

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MASSACHUSETTS

**DOCKETED**

ANNE ANDERSON, for herself, and as Parent  
and Next Friend of CHARLES ANDERSON, and  
as Administratrix of the Estate of JAMES  
ANDERSON; CHRISTINE ANDERSON; RICHARD  
AUFIERO, for himself, and as Parent and  
Next Friend of ERIC AUFIERO, and as  
Administrator of the Estate of JARROD  
AUFIERO; LAUREN AUFIERO; DIANE AUFIERO,  
for herself, and as Parent and Next Friend  
of JESSICA AUFIERO; ROBERT AUFIERO;  
KATHRYN GAMACHE, for herself, and as Parent  
and Next Friend of AMY GAMACHE; TODD L.  
GAMACHE; ROLAND GAMACHE; PATRICIA KANE for  
herself, and as Parent and Next Friend of  
MARGARET KANE, KATHLEEN KANE, TIMOTHY KANE  
and KEVIN KANE, JR.; KEVIN KANE; DONNA L.  
ROBBINS, for herself and as Parent and  
Next Friend of KEVIN ROBBINS, and as  
Administratrix of the Estate of CARL  
ROBBINS, III; MARY J. TOOMEY, for herself  
and as Next Friend of MARY EILEEN TOOMEY,  
and as Administratrix of the Estate of  
PATRICK TOOMEY; RICHARD J. TOOMEY; JOAN  
ZONA, for herself, and as Administratrix  
of the Estate of MICHAEL ZONA; RONALD ZONA;  
ANN ZONA; JOHN ZONA; and PAT ZONA,

Plaintiffs

v.

CRYOVAC, Division of W.R. GRACE & CO.;  
W.R. GRACE & CO.; JOHN J. RILEY COMPANY,  
Division of BEATRICE FOODS CO.; BEATRICE  
FOODS CO.; and XYZ COMPANY(IES),

Defendants

Civil Action No.

82-1672-S

SECOND AMENDED COMPLAINT

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MASSACHUSETTS

ANNE ANDERSON, et al., )  
 )  
 Plaintiffs )  
 ) Civil Action  
 v. )  
 ) No. 82-1672-S  
 CRYOVAC, Division of W.R. Grace )  
 & CO. et al., )  
 )  
 Defendants )

SECOND AMENDED COMPLAINT FOR PERSONAL  
INJURY, WRONGFUL DEATH AND INJUNCTION

Statement of the Case

1. For many years until May, 1979, the groundwater used by plaintiffs and plaintiffs' decedents for drinking and household purposes was contaminated with toxic chemicals disposed of by defendants. Plaintiffs and plaintiffs' decedents have either contracted fatal illnesses, been exposed to a significant risk of contracting fatal or otherwise serious illnesses and/or suffered significant mental anguish as a result of the contamination of their drinking water. Plaintiffs seek compensatory and punitive damages and an injunction.

Plaintiffs

2. Plaintiff Anne Anderson is a resident at and owner of the property at 11 Orange Street in Woburn, Massachusetts, where she has lived for seventeen years. She is the mother of Christine Anderson and mother and parent and next friend of

Charles Anderson; and she was the mother and is the administratrix of the estate of James Anderson, born July 16, 1968, diagnosed in January, 1972 as having acute lymphocytic leukemia at the age of three, and died of leukemia nine years later, on January 18, 1981.

3. Plaintiff Christine Anderson, born in 1962, age twenty, has resided at 11 Orange Street in Woburn for the past seventeen years.

4. Plaintiff Charles Anderson, age 16, has resided at 11 Orange Street in Woburn since the time of his birth in 1966.

5. Plaintiff Lauren Aufiero is a resident of and owns property at 15 Carmen Terrace in Woburn where she has lived for 6 years. She is the mother of Eric Aufiero and was the mother of Jarrod Aufiero, born in 1979, diagnosed as having leukemia at age 3 in June, 1982 and died of leukemia at the age of 3 on September 20, 1982.

6. Plaintiff Richard Aufiero is a resident of and owns property at 15 Carmen Terrace in Woburn where he has lived for 4 years. He is the father of Eric Aufiero and was the father and is the administrator of the estate of Jarrod Aufiero, deceased.

7. Plaintiff Eric Aufiero has resided at 15 Carmen Terrace in Woburn since his birth in 1981.

8. Plaintiff Robert Aufiero is a resident of and owns property at 50 Squire Road, Winchester where he has lived since

1979. From 1973 until 1979 he resided and owned property at 2 Fisher Terrace in Woburn. He is the father of Jessica Aufiero.

9. Plaintiff Diane Aufiero is a resident of and owns property at 50 Squire Road, Winchester where she has lived since 1979. From 1973 until 1979 she resided and owned property at 2 Fisher Terrace in Woburn. She is the mother of Jessica Aufiero.

