State of New Jersey
DEPARTMENT OF LAW AND PUBLIC SAFETY
DIVISION OF LAW
ENVIRONMENTAL PROTECTION SECTION
36 WEST STATE STREET
TRENTON 08625
TELEPHONE 609-292-1557

JOHN J. DEGNAN
ATTORNEY GENERAL

STEPHEN SKILLMAN
ASSISTANT ATTORNEY GENERAL
DIRECTOR

STEVEN A. TASHER
DEPUTY ATTORNEY GENERAL
SECTION CHIEF

November 13, 1979

Mr. Michael V. Polito
Emergency Response & Hazardous
Materials Inspection Branch
U.S. EPA, Region II
Edison, NJ 08817

Re: State of NJ, DEP v.
Ventron Corp., et al.
Docket No. C-2996-75

Dear Mike:

In response to your letter to me dated November 2, 1979 regarding my supplying you with copies of expert testimony in the above matter, please be advised that same is extremely voluminous (between 3,000 and 4,000 pages). Additionally, I do not have copies of all the material requested although I am in the process of obtaining same. In light of the aforementioned, I would like to suggest that if you wish to review the material in question you make arrangements to come down to my office and I will make it available to you. If you have any problems with this method please advise.

Very truly yours,

JOHN J. DEGNAN
ATTORNEY GENERAL

Ronald P. Heksch
Deputy Attorney General

RPH:mp

444658

UNITED STATES GOVERNMENT

2-Way Memo

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1) Reviewed the attached letter from Ron Hubel.
2) See circled item
3) Return when finished
4) Advise - should I be spending weeks in Trenton reading & copying expert testimony.
5) ~~May need of MFS and conversation of o's done yet to be answered.~~

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Ventron

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JOHN J. DEGNAN
ATTORNEY GENERAL OF NEW JERSEY
Attorney for Plaintiff
36 West State Street
Trenton, New Jersey 08625
By: RONALD P. HEKSCH
Deputy Attorney General
(609) 292-1557

SUPERIOR COURT OF NEW JERSEY
CHANCERY DIVISION, BERGEN COUNTY
DOCKET NO. C-2996-75

STATE OF NEW JERSEY, DEPARTMENT OF ENVIRONMENTAL PROTECTION, Plaintiff, v. VENTRON CORPORATION, etc., et al., Defendants.	Civil Action STATEMENT OF UNDISPUTED BASIC FACTS SUBMITTED BY PLAINTIFF, STATE OF NEW JERSEY, DEPARTMENT OF ENVIRONMENTAL PROTECTION

Pursuant to the Order and direction of the Court, the plaintiff, State of New Jersey, Department of Environmental Protection, submits this "Statement of Undisputed Basic Facts". Same is intended to supplement the "Statement of Undisputed Facts"

previously submitted by defendants Robert and Rita Wolf. It does not reiterate statements made by defendants Wolf which plaintiff concurs with. Instead, at the conclusion it specifically enumerates those statements made by defendants Wolf which it takes issue with. The remainder are incorporated herein by reference.

I. HISTORY OF THE PROPERTY INVOLVED HEREIN

A. F. W. Berk and Company, Inc., Wood Ridge Chemical Company, Velsicol Chemical Corporation, Ventron Corporation--Their Association With The Property Which Is The Subject Of The Within Litigation And The Business Conducted Thereon--1930 to 1974.

1. F. W. Berk and Company, Inc. (hereinafter "Berk") was an English company that manufactured mercury salts (Kirk deposition, p. 22).

2. In the 1930s it leased the property which is the subject of this litigation and constructed thereon a manufacturing facility for the production of mercury salts (Kirk deposition, p. 22).

3. From 1943 to 1960 Berk owned the entire property which is the subject of the within litigation, to wit: Block 229, Lots 8 and 10, Borough of Wood-Ridge, New Jersey, and Block 146, Lot 3, Borough of Carlstadt, New Jersey.

4. George Taylor was the general manager of Berk and subsequently Wood Ridge Chemical Company (hereinafter "WRCC") from 1943 to 1964 (Kirk deposition, p. 22).

5. In the late 1950s George Taylor acquired Berk and was granted the right to use its name as long as he had a controlling interest in the business (Kirk deposition, p. 23).

6. In 1960 he sold the assets of Berk to the Velsicol Chemical Corporation (hereinafter "Velsicol"), an Illinois corporation which formed the Wood Ridge Chemical Company, a Nevada corporation, as a wholly owned subsidiary, for the sole purpose of acquiring the assets of Berk and operating the chemical plant on the property which is the subject of this litigation (Kirk deposition, pp. 15 through 18, 25; Exhibit Kirk-1).

7. The assets of Berk acquired by WRCC in 1960 included the entire property which is the subject of the within litigation, namely, Block 229, Lots 8 and 10, Borough of Wood-Ridge, and Block 146, Lot 3, Borough of Carlstadt.

8. From June 1960 to February 1, 1968 WRCC was a wholly owned subsidiary of Velsicol (Velsicol's answers to State Interrogatory #3; Bernstein deposition Sept. 14, 1976, pp. 43 through 44).

9. From 1951 to 1974 Berk and WRCC produced purified mercury, phenylmecuric compounds, inorganic mercury compounds,

organic mercury compounds and nonmercurial fungicides. The items produced by Berk and WRCC remained the same during the period 1951 through 1974. In addition, there was no noticeable change in production methods employed by Berk and WRCC during the period 1957 through 1971 (Hoffman deposition, pp. 10, 11; Cadmus deposition, p. 62; Bernstein deposition Sept. 14, 1976, pp. 33-34; Kirk deposition, p. 27).

10. While WRCC was a wholly owned subsidiary of Velsicol, quality control at the Wood-Ridge plant (1960-1968) was under the direct control of Velsicol (Cadmus deposition, p. 72).

11. During the period 1960 to February 1, 1968, the Board of Directors of WRCC were all Velsicol employees (Kirk deposition, p. 18).

12. When WRCC acquired the assets of Berk there were no changes made in management level employees at the Wood-Ridge facility. The staff that operated the Wood-Ridge facility under Berk stayed with the company and continued the operation while WRCC was owned by Velsicol (Kirk deposition, pp. 16, 27).

13. The products produced by WRCC during the period 1960 to 1968 at the Wood-Ridge facility stayed the same as those produced by Berk in the 1950s (Kirk deposition, p. 27).

14. During the period 1960 to 1968 the customers of WRCC remained substantially the same as those of its predecessor Berk (Kirk deposition, p. 27).

15. The Board of Directors of WRCC met monthly in the Velsicol offices in Chicago, Illinois (Kirk deposition, p. 41).

16. In the Summer of 1967 the Ventron Corporation (hereinafter "Ventron") commenced negotiations with Velsicol for the acquisition of the stock of WRCC (Kirk deposition, pp. 70-71).

17. By the stock purchase agreement dated February 1, 1968 Ventron acquired the stock of WRCC from Velsicol (D-Vel-5d).

18. At the time Ventron acquired the stock of WRCC the company owned Block 229, Lot 10, Borough of Wood-Ridge. Title to Block 229, Lot 8, Borough of Wood-Ridge and Block 146, Lot 3, Borough of Carlstadt had been transferred to Velsicol, which continues to hold title to this land.

19. WRCC under Ventron's ownership was the largest processor of mercury chemicals in the country (Bernstein deposition Feb. 29, 1977, p. 288).

20. Many management level personnel who operated the facility in question under the ownership of Berk continued to be employed by WRCC under its ownership by Velsicol and Ventron, to wit: Cadmus, Hoffman, Bratt, Clark, Sievers and Pfeiffer (Bernstein deposition July 27, 1977, p. 50; Kirk deposition, p. 16).

