. 194, October 4, 1974

D-31 Study: "Epidemiological Investigation of the PVC Industry in reference to Occupational Acroosteolysis", February 1969.

D-32 Study: "Epidemiological Study of Vinyl Chloride Workers", May 3, 1974 by Tabershaw and Cooper.

D-33 Study: "Epidemiological Study of Vinyl Chloride Workers employed by Union Carbide, South Charleston Plant", December 1976 by Equitable Environmental Health, Inc.

D-34 Study: "Report on a Mortality Study Covering Employees of PVC Fabricators", February 1976 by Organization Resources Counselors.

D-35 Study: "Epidemiological Study of Vinyl Chloride Workers", January 1978 by Equitable Environmental Health Inc.

D-40 List entitled "Polyvinyl Chloride - Vinyl Chloride Monomer/Chronological Bibliography".

D-41 Safety and health records of Amboy Terminaling Company.

D-42 Records and documents of Amboy Terminaling Company concerning vinyl choride monomer and polyvinyl chloride.

D-43 Monthly summary reports of OTD Terminals and Amboy Terminaling Company.

D-44 Reports of Gollob Analytical Service Corp. rendered to ATC.

D-45 Bullentin Board Notices at ATC.

D-46 Sample bags used to ship products.

109. Were any medical examinations of employees of ATC ever performed at the request of Union Carbide at any time after it first learned from OSHA the fact that PVC was a suspected carcinogen.

110. If such examination was made set forth the following information:

(a) a copy of any direction or correspondence ordering such examination

(b) the person who directed the examination

(c) the name of the doctor who was to make the examination

(d) the manner in which the employees of ATC were directed to attend such examination

UCC 089132

111. Was there ever a questionnaire ever sent to the employees regarding an examination and if so, set forth and attach a copy hereto.

112. Did this defendant have a plant doctor at OTD/ATC.

113. Who was the plant doctor.

114. Was he ever directed of the fact that PVC was a suspected carcinogen.

115. What were his instructions in relation to examining the employees of OTD relative to such problem.

116. What were the results of such examination.

117. Did this defendant have occasion to have any studies made of those employees of OTD who were or might be victims of cancer in any form between 1966 and 1986 and if so, set forth the results of those studies.

118. Was there any notice to this defendant subsequent to 1975 of cancer suffered by 4 employees of the OTD plant, to wit, EUGENE MALIKO; ARTHUR SCHAFFER; HARRY WILKINSON and HENRY MAZANOWSKI and if so, when did the defendant learn of the cancer affliction of these 4 employees and how did it learn.

119. In what manner did the defendant, UC, direct a change of its plant's organization of health facilities and its health and safety control of the plant in Perth Amboy subsequent to learning of the cancer of its 4 employees.

120. Set forth the name and address of each and every witness whom the defendant intends to produce at the time of trial who has knowledge of the relevant facts herein.

121. Set forth the name and address of each and every expert witness the defendant intends to call upon at the time of trial to testify on its behalf.

122. In dispersion PVC resins, set forth the amount of unconverted monomers present by giving the precise concentration of monomers in the resin particles manufactured by the defendant between 1967 and 1986.

123. Did this defendant maintain in its laboratory, ie., the laboratory working with these specific products any fixed mathematical standards relating to the concentration of the monomers between 1967 and 1986.

124. If the above question is answered in the affirmative, set forth this data for each and every year.

125. Set forth those years in which suspension type PVC was shipped to OTD/ATC.

126. Set forth the years other types of PVC was shipped describing each one.

127. Did the suspension from PVC contain free monomer and if so, set forth the amount of the free monomer and actual concentration in the products in mathematical form for these years.

128. Was there any threshold value of level established by OSHA, FDA, NIOSH or EPA and if so, set forth in detail that group which established the same as well as the date and number of such regulation.

129. What relationship does the threshold limit value for VCM in air have with threshold limit value for VCM in the resin when the resin particle is exposed to ambient air.

130. Explain fully the term ppm of VCM in a resin particle as shipped in bulk or bags.

UCC 089135

131. What do the units represent in the ppm term, physically and chemically.

132. What does the ppm term mean when used for ambient air.

133. What are the units and what physical and chemical interpretation is associated with the units of ppm for ambient air that has been polluted with VCM gas.

134. What is the conversion factor for ppm (air) in order to obtain the equivalent in mg/m³ (milligrams per meter cubed).

135. Set forth what instrument was used by the defendant between 1967 and 1986 to determine the existence or presence or the amount thereof of free monomer in the air.

136. Did this defendant have occasion to use an instrument known as "chromatography-Mass Spectrometer instrument and if so, set forth the following:

(a) the purpose of this instrument

(b) when it was first obtained

(c) When was it used and in what year

(d) was it used on PVC being shipped to OTD and ATC between 1967 and 1986

UCC 089136

137. What was the complete chemical breakdown qualitatively and quantitatively of PVC resins manufactured and shipped by this defendant to the plaintiffs' employer for the period of 1967 and 1986.

138. The defendant has indicated that it shipped polyethylene resins, vinyl resins, bis-phenol-A resins and polystyrene resins to OTD/ATC. Set forth the amount of each shipped between the years 1967 and 1986.

139. Where were these resins shipped from, i.e., what UC plant.

140. In what manner were these chemicals shipped and how were they packaged.

141. Set forth the label attached to each product.

142. In April 1975 Occupational Safety and Health Act standards became effective lowering the VC exposure limit to 1 ppm maximum for an eight hour time weighted average or 5 ppm maximum for any period not exceeding fifteen minutes. Did this defendant make any test to determine whether the VC being shipped to the Perth Amboy plant was in conformance with that mandate.

143. How did it do it and what records were kept setting forth copies of those records on a daily, weekly or monthly interval.