10. Plaintiff Jessica Aufiero has resided at 50 Squire Road, Winchester since January, 1979. From her birth, April 19, 1976 until January, 1979 she resided at 2 Fisher Terrace in Woburn. In March, 1981, at the age of four, she was diagnosed as having leukemia. She is under treatment for her disease at Children's Hospital in Boston. Her leukemia is currently in remission.

11. Plaintiff Roland L. Gamache is a resident of and owns property at 110 Montvale Road in Woburn, Massachusetts where he has lived for eleven years. He is the father of Amy Gamache and Todd L. Gamache.

12. Plaintiff Kathryn Gamache is a resident of and owns property at 110 Montvale Road in Woburn where she has lived for eleven years. Prior to that she lived next door at 18 Floyd Street for more than 20 years. She is the mother and parent and next friend of Amy Gamache and Todd L. Gamache.

13. Plaintiff Amy Gamache, age 10, has lived at 110 Montvale Road in Woburn since the time of her birth in September, 1971.

14. Plaintiff Todd L. Gamache, age 8, has been a resident at 110 Montvale Road in Woburn since the time of his birth in August, 1973.

15. Plaintiff Kevin Kane is a resident of and owns property at 8 Henry Avenue in Woburn, where he has lived for 14 years. He is the father of Margaret Kane, Kathleen Kane, Timothy Kane and Kevin Kane, Jr.

16. Plaintiff Patricia Kane is a resident of and owns property at 8 Henry Avenue in Woburn, where she has lived for 14 years. She is the mother and parent and next friend of Margaret Kane, Kathleen Kane, Timothy Kane and Kevin Kane, Jr.

17. Plaintiff Margaret Kane, born in 1964, age 17, has been a resident at 8 Henry Avenue in Woburn since the age of 3.

18. Plaintiff Kathleen Kane, born in 1967, age 15, has been a resident at 8 Henry Avenue in Woburn since the age of 1.

19. Plaintiff Timothy Kane, age 13, has been a resident at 8 Henry Avenue in Woburn since the time of his birth in 1968.

20. Plaintiff Kevin Kane, Jr. has been a resident at 8 Henry Avenue in Woburn since the time of his birth, October 22, 1970. In June, 1973, at the age of two, he was diagnosed as having leukemia. He was under treatment for his disease at

Massachusetts General Hospital for seven years. His leukemia is currently in remission.

21. Plaintiff Donna L. Robbins is a resident of and owns property at 6 Lowell Street in Woburn where she has lived for the past eight years. Prior to July, 1974, she resided at 40 Merrimack Street in Woburn. She is the mother and parent and next friend of Kevin Robbins and was the mother and is the administratrix of the estate of Carl W. Robbins, III, born March 15, 1972, diagnosed in October, 1976 at age four of having leukemia, and died at age 9, August 10, 1981.

22. Plaintiff Kevin Robbins has resided at 6 Lowell Street in Woburn since his birth in January, 1975.

23. Plaintiff Richard J. Toomey is a resident of and owns property at 43 Wood Street in Woburn where he has lived for eighteen years. He is the father of Mary Eileen Toomey, born in 1965 and Sheila Toomey, born in 1982 and was the father of Patrick Toomey, born June 29, 1969, diagnosed as having leukemia August, 1979 at the age of ten, and died at the age of 11 on March 25, 1981.

24. Plaintiff Mary J. Toomey is a resident of and owns property at 43 Wood Street in Woburn where she has lived for eighteen years. She is the mother and parent and next friend of Mary Eileen Toomey, Sheila Toomey, and was the mother and is the administratrix of the estate of Patrick Toomey, deceased.

25. Plaintiff Mary Eileen Toomey, age 17, has resided at 43 Wood Street in Woburn since the time of her birth in 1965.

26. Plaintiff Pat Zona is a resident of and owns property at 108 Montvale Road in Woburn where he has lived for 20 years. He is the father of Ronald Zona, Ann Zona, and John Zona; and was the father of Michael Zona, born in 1966, diagnosed as having leukemia at the age of 6 in June, 1973 and dead at the age of 8 on February 23, 1974.

27. Plaintiff Joan M. Zona is a resident of and owns property at 108 Montvale Road in Woburn where she has lived for 20 years. She is the mother of Ronald Zona, Ann Zona, John Zona and was the mother and is the administratrix of the estate of Michael Zona, deceased.

28. Plaintiff Ronald Zona, born in 1960, age 21, has lived at 108 Montvale Road in Woburn since the age of one.

29. Plaintiff Ann Zona, born in 1961, age 20, has lived at 108 Montvale Road in Woburn since her birth in 1961.

30. Plaintiff John Zona, age 19, has lived at 108 Montvale Road in Woburn since the time of his birth in 1963.

#### Defendants

31. Defendant Cryovac Division is a division of the Industrial Chemical Group of W.R. Grace & Co. Cryovac Division is doing business in Massachusetts at 369 Washington Street in East Woburn.