Eugene Cadmus

1951 - 1956	Research Chemist at Berk
1956 - 1971	Chief Chemist, Technical Director

(Cadmus deposition, pp. 5, 6)

John G. Hoffman

1951 - 1957-58	Assistant Production Manager
1957-58 - 1969	Production Manager
1969 - 1973	Plant Manager

(Hoffman deposition pp. 6, 7)

Charley Sievers

General Foreman for WRCC under both Velsicol and Ventron ownership
(Bernstein deposition, July 27, 1977, p. 50)

Harry Pfeiffer

Maintenance Foreman for WRCC under both Velsicol and Ventron ownership
(Bernstein deposition, July 27, 1977, p. 50)

John Bratt

1948 - 1950	Research Chemist
1950 - 1951	Production Manager
1951 - 1968	Plant Manager
1956 - 1968	Vice President

(Bratt deposition, p. 47; Bernstein deposition, July 27, 1977, p. 51)

21. Several management level employees of Ventron held similar positions with WRCC during the period 1968 to 1974, to wit: William Lauenstein, William Boyer, S. K. Dederian, William Zolner, John Durrell, Forest Griffin and Joseph Bernstein (Bernstein deposition July 27, 1977, p. 58).

22. By formal resolution of the Board of Directors of WRCC dated June 15, 1974, WRCC was merged into Ventron.

B. Environmental Problems Associated With The Property Involved Herein And Business Conducted Thereon-- 1930 - 1974

1. The Berk mercury processing facility and pollution problems associated with it first came to the attention of the State of New Jersey in 1956. At that time the Department of Health became aware that the wastewater effluent discharged by the plant into Berrys Creek was unacceptable and polluting Berrys Creek. In attempting to rectify the pollution problems it had, Berk and later WRCC were undecided whether to install a complete treatment facility of its own or to discharge wastes to the Borough of Wood-Ridge municipal sewerage system. In 1959 the company was advised by the Township of Wood-Ridge that its request to discharge industrial waste into the municipal sewerage system had been denied. Industrial wastes discharged by the company into Berrys Creek went untreated. During 1960 under normal plant production the industrial waste volume generated and discharged into Berrys Creek was between 30,000 and 40,000 gallons per day (DV-171, DV-167).

2. Since 1956 the Department of Environmental Protection (hereinafter "DEP") and its predecessor the Department of Health

has attempted to get Berk and WRCC to treat its effluent so as not to pollute Berrys Creek (DV-66 through and including DV-178).

3. By letter dated February 13, 1968 the Department of Health advised WRCC that it would have to design a sewage treatment plant to remove toxic metals from its effluent being discharged into Berrys Creek (DV-129). The effluent being discharged by WRCC was objectionable because of toxicity due to the presence of mercury compounds (DV-110).

4. A report prepared for WRCC by Metcalf & Eddy dealing with wastewater treatment disposal at the Wood Ridge site on December 6, 1968 notes that "at present, the wastes are conducted about one-quarter of a mile and discharged untreated to Berrys Creek, a tributary of the Hackensack River." Previous efforts to upgrade the quality of the effluent discharged were noted to have been unsuccessful.

5. On June 9, 1971 the effluent from WRCC was sampled by the DEP and found to be unsatisfactory because of high pH (11.1), suspended solids 63 mg/1) and mercury (5800 ppb) (DV-92, DV-93). ppm

6. By letter dated November 24, 1971 the DEP advised WRCC that its effluent was unacceptable and noted that it contained 120 ppb mercury. WRCC was advised by the DEP that the quality of its effluent must be improved immediately (DV-481).

7. An internal memo captioned "Occupational Safety and Health, Long-Range Plan" prepared by Ventron in 1972 for the WRCC facility indicates that exposure of workers to toxic vapors and dust was a serious problem at the plant. It further noted that WRCC could not meet mercury exposure limits. Despite cleanup and housekeeping improvements implemented, vapors and dust on the floors and walls of the buildings on the site continued to be a problem. Another problem noted was exposure of workers at WRCC to chemical burns.

8. An internal memo captioned "Long-Range Environmental Protection Plan" prepared by Frank H. Wilson of Ventron on September 12, 1972 for the Wood-Ridge facility noted that Ventron/WRCC was aware of problems associated with airborne mercury at its plant. The airborne mercury they were concerned with was particulate matter and vapors. Solid wastes, wastes generated by recovery stills and scrap containers that once contained mercurials were also mentioned as a problem.

9. An internal memo captioned "Ventron Chemical Division Long-Range Facilities Plan in 1972-1977" prepared by Joseph Bernstein, Operations Manager, and Frank Wilson, III, Chief Engineer, WRCC, first issued in June 1972, noted that the facility at WRCC was old and in disrepair. It further noted that the plant's

safety record was poor. The major environmental problems at that time from their point of view appeared to be ambient mercury vapor levels in manufacturing areas. Cleanup and housekeeping apparently were unable to solve these problems. It was noted that ". . . the plant is a veritable Aegean stable of residual mercury." It was also noted that current residual mercury deposits will produce high vapor levels. The conclusions drawn from this report were that WRCC should be sold because of United States Environmental Protection Agency (hereinafter "EPA") and Occupational Safety and Health Administration (hereinafter "OSHA") problems related to pollution and workers' safety.

10. By letter dated January 14, 1972 to EPA, WRCC discussed the problems it was having regarding the "apparent anomaly" between the mercury content of the total plant discharge and that of the effluent immediately after treatment. In its letter WRCC cited five possible sources of mercury contamination: (1) infiltration of groundwater contaminated with mercury leached from deposits in the soil into the underground waste line; (2) surface runoff into storm sewers of rain water contamined with mercury from surface deposits; (3) surface runoff of contaminated overflow from collecting pits and basins; (4) leaching of residual mercury in the waste lines; and (5) discharge of contaminated "nonmercurial" streams into the waste system. The document in question states

that mercury in surface soil surrounding a storm basin on the property in question was in the range of 10-500 ppm. It noted that the cause of mercury in the soil was the result of spills onto the plant grounds. It also noted that one of the sludge pits on the property (Pit "J") tends to overflow during heavy rains. In addition, it was noted that residue from the retorting operation (retort sludge) had previously been disposed of by dumping same on the adjoining property which Velsicol retained title to (DW-11, DV-245).

11. Internal memo dated February 1, 1973 indicates that a worker at WRCC, hired on October 14, 1971, showed high levels of mercury in his blood and kidneys, causing illness which required hospitalization (memo dated February 1, 1973 from Durrell to Bernstein re Leon Brudnicki).

12. The record indicates that Berk and WRCC until 1968 were using that portion of the property involved in this litigation presently owned by Velsicol as a landfill site.

13. Portions of the material deposited on the present site of Velsicol was the retort sludge generated by the recovery still operated in proximity to Building #20. This sludge contained mercury in the range 0-800 ppm and the still operation generated material containing approximately .03 pounds of mercury per day (Dw-11, DV-245, Bernstein deposition February 9, 1977, p. 32; Hoffman deposition pp. 22, 72).

14. Soil in the area of the retort still both on the present Velsicol property and present Wolf property was and is contaminated with mercury (Hoffman deposition, p. 19; Cadmus deposition, p. 68; see also M-2).

15. Officials of Ventron/WRCC were aware of the dumping of retort sludge on the Velsicol property and were also aware of the mercury contamination in the area of the retort still (Cadmus deposition, p. 68; Bernstein deposition, February 9, 1977, p. 32; Hoffman deposition pp. 22, 72, 19).

16. Officials of Ventron/WRCC prior to May 1974 were aware of mercury in the soil and groundwater on the property of WRCC. EPA had advised Ventron that mercury in the soil was higher than they would like it to be (Hoffman deposition, p. 16; Faye deposition, pp. 107, 214; Bernstein deposition, February 9, 1977, p. 31).

17. Similarly, prior to May 1974 officials of Ventron/WRCC were aware of contaminated sediment in Berrys Creek adjacent to the present Velsicol site.