32. W.R. Grace & Co. has its headquarters at Grace Plaza, 114 Avenue of the Americas, in New York City, and is incorporated under the laws of the State of Connecticut. It is doing business in Massachusetts through Cryovac Division and other business activities. Hereinafter, defendants Cryovac Division and W.R. Grace & Co. will be referred to jointly as W.R. Grace.

33. Defendant John J. Riley Company located at 228 Salem Street in East Woburn, was between 1909 and 1978 a family business owned and run by Mr. John J. Riley. In December of 1978, the Riley Company became a division of Beatrice Foods, Inc. The defendant operates a tannery at the Woburn site and is doing business in Massachusetts.

34. Defendant Beatrice Foods Co. is incorporated under the laws of the State of Delaware, has its headquarters at 2 North LaSalle Street, Chicago, Illinois, and is doing business in Massachusetts through the Riley Tannery and other business activities. Hereinafter defendants John J. Riley Company and Beatrice Foods Co. will be referred to jointly as Beatrice Foods.

35. Beatrice Foods also owns an undeveloped site of 14.73 acres, situated just to the northeast of the tannery, bordering the Aberjona River. This site has been used as a dump for chemical wastes.

36. XYZ Company is a company/companies, identity presently unknown, which is/are doing business in or near Woburn, and has/have contributed to the contamination of water complained of herein.

#### DEFINITIONS

37. Several terms or expressions of particular importance will be repeated in the course of this Complaint. These terms, as used in this Complaint, are defined or explained in the following paragraphs so that they will be more readily understood in the text:

- a. The "Ambient Level" of a chemical in any particular place is the amount of the chemical scientists would ordinarily expect to measure in the absence of an incremental amount of the chemical resulting from an outside source.
- b. The term "Carcinogen" refers to any substance which has been proven to cause cancer or is suspected to cause cancer in humans, animals or both.
- c. The term "Mutagen" refers to any chemical substance that causes a change in the characters of a gene that is perpetuated in subsequent offspring or divisions of the organism or cell in which the change occurs.

- d. The term "Toxic" or "Toxicological Effect" refers to adverse biological or health effects which result from either acute (short-term) or chronic (long-term) exposure to a chemical. Toxicological effects in humans include, but are not limited to, respiratory diseases, liver abnormalities, birth defects, central nervous system disorders, skin irritations, nausea, and ultimately, death.
- e. The term of chemical measurement used in this complaint is parts per billion (ppb). This measure of water contamination is equivalent to micrograms per liter.
- f. In this complaint we compare levels of contaminants found in the groundwater and drinking water in Woburn with levels of contaminants deemed to cause certain adverse health effects. The measures of health risk associated with contaminants used in this complaint are derived from guidelines developed by the United States Environmental Protection Agency (EPA) pursuant to two statutes.

Section 304(a)(1) of the Clean Water Act, 33 U.S.C. 1314(a)(1) provides guidelines for the protection of human health based on the carcino-

genic, toxic or organoleptic (taste and odor) properties of chemicals. For carcinogens EPA has established a range of concentrations corresponding to incremental cancer risks (one additional case of cancer in populations of 100,000, one million and ten million respectively). These estimates are based on an assumed population of adult males, in average exposure conditions, with exposure over the course of a lifetime (30 years). In this complaint, the concentration level estimated to cause one additional cancer in a population of one million is used as the basis for comparison with concentrations found in the drinking water and groundwater in Woburn.

Guidelines developed by EPA under Section 1412 of the Safe Drinking Water Act, 42 U.S.C. 300g-1(e) (SDWA), are also presented in this complaint for comparison purposes. These standards represent suggested levels at which EPA believes no adverse acute affects in human population will occur from 10-day exposures to certain contaminants and no adverse non-cancer chronic affects will occur from extended exposure to certain contaminants.

## GENERAL ALLEGATIONS

### The Site and Surroundings

38. Woburn is a city of 35,000 located about twelve miles north of Boston. It has been the locus of various manufacturing industries since the mid-nineteenth century and remains today an industrial and residential community.

39. Until 1979 the city's entire municipal water supply was provided by a number of groundwater wells located within the city limits. Woburn is located in an area with several abundant aquifers. These aquifers, consisting of underground strata of rock, sand and gravel permeated with water, are separated by barriers of bedrock, some of which rise above the surface of the ground forming rock outcrops.

40. Two wells of particular relevance in this proceeding, city Wells G and H, were opened in East Woburn in 1964 and 1966, respectively. These wells drew on an aquifer previously untapped by the city. These wells were intended as a supplemental water supply and were not in constant use. They were drawn on heavily, however, during the period they were in use, between 1964 and 1979. During this period, the wells provided a substantial proportion of the domestic water supply for most of the homes in Woburn, near to and east of Main Street (Route 38).

41. The aquifer that supplies Wells G and H underlies the entire eastern portion of Woburn and forms a part of the Aberjona River watershed. The Aberjona has its headwaters in Winchester,

north of Woburn and in Reading, to the east. The river flows through the eastern portion of Woburn and empties into the Mystic Lakes to the south. The river valley decreases gradually in elevation from north to south, the northern end being about 65 feet above sea level and the southern end about 35 feet above sea level. This geological configuration forms a trough for surface water, channeling run-off from either side of the river and from the north toward the center of the area, and from there, south at a gentle rate along the bed of the river. Wells G and H are located just off the banks of the Aberjona, near the center of this hydro-geologic system.

42. The flow of groundwater within the East Woburn aquifer closely parallels surface water flow. In the north portion of Woburn and at the Woburn-Wilmington border, the sub-surface area is characterized by four shallow bedrock trenches which meet to form one deep north-south trending trench. The deep trench is approximately two miles long and reaches a depth of greater than 100 feet below the ground surface, providing a sink for groundwater. Wells G and H which are 88 and 90 feet deep respectively, draw on this aquifer near a low point of this sink in the bedrock trench.

### Contaminated Water Wells

43. In May, 1979, after water had been drawn from these wells over the course of fifteen years, Wells G and H were tested for volatile organic contamination. They were found to have hazardous levels of contaminants and were immediately shut down.

44. In tests for contaminants in 1979, and subsequent tests in 1980 and 1981, Wells G and H showed consistently high concentrations of two contaminants. Trichloroethylene was identified in concentrations as high as 400 ppb (parts per billion) and Tetrachloroethylene was found at 43 ppb.

#### A. Trichloroethylene

(1) Trichloroethylene (TCE), is a potent central nervous system depressant and can cause severe neurological symptoms such as dizziness, loss of appetite and loss of motor coordination. It can produce liver damage at certain exposure levels and cause cell mutations and cancer. TCE can be dangerous if absorbed through the skin, ingested in water or breathed in the air. TCE is volatile and some of it will volatilize when water in which it is contained is exposed to air thus creating a toxic fume.

(2) TCE has been designated a hazardous waste and a hazardous waste constituent under regulations published by the U.S. Environmental Protection Agency (EPA) that became effective on November 19, 1980, 40 C.F.R. §§ 261.11, 261.33 and Appendix VIII, 45 Fed. Reg. 33121, 33124 and 33132 (May 19, 1980), and is

a contaminant within the meaning of Section 1401(6) of the SDWA, 42 U.S.C. § 300f(6).

(3) EPA's recommendation with regard to standards for drinking water is that for a maximum protection of human health from potential carcinogenic effects due to exposure of TCE through ingestion of contaminated water, the ambient water concentration should be zero. The level of lifetime exposure to TCE which can be expected to pose a cancer rate of one additional cancer in an exposed population of one million people is 2.7 ppb. The concentration of TCE found in Wells G and H is 148 times this level. The concentration is also twice the guideline established by EPA to protect against acute illness from a 10-day exposure. The concentration is 5 times the guideline established by EPA to protect against chronic illness (other than cancer) after long-term exposure.

#### B. Tetrachloroethylene

(1) Tetrachloroethylene exhibits adverse effects on the central nervous system and is also a carcinogen. Its effects can include depression, nausea, liver dysfunction, chronic bone marrow depression and leukemia. Tetrachloroethylene can be dangerous if absorbed through the skin, ingested in water or breathed in the air. Tetrachloroethylene is volatile and some of it will volatilize when water in which it is contained is exposed to air thus creating a toxic fume.

(2) Tetrachloroethylene has been designated a hazardous waste and a hazardous waste constituent under published EPA regulations that became effective on November 19, 1980, 40 C.F.R. §§ 261.11, 261.33 and Appendix VIII, 45 Fed. Reg. 33121, 33124 and 33132 (May 19, 1980), and is a contaminant within the meaning of Section 1401(6) of the SDWA, 42 U.S.C. § 300f(6).

(3) EPA's current recommendation with regard to standards for drinking water is that for maximum protection of human health from potential carcinogenic effects due to exposure of Tetrachloroethylene through ingestion of contaminated water, the ambient water concentration should be zero. The level of lifetime exposure to Tetrachloroethylene which can be expected to pose a cancer rate of one additional cancer in an exposed population of one million people is 0.8 ppb. The concentration of tetrachloroethylene found in Wells G and H ranged as high as 51 times this level. The concentration is also more than twice the guideline established by EPA to protect against chronic illness (other than cancer) after long-term exposure.