18. A sludge pit (Pit "J") at the Wood Ridge facility, used as a settling tank for liquid wastes, containing mercury, overflowed during heavy rains. Soil samples in the area of this pit showed significant concentrations of mercury (Faye deposition, p. 53; Hoffman deposition, p. 84; Bernstein deposition, July 27, 1977, pp. 76-77).

19. An inspector from New Jersey Manufacturers Insurance Company, the workmens' compensation carrier for WRCC during Ventron's ownership of the company (1968-1974), noted during inspections of the plant facilities that there was mercury dust on the floor and the walls; he observed mercury on the ground on more than one occasion; he also saw mercury on clothing of workers; and also saw mercury slag or sludge piles on the property (John Bratt deposition, pp. 72-80).

II. CONDITIONS ON AND ALTERATIONS TO THE VENTRON/ VELSICOL SITE -- MAY 1974 TO APRIL 1976

1. Demolition of buildings on the Ventron (Wolf) site began during the latter part of May 1974. On June 7, 1974 governmental entities became aware of the discharge of chemicals and oil from the site. Personnel from the Hackensack Meadowlands Development Commission (HMDC), EPA and DEP arrived on the site on June 7, 1974 and collected various samples of water, sediment, liquids and solid materials from the site (present Wolf and U. S. Life property) and surrounding area. (Chronology prepared by Uwe Frank, Chemist, EPA, dated May 2, 1977; undated memo to the file prepared by William Librizzi, Chief, Emergency Response Branch, EPA, re chemical spill, Ventron Corporation, Wood-Ridge, N. J.; memo dated June 19, 1974 re laboratory analysis--Ventron Corp.--June 7, 1974, prepared by Francis T. Brezenski, Chief,

Technical Support Branch, EPA; memo from Henry J. Jeleniewski to William Librizzi re chronological statements re Ventron.)

2. Concentrations of mercury in the water collected on the site (Ventron property) range from 15.0 to 285.0 ppm. Water samples collected upstream and downstream from the Ventron site contained 0.22 and 14.0 ppm of mercury, respectively. Samples of solid materials collected on the site range from 11.5 to 9,500 ppm mercury with one sample containing virtually pure mercury. Samples of sediment collected on the site and upstream from the site in Berrys Creek contained 17,700 and 9.9 ppm mercury, respectively (memo dated June 19, 1974 from Francis T. Brezenski, EPA to Chief, Emergency Response Branch, EPA, re laboratory analysis--Ventron Corporation--June 7, 1974).

3. On June 10, 1974 a telegram order (EV-629) was sent to Rovic Construction (hereinafter "Rovic") ordering the discharge of hazardous chemicals and petroleum products from the demolition site to cease. The telegram order states in pertinent part that: "Investigation by this Department has found that on or about June 7, 1974 your company was responsible for the discharge of hazardous chemicals and petroleum products into Berrys Creek, a tributary of the Hackensack River, from your property in Wood-Ridge Borough, Bergen County, formerly occupied by Wood Ridge Chemical

Company. This discharge is caused by wetting the area during demolition of buildings on this site. Such discharge from your property should be prevented at all times. This discharge is in violation of statutes of the State of New Jersey, including N.J.S.A. 58:10-23.4 and N.J.S.A. 23:5-28."

4. On June 12, 1974, there was an on-site meeting between representatives of Rovic, the DEP, EPA, Ventron, Otillio Demolition Company and Gaess Environmental Services, Inc. After discussions regarding problems associated with the presence of chemicals and the demolition operation it was agreed that:

(a) All drainage from the site during the operation will be diverted to an appropriately lined catch basin. The liquids and solids collected will be analyzed and properly disposed of. Analysis procedures by a contractor, hired by the owner, and disposal procedures will be approved by EPA/NJDEP.

(b) Parameters to be analyzed in the above materials will be at the very least, mercury, cadmium, zinc, asbestos and oil.

(c) The owner will remove all drums, containers, flasks, asbestos in bulk, and other similar materials prior to restart of operations. The State will make inspection.

(d) The owner will determine chemical infusion in the soil after demolition prior to construction of the proposed

parking lot warehouse facility. Of particular concern here is the concentrations of mercury and mercury compounds in the soil.

(e) Based upon the determinations in (d) above, the owner may be required to remove contaminated soils." (DV-467)

5. By letter dated June 17, 1974, David Longstreet of the DEP summarized the agreements reached at the June 12, 1974 meeting.

6. On June 19, 1974 DEP personnel inspected the site and found that demolition was continuing and, further, that water was flowing from the site into a ditch which led into Berrys Creek without the DEP and/or EPA being notified and without first analyzing said waters for contaminants (DV-608).

7. On June 20, 1974 a joint inspection of the property was conducted by EPA and DEP personnel. No demolition was occurring on that date (DV-607).

8. Water samples collected from the plant sewer system and from Berrys Creek upstream and downstream of the Ventron site on June 21, 1974 contained 0.140, 0.011 and 0.0039 ppm of mercury respectively (DV-625).

9. An inspection conducted by DEP personnel on June 27, 1974 found no demolition in progress; however, a sample of the effluent leaving the site and entering Berrys Creek was taken and analyzed and contained 28.0 ppm of mercury (DV-607; DV-624).

10. On July 1, 1974 a meeting was held at the demolition site. Attendees were representatives of EPA, DEP, Rovic, and U. S. Testing Company, Inc. The meeting was called by DEP and EPA personnel to ascertain what was being done with contaminated water on site and the saturated ground, in the way of collection and disposal. No demolition was taking place during the meeting (DV-619).

11. On July 2, 1974 DEP personnel inspected the demolition site and observed water overflowing the drainage pit and exiting the property into a ditch adjoining the property which leads into Berrys Creek (DV-367).

12. On July 8, 1974 the DEP received a letter from U. S. Testing Company, Inc. advising that it had been retained by Rovic to perform chemical analyses of runoff water which had been collected and stored in tanks on the premises (DV-627).

13. On July 8, 1974 Mike Polito of EPA visited the Ventron site, accompanied by Mr. Jeleniewski and Dr. Lafornari, also of EPA. Demolition at the site was in progress. Mike Polito observed that the building being demolished was being sprayed with a fire hose (DV-621).

14. On July 9, 1974 Ed Faille of DEP visited the site and observed ". . . a small drip discharge from the old treatment

site" leaving the property and flowing in the direction of Berrys Creek (DV-607).

15. On July 11, 1974 DEP and EPA personnel again visited the site and obtained soil core borings from the property. Elemental mercury on the ground surface was observed at several locations. In addition, droplets of mercury were found in the core soil samples taken. Concentrations up to 200,000 ppm of mercury were observed in samples taken. Additionally, high concentrations of cadmium, lead, zinc, chromium, nickel and arsenic were found in the samples (DV-621, DV-609, DV-601).

16. During June 1974 United States Testing Company, Inc. took samples of drainage water flowing off the Ventron property into a ditch leading into Berrys Creek and analyzed same for mercury, cadmium, zinc and oil. The results of their sampling and analysis indicate that water leaving the site in question contained the following contaminants on the various dates noted:

Site #5 - Wier

	Results in ppm			
Date Collected	Mercury	Cadmium	Zinc	Oil
June 13, 1974	167	N.D.*	13.0	61,500
June 17, 1974	3.9	N.D.*	0.5	32
June 18, 1974	2.2	N.D.*	0.25	26
June 24, 1974	50	N.D.*	0.19	21

* N.D. = Not Detected. Detection limit is 0.02

In addition, water collected and retained on the site in a holding tank was sampled on June 21, 1974 and analyses showed it contained 80 ppm mercury, 0.21 ppm zinc and 172 ppm oil (U. S. Testing 1).