45. The following toxic chemicals, recognized as having serious health effects among human populations were also identified in the well water:

1,2-trans-dichloroethylene  
1,1,1-trichloroethane  
benzene  
chloroform

A. 1,2-Transdichloroethylene

(1) 1,2-Transdichloroethylene is an irritant in high concentrations and a narcotic. Dichloroethylenes as a class can cause liver and kidney damage and dermatitis, and are suspected carcinogens.

(2) 1,2-Transdichloroethylene has been designated a hazardous waste and hazardous waste constituent under published EPA regulations that became effective on November 19, 1980, 40 C.F.R. §§ 261.11, 261.33 and Appendix VIII, 45 Fed. Reg. 33121, 33124 and 33132 (May 19, 1980), and is a contaminant within the meaning of Section 1401(6) of the SDWA, 42 U.S.C. § 300f(6).

B. 1,1,1-Trichloroethane

(1) 1,1,1-Trichloroethane is an eye and mucous membrane irritant, a narcotic in high concentrations, and mammalian toxicity tests have resulted in decreased survival rates.

(2) 1, 1, 1 Trichloroethane has been designated a hazardous waste and hazardous waste constituent under published EPA regulations that became effective on November 19, 1980, 40 C.F.R. §§ 261.11, 261.33 and Appendix VIII, 45 Fed. Reg. 33121, 33124 and 33132 (May 19, 1980), and is a contaminant within the meaning of Section 1401(6) of the SDWA, 42 U.S.C. § 300f(6).

### C. Benzene

(1) Benzene is a central nervous system depressant. Exposure to benzene can result in severe changes in blood chemistry, intoxication, fatigue, loss of appetite and other nervous system disorders. Benzene is a carcinogen. It has produced dose-related increases in cancers in experimental animals, including mammary gland carcinomas and leukemias, and is known to produce leukemia and Hodgkin's disease in humans.

(2) Benzene has been designated a hazardous waste and a hazardous waste constituent under published EPA regulations that became effective on November 19, 1980, 40 C.F.R. §§ 261.11, 261.33 and Appendix VIII, 45 Fed. Reg. 33121, 33124 and 33132 (May 19, 1980), and is a contaminant within the meaning of Section 1401(6) of the SDWA, 42 U.S.C. § 300f(6).

### D. Chloroform

(1) Chloroform sensitizes the heart, increasing the possibility of fatal cardiac arrhythmia. At high doses it is toxic to the liver, kidney and central nervous system. It produces teratogenic effects in experimental animals. Chloroform is a carcinogen. Epidemiological studies on human populations exposed to chloroform in the public drinking water have shown correlations between chloroform and population cancer rates.

(2) Chloroform has been designated a hazardous waste and a hazardous waste constituent under published EPA regulations that became effective on November 19, 1980, 40 C.F.R. §§ 261.11, 261.33 and Appendix VIII, 45 Fed. Reg. 33121, 33124, and 33132 (May 19, 1980), and is a contaminant within the meaning of Section 1401(6) of the SDWA, 42 U.S.C. § 300f(6).

46. The ingestion of all these chemicals in combination may produce synergistic effects that can be worse than the recognized adverse health effects of any one of the contaminants described above.

47. As a result of the detected contamination, EPA undertook an evaluation of the quality of the groundwater that feeds Wells G and H. Within one square mile of the Wells the highest concentrations of the contaminants listed below that were found by EPA were:

A. 1,372 ppb of trichloroethylene. This is over five hundred times the level estimated to produce one additional case of cancer in a population of a million.

B. 240 ppb of tetrachloroethylene. This is over three hundred times the level estimated to produce one additional case of cancer in a population of a million.

48. These contaminants are entering the G and H Well area from at least two directions. High levels of TCE and Tetrachloroethylene were found in the groundwater northeast of the wells, indicating a plume with a source northeast of the wells

beginning approximately where the W.R. Grace facility is located. High concentrations of TCE were found in the groundwater to the west and slightly south of the wells. The highest concentrations were found in a well on the property owned by Beatrice Foods.

### The Activities of the Defendants

#### W.R. Grace

49. W.R. Grace is located northeast of Wells G and H within the Aberjona River Valley trench. The operation at this site consists of the manufacturing of packaging machinery and employs over 100 people. W.R. Grace has used and stored trichloroethylene and other solvents at this site at least as early as 1965.

50. During the period of operation of Wells G and H, W.R. Grace disposed of or allowed to be disposed, chemical waste products, organic solvents including trichloroethylene and other wastes on their property at 369 Washington Street in East Woburn.

51. TCE and other chlorinated volatile organics are slightly soluble in water and have a density greater than water. Surface and groundwater from the W.R. Grace site moves directly toward Wells G and H. The solvents spilled upon the surface of the ground at W.R. Grace, as described in paragraph 50 above, flowed with surface and groundwater and by gravity along the surface of the bedrock toward the wells; and as they entered the groundwater, moved toward the bottom of the aquifer, below Wells

G and H. Testing by EPA confirms the existence of a plume of TCE and other chemicals originating northeast of Wells G and H, near the W.R. Grace property and moving along the bedrock surface at the bottom of the aquifer in the area of Wells G and H.

#### Beatrice Foods

52. West and southwest of Wells G and H lies a 15-acre undeveloped plot of land owned by Beatrice Foods. The land is bordered by the Aberjona River on the east and railroad tracks on the west. It has a private well located at the southern tip of the property.

53. The land consists of wooded field and marshlands. There is a well-defined dirt road located next to the marshland along which are deposited numerous tanks and drums. The drums are in various conditions: new and rusted, open and closed. Drums have also been deposited near the railroad tracks. There are some areas of distressed vegetation, indicating spills of hazardous materials.

54. Chemicals deposited on this site have seriously contaminated the groundwater as evidenced by the level of contamination in the private well on site as described in paragraph 48. These contaminants are solvents that are slightly soluble and denser than water. They have entered the groundwater in the vicinity of Wells G and H, moved toward the bottom of the aquifer, and been

drawn toward the wells by the cone of influence created by Wells G and H and/or by gravity along the slope of the bedrock.

55. XYZ Company, identity as yet unknown, also contributed to the pollution by disposing of chemicals that contaminated the groundwater in the area.

Endangerment of and Injury to Plaintiffs

56. All the plaintiffs in this suit reside in East Woburn in homes that received water from Wells G and H. These families have lived in their present locations as long as twenty years, and a minimum of five years.

57. Between 1969 and 1982, fourteen children in Woburn were diagnosed as having leukemia. Twelve of these children live in the part of the city serviced substantially by Wells G and H. Eight of the children live in a one mile square area adjacent to Wells G and H.

58. Residents of the area who had complained of their water quality for years, and who noted the rising rate of illness in their area with great anxiety and concern, became alarmed when the Wells were shut down due to contamination. They notified the Massachusetts Department of Public Health about the observed incidence of leukemia and the Department, with the assistance of the Center for Disease Control, conducted a study of health status in Woburn.

59. This study revealed that for the decade 1969-1978:

(1) the overall death rate in Woburn was 8% higher than expected based on statewide experience; (2) deaths from cancer were 13% higher than the state cancer mortality rate; and (3) that significantly more deaths than expected were reported for cancers of the kidney and female organs other than the cervix.

60. The findings with regard to leukemia were the following: more than twice the number of expected childhood leukemias were identified in Woburn. This excess is statistically significant. The likelihood of such a large difference occurring by random chance is less than 6 in 1,000.

61. Within a census tract where six of the leukemias were located, the incidence of leukemia was seven and a half times higher than expected. The random probability of this occurring is less than 2 in 10,000. Since the study was completed, one additional childhood leukemia has been identified within the census tract.

62. Water contaminated with dangerous chemicals was drawn from Wells G and H and ingested through the water and the air and absorbed through the skin in substantial quantities over the course of many years by the plaintiffs and the plaintiffs' decedents. This drinking water was a cause of the leukemia in the families of the plaintiffs.

a. James Anderson was exposed to contaminants in utero through chemicals in the tap water ingested by his mother, chemicals which were in the water and absorbed through the skin of his mother, and fumes of chemicals volatized from the water and inhaled by his mother; and he ingested chemicals from the tap water in his home from the time of infancy and inhaled fumes of chemicals which volatized from the water and absorbed chemicals through his skin as a result of exposure to the water. He became ill with leukemia at the age of three, suffered conscious pain and suffering, and died of leukemia at the age of twelve.

b. Kevin Kane, Jr. was exposed to contaminants in utero through chemicals in the tap water ingested by his mother, chemicals which were in the water and absorbed through the skin of his mother, and fumes of chemicals volatized from the water and inhaled by his mother; and he ingested chemicals from the tap water in his home from the time of infancy and inhaled fumes of chemicals which volatized from the water and absorbed chemicals through his skin as a result of exposure to the water. He became ill with leukemia at the age of two and a half and remained in treatment for the disease for seven years. He is now eleven years old.

c. Carl Robbins, III was exposed to contaminants in utero through chemicals in the tap water ingested by his mother, chemicals which were in the water and absorbed through the skin of his mother, and fumes of chemicals volatized from the water

and inhaled by his mother; and he ingested chemicals from the tap water in his home from the time of infancy and inhaled fumes of chemicals which volatized from the water and absorbed chemicals through his skin as a result of exposure to the water. He developed leukemia at age four, suffered conscious pain and suffering, and died of the disease at age nine.