17. On August 16, 1974 a memorandum of understanding (P-48) was entered into between EPA, DEP and Rovic (Wolf) regarding steps to be taken prior to further site preparation and construction being conducted on Block 229, Lots 10A and 10B. Same is fully set forth on page 86 of Wolf's "Statement of Undisputed Basic Facts."

18. On September 19, 1974 Mike Polito of EPA and Ed Faille of DEP inspected the construction site. During the visit they observed a drainage canal, approximately one foot wide and thirty feet long, extending from the construction site into a drainage ditch running along the southern border of the property. The latter ditch leads into Berrys Creek. Both ditches were filled with water which was flowing in the direction of Berrys Creek. Samples were taken of the water in the ditches and revealed that the water contained 15,800, 1.1 and 940 ppb of mercury (DV-602; DV-466).

19. On December 5, 1974, at the request of Rovic, a meeting was held at EPA, Edison, New Jersey, to discuss a proposal presented by defendant Wolf for the treatment of mercury contaminated soil at the site. DEP and EPA personnel requested that the proposal be submitted in writing for their review (DV-404).

20. On December 9, 1974 Rovic sent a letter to the DEP outlining certain recommendations made by their consultant, Drs. Johnson and Ollis, for the recovery of mercury from the contaminated soil on site (DV-592).

21. On December 24, 1974 David Longstreet advised Rovic that it was rejecting the proposal of December 9, 1974 because the DEP felt that same did not provide sufficient safeguards to prevent the runoff of mercury and other contaminants into the State's waters (DV-591; P-51).

22. During the period August 1974 to September 1975 both Wolf and the governmental entities involved investigated the possibility of removing the contaminated soil from the property in question.

23. On January 10, 1975 a meeting was held at EPA's office in New York City to discuss the problems associated with mercury contamination at the site and what the governmental entities involved would expect prior to construction commencing

on the remainder of the property (Block 229, Lot 10B). At this time defendant Wolf made a presentation through his consultant (Thomas Schiel) to entomb the contaminated area in question. According to Schiel this could be done because of an organic silt layer underlying the property. It was represented that this layer was impervious. The top and sides of the entombment system would be sealed off by utilizing a special construction method for the foundation of the building. The entombment system would contain the contaminated soil scraped from Lot 10A. The entombment proposal included a monitoring program to be established to insure that no leachate containing mercury was leaving the site. If heavy metals were noticed in the leachate leaving the site the entombment system was to be extended around the entire property. The governmental entities involved continued to maintain that removal of the contaminated material was the best method for protecting the environment. Wolf, on the other hand, insisted that this was economically infeasible. The governmental entities concluded, in light of Wolf's obstinance on this point, that the entombment proposal seemed to be the best available alternative provided sufficient safeguards, such as monitoring and restrictions regarding future development of the property were agreed to. Prior to agreeing to the entombment proposal the governmental entities involved requested additional

information (DV-585, DV-306L, DV-451).

24. On January 29, 1975 Schiel submitted his final proposal for the entombment of contaminated soil on the site in question. Same recommended four alternative programs or stages to alleviate the pollution problem (DV-451).

25. In order to ascertain the effectiveness of the alternate proposals individually and/or in conjunction with one another, Schiel's proposal indicates that the ". . . stream along the southern property line should be monitored after construction. If more than 15 parts per billion of mercury contamination is recorded . . .", additional measures should be taken. "Similarly, alternate four is recommended if all other alternates fail." (DV-306L)

26. On February 28, 1975 Meyer Scolnick, Director, Enforcement and Regional Council Division, EPA, responded to Schiel proposal of January 28, 1975. In pertinent part the letter states:

> "The Environmental Protection Agency in reviewing options potentially available to you hereby submits the following proposal for your review. This proposal essentially implements the recommendations you proposed in your letter of January 30, 1975. After you have had time to consider and comment upon our proposal in writing to both the EPA and NJDEP, the final version will be written as a stipulation and final disposition for signature by the Regional Administrator, Region II, EPA,

and the Commissioner, New Jersey Department of Environmental Protection, along with Rovic Construction and Wolf Enterprises.

"(1) A continuous building perimeter footing shall be constructed as set forth in alternate 1 of your letter of January 30, 1975.

"(2) A wall shall be constructed around the perimeter of the southern and eastern property lines, as set forth in alternate 3 of your letter of January 30, 1975, to a depth of one foot below the lower surface of the organic silt layer, or to a depth of five feet from the surface of the topsoil, whichever is greater.

"(3) Complete impervious paving of the surface of the construction site shall be performed.

"(4) All drainage from the property shall be carried by drainage ditches constructed of a water-impervious material.

"(5) A monitoring program shall be conducted in a manner specified by the National Pollutant Discharge Elimination System permit which will be issued to the site.

"(6) A semi-annual inspection schedule shall be maintained of all above-ground structures constructed to mitigate mercury pollution. A file shall be kept on the property, available for inspection by EPA and NJDEP during normal business hours. All cracks in paving and drainage shall be repaired within 14 (FOURTEEN) days of their detection.

"(7) The conditions of any stipulation entered into by the above-mentioned parties shall appear in any deeds executed in transference of ownership or proprietorship of the property referred to above, and such stipulation shall become a covenant running with the land and shall be recorded in the records of the County Clerk's Office.

"If later survey or studies conducted by EPA or any other agency responsible for environmental quality determines that the above mitigating actions are not sufficient to meet the requirements of the final NPDES permit which will be issued to the site or the requirements of any laws or regulations relating to aquifers of the State of New Jersey, it is agreed that you will comply with any additional requirements which may be imposed.

"We will arrange a meeting of EPA, NJDEP, Rovic and Wolf after you have had time to consider and comment upon the above proposal. The final language for the stipulation will be decided upon at that meeting." (DV-411)

27. It is the DEP's position that no work was to commence on Block 229, Lot 10B until such time as a written agreement containing the conditions outlined in the Scolnick letter of February 28, 1975 (DV-411) was executed by the DEP, EPA and Wolf. Wolf was advised by the DEP that he would not be allowed to build on Block 229, Lot 10B without a written agreement as aforesaid (Wolf deposition, p. 782).

28. No written agreement between Wolf, the DEP and/or EPA with regard to the commencement of construction on Block 229, Lot 10B was ever entered into (Wolf deposition, p. 795).

29. Wolf took exception to points 5, 6 and 7 of DV-411 involving monitoring, the submission of reports and deed restrictions (Wolf deposition, pp. 782-783).

30. If alternates 1, 2 and/or 3 of the Schiel proposal (DV-451) did not effectively contain the contamination on site, Wolf agreed that he would implement alternate 4 (Wolf deposition, pp. 931, 935).

31. During 1974, 1975 and 1976 samples of water and sediments on and off the property in question were collected during various inspections of the site by personnel from DEP and EPA. A summary of the data collected during this period through 1976 is presented below.

DATE	SOURCE	MERCURY CONCENTRATIONS (ppm)
Sept. 19, 1974[1]	Water-runoff ditch	15.8
	Berrys Creek water, upstream	0.001
	Berrys Creek water, downstream	0.940
Sept. 13, 1974[2]	Sediment-abandoned lagoon on-site	1.2
Feb. 14, 1975[3]	Water, Ventron discharge	0.013
	Sediment, Ventron discharge	165.0
	Water, 150 ft. below discharge	0.300
	Sediment, 150 ft. below "	167.0
	Water-flood tide at tide gate, West Riser	0.0
	Sediment, flood tide at tide gate, West Riser	147.0
Nov. 5, 1975[4]	Sediment, 1.2 miles upstream from Ventron site (1)	25.0
	Sediment, West Riser tide gate (2)	35.0
	Sediment, 0.2 mile downstream from Ventron site (3)	0.3
	Water, (No. 1)	0.6 ppb
	Water, (No. 2)	0.4 ppb
	Water, (No. 3)	0.3 ppb

DATE	SOURCE	MERCURY CONCENTRATIONS (ppm)
Nov. 5, 1975 (cont.)	Cattail-tuber and top (No. 2)	0.3
	Phragmites - stem (No. 2)	1.2
	Phragmites - tuber and top (No. 3)	1.5
	Phragmites - stem (No. 3)	1.1
Aug. 24, 1976[5]	Sediment (No. 2)	577
	Sediment (No. 3)	4,480
	Sediment (No. 1)	5.5
	Water (No.1)	0.20 ppb
	Water (No. 2)	2.1 ppb
	Water (No. 3)	0.43 ppb
	Phragmites - tuber (No. 1)	*
	Phragmites - stem (No. 1)	*
	Whole killifish (No. 1)	*
	Cattail - tuber (No. 3)	51.0
	Cattail - stem (No. 3)	1.2
	Phragmites - tuber (No. 3)	170.0
	Phragmites - stem (No. 3)	3.5
May 12, 1976[6]	Soil - Ventron site, surface	3.3 to 5.6
	Soil - Ventron site, 7 inches below	4.2
	Soil - Ventron site, 10 " "	5.2
	Soil - Ventron site, 11 " "	4.3
	Soil - Ventron site, 12 inches "	4.2
	Soil - Ventron site, 17 " "	4.8 to 5.2

* Not available

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1. Memo dated Sept. 27, 1974, Francis T. Brezenski, Chief, Technical Support Branch, EPA, to Chief, Emergency Response Branch, re Mercury Results - Ventron Corp., Sept. 20, 1974.

2. Memo dated Sept. 13, 1974, Francis T. Brezenski, Chief, Technical Support Branch, EPA, to Chief, Emergency Response Branch, re Ventron Sediment Samples - Hg results.

32. In addition, on August 5, 1975 Mike Polito of EPA inspected the site and observed effluent leaving it in a manner which permitted it to flow into Berrys Creek. He sampled the effluent and the analysis showed that it contained 3.4 ppm mercury (DV-419). The inspection of August 5, 1975 also revealed that mercury contaminated soil was being stockpiled and removed from the property (DV-426, DV-568).

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3. Memo to the file dated February 14, 1975 by D. J. Jackangelo, New Jersey Fish and Game, re Special Investigation in co-operation with N. J. Office of Special Services Oil and Hazardous Materials Section.

4. Memo dated November 5, 1975, Francis T. Brezenski to M. V. Polito, Emergency Response Branch, re Analytical results for water, sediment, fragmites, cattail and killifish samples, N. J. Fish and Game Commission.

5. Letter dated September 20, 1976 from Francis T. Brezenski to Donald Jacangelo, New Jersey Fish and Game.

6. DV-304

See also sampling and analyses data collected on present Velsicol property set forth in section 44, paragraphs (e) (i), pp. 124-125, Wolf's "Statement of Undisputed Basic Facts."

33. A telegram order was sent to Rovic indicating that the Department's inspection revealed the stockpiling and removal of mercury contaminated soil from the property and, further, that this was in violation of the agreements previously reached. The telegram ordered Rovic (Wolf) to cease and desist from removal and stockpiling of the contaminated soil in question and to completely cover and seal all removed and stockpiled material to prevent any water from contacting it (DV-416).

34. A meeting was held at EPA, Edison, N.J., between EPA, DEP and Wolf to discuss the aforementioned telegram order. At the meeting on September 3, 1975 the DEP maintains that Wolf agreed to accept all of the provisions of the Scolnick letter of February 1975 so that he could continue construction on Building # 2. EPA and DEP agreed that construction could proceed in accordance with the Scolnick letter. This was to include the provisions that Wolf found objectionable.

35. Wolf had commenced site preparation for Building #2 in July and August of 1975.

36. Construction of Building # 2 continued during the latter part of 1975 and the early part of 1976.

37. Stockpiled material from Lot 10A was supposed to be placed under and within the entombment device under Building # 2 (Wolf deposition, p. 777). Only 80% of the contaminated material

from Lot 10A was in fact ever placed under Building # 2. The remainder was spread over the Lot 10B site (Wolf deposition, p. 941; D'Amore deposition, p. 109).

38. Since the completion of Building # 2 no testing sampling and/or analyses has been conducted by Wolf to ascertain the effectiveness of a containment system he allegedly constructed under the building in question (Wolf deposition, p. 936).

39. United States Life Insurance Co. (hereinafter "U. S. Life") has conducted no testing, sampling and/or analysis to ascertain whether or not any contaminants from its property or from any of the property involved in this litigation is flowing and/or being discharged into the waters of the State.

40. WRCC/Ventron has conducted no testing, sampling and/or analyses since January 1974 to ascertain whether or not any contaminants from the property involved herein are flowing and/or being discharged into the waters of the State.

41. Velsicol has conducted no testing, sampling and/or analyses to ascertain whether or not any contaminants from the property involved herein are flowing and/or being discharged into the waters of the State.

42. U. S. Life, Ventron, Velsicol have done nothing since January 1, 1974 to remedy the mercury contamination that

exists on the property which is the subject of the within litigation.

43. U. S. Life was informed prior to taking title to Block 229, Lot 10A of the mercury contamination that existed on Block 229, Lots 10A and 10B as of June 1974 and of Wolf's efforts, in conjunction with EPA and DEP, to resolve the problems associated therewith (Wolf deposition, p. 943).

44. At no time prior to April 1976 did U. S. Life or any of its employees and/or agents contact EPA and/or DEP to ascertain their position regarding the alleged contamination of Block 229, Lot 10A and the resulting water pollution.

III. UNDISPUTED FACTS AND OPINIONS OF EXPERT WITNESSES: REPORT OF JACK McCORMICK & ASSOCIATES, INC. CAPTIONED "INVESTIGATIONS OF AQUATIC AND TERRESTRIAL MERCURY CONTAMINATION IN THE VICINITY OF THE FORMER LOCATION OF THE WOOD RIDGE CHEMICAL CORPORATION PROCESSING PLANT BOROUGHS OF WOOD-RIDGE AND CARLSTADT, BERGEN COUNTY, NEW JERSEY," DATED AUGUST 1, 1977 (M-2)

1. The results of the analysis for mercury and other metals (arsenic, cadmium, lead, nickel and zinc) in samples of soil, groundwater, sediment and surface water collected on or near the subject property by the DEP and Jack McCormick & Associates are contained on pages 37 to 64, inclusive, of his report. The analytical results are compiled on Tables 5 through 13 on pages 38 through 42, 44 through 48, and 50 through 53.

To date the record is devoid of any data or expert opinion that would tend to refute the aforementioned analytical results. To date none of the parties have conducted any sampling or analysis which questions these findings. This being the case the plaintiff maintains that this data constitutes part of the undisputed facts in this case and same are therefore incorporated herein by reference.

2. Mercury contaminated sediments are flowing from the property of U. S. Life, Wolf and Velsicol into the waters of the State (p. 75).

3. Mercury contaminated sediments located on the property of U. S. Life, Wolf and Velsicol are in a position which permits them to flow into the waters of the State (p. 75).

4. Water flow from the property of U. S. Life, Wolf and Velsicol is contaminated with mercury and this contaminated water is flowing into Berrys Creek (p. 75).

5. The soil analysis surveys conducted by U. S. Testing and N. J. Testing on behalf of the defendant Wolf, the results of which are contained on Tables 15 and 16 on pages 68 and 69 through 70, respectively, document that mercury is present in extraordinarily high concentrations in the soil on Block 229, Lot 10B, Borough of Wood-Ridge.

6. Because of the high concentrations of mercury in the soil on the property presently owned by defendants Wolf and Velsicol, soil materials which are carried from the property into Berrys Creek will contaminate the aquatic environment in the area.