d. Patrick Toomey was exposed to contaminants in utero through chemicals in the tap water ingested by his mother, chemicals which were in the water and absorbed through the skin of his mother, and fumes of chemicals volatized from the water and inhaled by his mother; and he ingested chemicals from the tap water in his home from the time of infancy and inhaled fumes of chemicals which volatized from the water and absorbed chemicals through his skin as a result of exposure to the water. He became ill with leukemia at the age of ten, suffered conscious pain and suffering, and died of leukemia a year and a half later at age eleven.

e. Michael Zona was exposed to contaminants in utero through chemicals in the tap water ingested by his mother, chemicals which were in the water and absorbed through the skin of his mother, and fumes of chemicals volatized from the water and inhaled by his mother; and he ingested chemicals from the tap water in his home from the time of infancy and inhaled fumes of chemicals which volatized from the water and absorbed chemicals

through his skin as a result of exposure to the water. He developed leukemia at age six, suffered conscious pain and suffering, and died of leukemia at the age of eight.

f. Jarrod Aufiero was exposed to contaminants in utero through chemicals in the tap water ingested by his mother, chemicals which were in the water and absorbed through the skin of his mother, and fumes of chemicals volatized from the water and inhaled by his mother; and he ingested chemicals from the tap water in his home from the time of infancy and inhaled fumes of chemicals which volatized from the water and absorbed chemicals through his skin as a result of exposure to the water. He developed leukemia at age three, suffered conscious pain and suffering, and died of leukemia three months later.

g. Jessica Aufiero was exposed to contaminants in utero through chemicals in the tap water ingested by her mother, chemicals which were in the water and absorbed through the skin of her mother, and fumes of chemicals volatized from the water and inhaled by his mother; and she ingested chemicals from the tap water in her home in Woburn from the time of infancy and inhaled fumes of chemicals which volatized from the water and absorbed chemicals through her skin as a result of exposure to the water. She developed leukemia at the age of four and a half and remains in treatment for her disease. She is now six and a half years old.

h. Roland Gamache ingested chemicals from the tap water in his home for six years -- from the time he moved to East Woburn in 1970 until his family began using bottled water -- and inhaled fumes of chemicals which volatized from the water and absorbed chemicals through his skin as a result of exposure to the water. He was diagnosed as having leukemia in 1980, at the age of thirty-three, and has been under treatment for the disease periodically since that time.

63. Each of the plaintiffs in this case has consumed substantial quantities of contaminated drinking water, has inhaled substantial chemical fumes from that water, and has absorbed chemicals from that water through his skin over the course of many years. This water came from Wells G and H. Because of their direct exposure to the contaminants in their drinking water and the fumes from that water, each plaintiff has suffered a direct adverse physical affect and has an increased risk of leukemia, other cancers, liver disease, central nervous system disorders and other unknown illness and disease.

a. Anne Anderson consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in her body and she has an increased risk of serious illness.

b. Christine Anderson consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in her body and she has an increased risk of serious illness.

c. Charles Anderson consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in his body and he has an increased risk of serious illness.

d. Richard Aufiero consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in his body and he has an increased risk of serious illness.

e. Lauren Aufiero consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in her body and she has an increased risk of serious illness.

f. Diane Aufiero consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in her body and she has an increased risk of serious illness.

g. Robert Aufiero consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in his body and he has an increased risk of serious illness.

h. Jessica Aufiero consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in her body and she has an increased risk of serious illness.

i. Roland Gamache consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in his body and he has an increased risk of serious illness.

j. Kathryn Gamache consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in her body and she has an increased risk of serious illness.

k. Todd Gamache consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in his body and he has an increased risk of serious illness.

l. Amy Gamache consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in her body and she has an increased risk of serious illness.

m. Kevin Kane consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in his body and he has an increased risk of serious illness.

n. Patricia Kane consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in her body and she has an increased risk of serious illness.

o. Margaret Kane consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in her body and she has an increased risk of serious illness.

p. Kathleen Kane consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in her body and she has an increased risk of serious illness.

q. Timothy Kane consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in his body and he has an increased risk of serious illness.

r. Kevin Kane, Jr. consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in his body and he has an increased risk of serious illness.

s. Donna L. Robbins consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in her body and she has an increased risk of serious illness.

t. Kevin Robbins consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in his body and he has an increased risk of serious illness.

u. Richard J. Toomey consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in his body and he has an increased risk of serious illness.

v. Mary J. Toomey consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in her body and she has an increased risk of serious illness.

w. Mary Eileen Toomey consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in her body and she has an increased risk of serious illness.

x. Pat Zona consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in his body and he has an increased risk of serious illness.

y. Joan M. Zona consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in her body and she has an increased risk of serious illness.

z. Ronald Zona consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in his body and he has an increased risk of serious illness.

aa. Ann Zona consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in her body and she has an increased risk of serious illness.

bb. John Zona consumed water and inhaled air contaminated with hazardous chemicals and absorbed chemicals through the skin from exposure to contaminated water and because of this consumption and exposure has suffered an adverse physical affect in his body and he has an increased risk of serious illness.