7. The levels of lead observed in the sediment at station 6 are hazardous to aquatic biota (p. 83).

8. Zinc from the U. S. Life, Wolf and Velsicol property is entering Berrys Creek by way of surface water drainage (p. 88).

9. Zinc is a hazard to aquatic biota and wildlife in concentrations greater than 100 ppb (p. 89).

10. The criteria, guidelines and regulations for the maximum concentrations of certain metals in various media are set forth in Table 14 on page 66 and are incorporated herein by reference.

IV. STATEMENTS CONTAINED IN THE "STATEMENT OF UNDISPUTED BASIC FACTS," SUBMITTED BY DEFENDANTS ROBERT M. AND RITA W. WOLF WHICH THE PLAINTIFF TAKES ISSUE WITH.

1. Section 1, para. (f), p. 2. Block 146, Lot 3 is in fact in the Hackensack Meadowlands District.

2. Section 4, para. (m), p. 7. It was not until sometime after Ventron acquired the stock of the Wood Ridge Chemical Company that the residue from the retorting stills were

allegedly placed in drums and stored. Prior to that time the sludge continued to be dumped on what is now the Velsicol property (Bernstein deposition, February 9, 1977, p. 32). Plaintiff proposes to present oral testimony to the effect that the dumping of sludge from the retorting still on the Velsicol property continued after Ventron acquired the stock of WRCC.

3. Section 9, paras. (e), (i) and (j), p. 19. These paragraphs deal with cleanup efforts by Ventron prior to abandonment of its facility at Wood-Ridge in March and April of 1974. DEP and EPA personnel who visited the site shortly after shutdown observed open containers of chemicals throughout several vacant buildings. They also observed sludge in certain tanks and on the ground. A sample taken from this sludge indicated it contained 17,700 ppb mercury (DV-680, DV-645, PL-4, DV-366). By reason of the aforementioned the extent and reasonableness of the cleanup effort engaged in by Ventron/WRCC prior to its abandonment of the facility in question is a contested issue of fact.

4. Section 35, para. (c), p. 75. The plaintiff disputes defendants' assertions that it was agreed that the lined ditch referred to in paragraph 1(a) of the DEP's June 17, 1974 letter need not be implemented.

5. Section 35, para. (e), p. 75. The plaintiff disputes defendants' allegation that a small earthen dam was created at the culvert to prevent water from leaving the property (Lepre deposition, pp. 27, 34).

6. Section 35, para. (f), p. 76. The numerous inspections conducted by personnel from the DEP and EPA indicate that not all runoff water used in demolition was pumped into on-site fuel storage tanks. In fact on numerous occasions water was observed leaving the site subsequent to June 12, 1974.

7. Section 35, para. (x), p. 79. During Mr. Pike's visit to the site on July 2, 1974 he observed water leaving the site and entering a ditch which leads into Berrys Creek.

8. Section 37, para. (k), p. 89. Not all of the topsoil scraped from Block 229, Lot 10A was in fact removed to Building # 2 area. Some of it was removed from the site without the prior knowledge and approval of the governmental entities involved. Furthermore, stockpiled material from Lot 10A was supposed to be placed under and within the entombment device under Building # 2 (Wolf deposition, p. 777). Only 80% of the contaminated material from Lot 10A was in fact placed under Building # 2. The remainder was spread over Lot 10B (Wolf deposition, p. 941; D'Amore deposition, p. 109).

9. Section 40.7, para. (o), p. 96. Statement contained in this paragraph should be qualified to indicate that Doctors Ollis and Johnson proposed a clay dike four (4) feet deep around the entire property in order to seal off the contaminated area (Ollis and Johnson Report dated March 4, 1975).

10. Section 41, para. (hh), p. 115. This paragraph is misleading. It states that Mike Polito, EPA, said that the impermeable layer "may have been penetrated." In fact he stated it was penetrated. His statement was based, in part, upon a New Jersey Testing Laboratory letter which describes the use of a backhoe to obtain samples from the property from depths greater than three (3) feet at which the alleged impermeable layer resides.

11. Section 41, paras (tt), (uu) and (vv) on pp. 117, 118. While EPA and the DEP tentatively approved the entombment proposals set forth by Wolf/Schiel, it was only under the condition that it be implemented in accordance with the provisions set forth in the Scolnick letter of February 28, 1975. At no time did either EPA or DEP agree to a modification of the Scholnick letter. In the memo of September 3, 1975, prepared by Mike Polito wherein he states that Rovic/Wolf had "basically accepted proposals of Meyer Scolnick", it was his understanding

that Wolf had agreed to commence construction in compliance with the Scolnick letter in its entirety. Mike Polito would have had no authority to agree to modifications to the Scolnick letter. (Oral testimony on the aforementioned will be submitted by the plaintiff at the time this matter comes to trial.)

12. Section 42, para. (j), p. 120. No plans or specifications for the paving of Lot 10B have ever been submitted to either the DEP or EPA. There is nothing in the record to indicate what type of material was used for the paving. Site inspections by DEP and EPA personnel have indicated that in fact the areas referred to in paragraph (j) have been paved; however, the impervious nature of this paving is in question by reason of cracking. (Plaintiff proposes to submit oral testimony on this issue.)

13. Section 42, para. (1), p. 120. There is a railroad spur along the southern boundary of the Wolf property. The drainage "along the southern boundary", which is immediately to the south of the railroad spur, is an open, unlined soil ditch. The drainage ditch here was not "replaced with underground concrete piping." This being the case, plaintiff takes issue with defendants' statement in paragraph (1). (Oral testimony will be submitted by plaintiff on this issue.)

14. Section 43, para. (i), p. 124. Plaintiff has no record of the November 4, 1975 letter referred to in paragraph (i) and no recollection of the contents thereof and therefore leaves defendant to its proofs on this particular factual point.

15. Section 45, para. (d), p. 126. The Berrys Creek tidal marsh is not a "part of the New Jersey Sports & Exposition Authority site." Rather it is adjacent to the Sports Complex.

16. Section 47, para. (o), p. 138. The words "similar to the foundation of the building on the Wolf property" is an editorialization supplied by the author of this statement. The McCormick report states that the cutoff wall could be "a bentonite-sand mixture (a slurry wall) with or without a cement additive." (McCormick Report, M-2, p. 92). Wolf never submitted any plans and specifications regarding the foundation of the building on the Wolf property and there is no way of knowing at this particular point in time what type of concret structure was used for the foundation of the building on their property.

17. Section 44, para. (i), pp. 125, 126. The mercury values contained in this schedule are too high by a factor of 100 (memo from Reed to Heksch dated August 5, 1977).

18. Section 46, para. (i), p. 135. In addition to the material enumerated as having been collected from the dump site

in question, also found in the vicinity of this dump site were: (1) earthen crock labeled "mercury"; (2) plastic chemical bottles in a shipping crate labeled "mercury, 10 pounds net, Wood Ridge Chemical Company" (these bottles were noted to have droplets of mercury in them); and (3) invoice forms with the heading "Wood Ridge Chemical Company--Ventron".

JOHN J. DEGNAN
ATTORNEY GENERAL OF NEW JERSEY
Attorney for Plaintiff

By _____
Ronald P. Heksch
Deputy Attorney General

State of New Jersey
DEPARTMENT OF LAW AND PUBLIC SAFETY
ENVIRONMENTAL PROTECTION SECTION
36 WEST STATE STREET
TRENTON 08625

JOHN J. DEGNAN
ATTORNEY GENERAL

STEPHEN SKILLMAN
ASSISTANT ATTORNEY GENERAL
DIRECTOR

STEVEN A. TASHER
DEPUTY ATTORNEY GENERAL
SECTION CHIEF

March 8, 1978

Mr. William Librizzi
U.S. EPA, Region II
Edison, N. J. 08817

Mr. Michael V. Polito
U.S. EPA, Region II
Edison, N. J. 08817

Re: State v. Ventron
Docket No. C-2996-75

Gentlemen:

Enclosed for your information are copies of proposed stipulation of facts in the above matter prepared by the attorneys for Robert and Rita Wolf. I am in the process of preparing a response to same and would ask that you review it and advise me specifically what sections, if any, we should refute. My time period for preparing a response is rather short. It must be submitted to the court no later than March 24, 1978. This being the case I would appreciate it if you would respond to me no later than March 20. Because of the time limitation please feel free to call me and discuss the matter with me as opposed to preparing a written statement.

Very truly yours,

JOHN J. DEGNAN
ATTORNEY GENERAL

Ronald P. Heksch

Ronald P. Heksch
Deputy Attorney General

RPH:mp
Enc.

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LOWENSTEIN, SANDLER, BROCHIN
KOHL & FISHER
744 Broad Street
Newark, New Jersey 07102
(201) 624-4600
Attorneys for Defendants
Robert M. and Rita W. Wolf

STATE OF NEW JERSEY, DEPARTMENT OF ENVIRONMENTAL PROTECTION	SUPERIOR COURT OF NEW JERSEY CHANCERY DIVISION - BERGEN COUNTY DOCKET NO. C-2996-75
Plaintiff,	
-v-	Civil Action
VENTRON CORPORATION, et. al.,	STATEMENT OF UNDISPUTED BASIC FACTS AS SUBMITTED BY DEFENDANTS ROBERT M. AND RITA W. WOLF
Defendants.	

Pursuant to the Order and direction of the Court, defendants Robert and Rita Wolf hereby submit this "Statement of Undisputed Basic Facts" for purposes of the first hearing in the above-captioned matter to determine what, if any, corrective actions are presently required and which parties are liable for the costs and other obligations arising therefrom.

Most statements contain one or more references to the documents, depositions, interrogatories, and pleadings which sup-

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port the Statement. Efforts have been made herein to exclude conclusory statements and statements of fact which are in dispute. All objections to relevancy and materiality shall be deemed preserved by all parties whether or not the fact is admitted.

1. The Subject Property is Located in Wood Ridge and Carlstadt, Bergen County, New Jersey.

(a) The property (hereinafter, "the property") which is the subject matter of the within litigation consists of approximately forty (40) acres of real estate.

(b) The property may be identified on the current Bergen County tax maps as Block 229, Lots 10A and 10B, Wood Ridge (hereinafter, the "Ventron property"); and Block 229, Lot 8, Wood Ridge and Block 146, Lot 3, Carlstadt (hereinafter, the "Velsicol property").

(c) The Ventron property (Block 229, Lots 10A and 10B, Wood Ridge) consists of approximately 7.1 acres.

(d) The Velsicol property (Block 229, Lot 8, Wood Ridge and Block 146, Lot 3 Carlstadt) consists of approximately 33 acres.

(e) The property is located adjacent to Berry's Creek, a tributary of the Hackensack River, on its westerly side approximately two (2) miles upstream of the Berry's Creek Tidal Marsh.

(f) The property is located without the area designated as the Hackensack Meadowlands District.

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COUNSELLORS AT LAW
744 BROAD STREET
NEWARK, N. J. 07102

2. <u>There Have Been Several Owners of the Property Since 1929.</u>

(a) From approximately 1929 through 1960, F.W. Berk and Co., Inc., (hereinafter "Berk"), a Maryland corporation, owned and operated a chemical processing facility at the property.

(b) At one time Berk manufactured methyl mercury salt but discontinued the product after a worker was overcome by fumes and killed (Kirk Tr. at pgs. 74-75).

(c) By 1960 Berk had come to be owned by William Taylor (Kirk Tr. at pgs. 15-25).

(d) In 1960 Taylor sold the assets of Berk to defendant Velsicol Chemical Company (hereinafter "Velsicol"), an Illinois corporation which formed Wood Ridge Chemical Corporation, a Nevada corporation, (hereinafter "WRCC") as a wholly-owned subsidiary to own and operate the chemical plant (Kirk Tr. at pgs. 15-18; 25; Ex. Kirk-1).

(e) From June 1960 to February 1, 1968, WRCC operated the business as a wholly-owned subsidiary of Velsicol (Velsicol Answer to State Interrogatory No. 3; Bernstein Tr. 9/14/76, at pgs. 43-44).

(e) WRCC operated a mercury processing facility on the portion of the property called herein the Ventron property (7.1 acres) from 1960 until 1968 (Velsicol Answer to State Interrogatory No. 23)

(f) In June 1967 WRCC subdivided the property into what is referred to as the Ventron and Velsicol properties and transferred title to the adjacent Velsicol property to its

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744 BROAD STREET
NEWARK, N. J. 07102

parent, Velsicol (Kirk Tr. at p. 82). WRCC continued to hold title to the property referred to herein as the Ventron property.

(g) By stock purchase agreement dated February 1, 1968 (DW-38), defendant Ventron Corporation, a Massachusetts corporation, (hereinafter "Ventron") acquired the stock of WRCC from Velsicol (Ventron Answer to State Interrogatory No. 1(a)).

(h) Under Ventron's ownership, from 1968 to 1974, WRCC processed and manufactured mercury and mercuric-based products on the Ventron property (Ventron Answers to State Interrogatories No. 2 and 12).

(i) Record title to the Ventron property remained in WRCC until 1974 (Ventron Answer to State Interrogatory No. 1(d)).

(j) On May 21, 1974, Ventron conveyed title to the Ventron property to defendants Wolf by deed dated May 7, 1974 (DV-1).*

(k) In 1975 the Ventron property (Block 229, Lot 10) was subdivided into Lots 10A and 10B.

(l) In 1975 defendant U.S. Life Insurance Company (hereinafter, "U.S. Life") acquired title to Lot 10A of the Ventron property from Wolf pursuant to a sale and leaseback agreement DV-659).

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* Robert M. Wolf is a real estate developer. Rita W. Wolf, the wife of Robert M. Wolf, is a joint owner of the subject property. Hereinafter, "Wolf" will refer to Rita W. and Robert Wolf.

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3. Ventron Acquires WRCC in 1968.

(a) In the summer of 1967 Ventron commenced negotiations with Velsicol for its acquisition of the stock of WRCC (Kirk Tr. at pgs. 70-71).

(b) Ventron conducted an extensive investigation of WRCC's plant operations, including potential pollution problems, prior to its acquisition (Kirk Tr. at p. 64).

(c) The potential pollution problems were discussed freely between Ventron and Velsicol pursuant to a secrecy agreement (Kirk Tr. at pgs. 62-65).

(d) Regarding the proposed sale of WRCC, Milton C. Lauenstein, Jr., president of Ventron, and John F. Kirk, executive vice-president of Velsicol, discussed specifically the "potential expenses involved in pollution control and safety programs" at WRCC which discussion was specifically referred to in the formal acquisition documents (Letter dated January 3, 1968).

(e) By the stock purchase agreement dated February 1, 1968, Ventron acquired the stock of WRCC from Velsicol on the specific disclaimer (Schedule A) of any warranty that "the Wood Ridge plant would not at some time entail alterations or other steps to comply with applicable federal, state and local environmental laws and regulations." (DW-38)

(f) At the time of the Ventron acquisition, Velsicol had been manufacturing purified mercury, inorganic and organic mercury compounds, and several sulfur, non-mercuric based fungi-

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cides (Bernstein Tr. 9/14/76 at pgs. 33-34).

4. Ventron* Manufactured and Supplied Mercury and Various Mercury-Based Products from its Wood Ridge Plant from 1968 through 1974.

(a) Ventron admits it was one of the largest domestic processors/users of mercury from 1968 to 1974 (DW-6).