64. As a result of the defendants' actions, the plaintiffs suffered and continue to suffer financial and economic harm and have been deprived of the quiet enjoyment of their property.

65. As a result of the knowledge that they and their loved ones have consumed hazardous chemicals, the plaintiffs have suffered and will continue to suffer great emotional distress.

CAUSES OF ACTION

Strict Liability

A. Plaintiffs reallege paragraphs 1 through 65.

B. Defendants are liable for carrying on abnormally dangerous activity on their property which resulted in harm to plaintiffs, regardless of whether or not defendants exercised due care to prevent such harm.

C. The handling and disposal of ultrahazardous chemical substances described in this complaint constitute an abnormally dangerous activity.

D. Defendants' abnormally dangerous activity created a risk of harm to the property, the drinking water supply and the personal health and safety of plaintiffs, plaintiff decedents, and others similarly situated in Woburn.

E. The handling and disposal of hazardous chemical substances on defendant's property resulted in their escape into the surrounding environment and the contamination of the drinking water supply utilized by plaintiffs, of plaintiffs' property, and of the groundwater beneath plaintiffs' property and of the air in plaintiffs' home.

F. The escape of hazardous chemical substances handled and disposed of on defendant's property has caused plaintiffs to be

unreasonably exposed to chemicals which have caused them to suffer in mind and body, to contract illness, to suffer the increased risk of contracting illness in the future, to suffer emotional distress and mental anguish, and to suffer the loss of use and enjoyment of their property and economic and financial harm.

Negligence

G. Plaintiffs reallege paragraphs 1 through 65 and A through F above.

H. Defendants owe plaintiffs and plaintiffs' decedents a duty to refrain from action which causes plaintiffs and plaintiffs' decedents to be unreasonably exposed to chemicals which can cause personal injury, economic harm, illness, or which increases the risk of contracting illnesses.

I. The chemicals described above are ultrahazardous substances, and defendants knew or should have known of the dangerous nature of the substances.

J. Defendants are liable for all harm caused plaintiffs and plaintiffs' decedents by the release of those chemicals.

K. Defendants had a duty of due care toward plaintiffs and plaintiffs' decedents in the manufacture, use, control, and/or disposal of such chemicals.

L. Defendants failed to exercise due care in the manufacture, use, control, and/or disposal of such chemicals.

M. Defendants' failure to exercise such care caused plaintiffs and plaintiffs' decedents to suffer in mind and body, to contract illness and to suffer the increased risk of contracting illness in the future, to suffer emotional distress and mental anguish, and to suffer the loss of use and enjoyment of their property, and economic and financial harm

Wrongful Death

N. Plaintiffs reallege paragraphs 1 through 65 and A through M above.

O. Defendants' conduct constituted gross negligence.

P. Defendants' failure to exercise such care and gross negligence was a cause of plaintiffs' decedents death.

Q. Defendants' failure to exercise such care and its gross negligence caused plaintiffs who are entitled to receive such damages, to be deprived of the decedents' reasonably expected net income, services, protection, care, assistance, society, companionship, comfort, guidance, counsel, and advice.

Conscious Pain and Suffering

R. Plaintiffs reallege paragraphs 1 through 65 and A through Q above.

S. Defendants' failure to exercise such care caused plaintiffs' decedents to consciously suffer pain and mental anguish prior to death.

Nuisance

T. Plaintiffs reallege paragraphs 1 through 65 and A through S above.

U. The contamination in the ground water from which plaintiffs received their water and which was caused by defendants' actions constitutes a nuisance which is inimical to plaintiffs' health and restricts their access to and use of the ground water flowing beneath East Woburn and beneath their property.

V. The continued disposal of hazardous substances on the ground and the continued presence of hazardous substances in the soil of defendants' property in East Woburn constitutes a further

threat to the ground water and is a nuisance which is inimical to plaintiffs' health and restricts their access to and use of the ground water beneath East Woburn and beneath their property.

RELIEF

Wherefore, plaintiffs pray that the court, upon trial and determination of their causes of action, award the following relief:

1. Compensatory, consequential and punitive damages as provided by law;
2. Order defendants to halt all further disposal of hazardous substances on the ground of their property in East Woburn and to remove from the soil on/or adjacent to their property in East Woburn all hazardous substances placed there by them.
3. Order defendants to provide appropriate methods to remove all contamination from the ground water flowing beneath East Woburn and plaintiffs' property and return that ground water to the condition it would be in but for the contamination.