(b) Ventron admits having consumed approximately 2,000 pounds of mercury for each operating day (1 shift/six days a week) (WRCC Application to U.S. Army Corps of Engineers for Permit to Discharge dated June 30, 1971; DW-6).

(c) From 1968 to 1974 Ventron manufactured fungicides, insecticides, organic and inorganic mercuric salts, borons, re-distilled mercury, red mercuric oxide, yellow mercuric oxide, phenyl-mercuric acetate, and other organic and inorganic mercuric compounds. Ventron also engaged in the storage of prime virgin mercury (Faye Tr. I at pgs. 13-15; 18-20; Bernstein Tr. 9/14/76 at p. 34; Ventron Answer to State Interrogatory 12).

(d) There were sixteen buildings located on the Ventron property until 1974 (Ventron Answer to State Interrogatory No. 3).

(e) Exhibit P-38 indicates the location of each of these buildings.

(f) Buildings 13A, 18, and 20 were those plant areas in

* When Ventron conveyed title to the Ventron property to Wolf in May 1974, it dissolved its subsidiary, WRCC. Ventron assumed all assets and liabilities of WRCC. By operation of law, WRCC ceased to exist as a separate corporate entity. Therefore, hereinafter, "Ventron" will refer to the parent and its subsidiary.

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which the mercury processes occurred and from which the mercury-bearing effluent was generated (DW-6).

(g) Building 13A housed the manufacture of phenylmercuric acetate and various phenyl mercury compounds (Hoffman Tr. at pgs. 77-78; Faye Tr. I at p. 20).

(h) Building 18 was the location for the manufacture of red mercuric oxide, yellow mercuric oxide, triple distilled mercury, mercuric chloride, and other mercury specialty compounds (Hoffman Tr. at pgs. 78-79; Faye Tr. I at p. 19).

(i) Building 18 "was one of the large mercury production buildings. It was also the location of the effluent treatment system" (Bernstein Tr. 9/30/77 at p. 270).

(j) Building 18 contained a storage vault for flasks of prime virgin mercury (Hoffman Tr. at pgs. 78-79).

(k) Building 20 was the location for the recovery of elemental mercury by distillation of mercury-bearing solids and sludges (DW-6; Bernstein Tr. 9/30/77 at pgs. 247-250; Faye Tr. II at p. 152).

(l) The mercury-bearing solids and sludges, which were distilled in Building 20, were internally generated by Ventron's manufacturing processes and also supplied directly for reclamation by Ventron customers (Cadmus Tr. at pgs. 56-59).

(m) After the operation of the stills, residue remained and was placed in drums and stored (Faye Tr. I at pgs. 15-17; Cadmus Tr. at pgs. 56-59; Hoffman Tr. at pgs. 21-22).

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(n) Building 17 was a shed used for mercury distillation (Ventron Answer to State Interrogatory 5; Faye Tr. I at p. 17).

(o) Building 19 was a warehouse which stored finished products and certain raw materials (Hoffman Tr. at pgs. 78-79).

5. Waste Treatment at Ventron as of February 1968

(a) As of February 1968, waste treatment processes at Ventron consisted of a plant sewer and drainage system and a collecting sump.

(b) The plant sewer and drainage system conducted process wastes from buildings 3, 9, 13 A & B, 16, 18 and 20 to a common collecting point located at the southeast corner of the Ventron property (Fig. 1, Metcalf & Eddy Study, dated December 6, 1968).

(c) Prior to 1968 the mode of effluent treatment employed at Ventron included neutralization of the waste water, sedimentation of solids, and filtration (Faye Tr. I at p. 71; DW-27; DW-19).

(d) By agreement dated February 1, 1968, Velsicol granted and conveyed to Ventron an easement over the Velsicol property to permit installation and maintenance of a pipeline to conduct plant effluent and surface water from the Ventron property across the Velsicol property to a discharge outfall on Berry's Creek (Easement Agreement dated February 1, 1968).

(e) Total plant waste waters were directed from the southeast corner of the Ventron property through a drainage pipe

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which traversed the Velsicol property and terminated at Berry's Creek.

(f) The Ventron waste waters were discharged directly into Berry's Creek.

6. 1968: Ventron/WRCC Undertakes Waste Water Study

(a) On February 1, 1968 the State of New Jersey, Department of Health* notified Ventron that its waste waters were unsatisfactory (DV-131).

(b) A meeting between the State and Ventron representatives was scheduled for February 9, 1968 to discuss the pollution emanating from the Ventron property to Berry's Creek (WRCC memorandum dated February 14, 1968; letter from State to WRCC dated February 13, 1968).

(c) At a meeting on February 14, 1968 the State directed Ventron to undertake immediately industrial waste water treatment studies, to formulate plans for waste water treatment facilities, and to investigate sources of additional effluent discharges at the Ventron property (WRCC memorandum dated February 14, 1968; letter from State to WRCC dated February 13, 1968).

(d) In February 1968 the State instructed Ventron to submit for approval the designs and specifications for any waste water treatment facilities prior to installation (Id).

* Prior to the 1971 formation of the New Jersey Department of Environmental Protection (hereinafter, the "DEP"), DOH was the cognizant state agency with primary authority for pollution control. Hereinafter, the "State" will refer to that state agency with environmental regulatory power.

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(e) As of February 1978 Ventron was required to submit to the State bi-monthly reports of its progress (Id).

(f) In March 1968 Ventron retained the services of a Boston engineering firm, Metcalf & Eddy, Inc., to conduct waste water analyses and to investigate the feasibility of biological treatment of the effluent. (Letter dated March 20, 1968 from Metcalf & Eddy, Inc. to WRCC; letter dated April 19, 1968 from WRCC to Metcalf & Eddy, Inc.)

(g) In April 1968 Ventron reported to the State its retention of Metcalf & Eddy and outlined its waste water study to date. (Letter dated April 18, 1968 from WRCC to State).

(h) By June 1968 Ventron had installed a V-notch weir at the southeast corner of the Ventron property to measure the flow rate of total plant effluent prior to its discharge from the Ventron property to Berry's Creek (DW-27; letter dated June 17, 1968 from WRCC to State).

(i) In 1968 Metcalf & Eddy reported mercury levels in Ventron's plant effluent up to 24,000 parts per billion (ppb) (DW-27).

(j) In December 1968, Metcalf & Eddy submitted to Ventron its waste water report in which it set forth the character and volume of the industrial wastes and recommended certain procedures for pretreatment and disposal (DW-27).

(k) In its December 1968 report, Metcalf & Eddy suggested that Ventron pretreat its waste water and attempt to gain

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gain acceptance for its effluent discharge into the Bergen County sewer system. (DW-27)

(l) There were two sewer systems nearby the Ventron site, one belonging to Wood Ridge, the other to Bergen County. Discussions regarding tying-in to one or the other were held even before 1968 and resurrected periodically thereafter but these discussions never came to fruition. (Bernstein Tr., 7/14/76, at pgs. 67-68) Ventron continued at all times from 1968 to 1974 to dump directly into Berry's Creek.

(m) On June 17, 1968, Ventron informed the State that it anticipated completion of construction of waste treatment facilities by November 1969 (DV-119).

(n) There is no evidence to indicate that Ventron ever initiated any of the remedial measures recommended by Metcalf & Eddy for treatment of its industrial waste waters.

(o) By letter dated January 24, 1969, Ventron submitted the Metcalf & Eddy study to the State (DV-111).

(p) The State reviewed the study and objected to the toxicity of the effluent due to the presence of mercury compounds (DV-110, dated February 14, 1969).

(q) In 1969 the State continued to monitor Ventron and in April 1969 notified the company that its final effluent was unsatisfactory (DV-107).

(r) Bernstein (Ventron), Manager of Mercury Chemicals, who spent 60% of his time physically at Wood Ridge, claims to have

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been unaware of any communications from federal and state agencies in this period (Bernstein Tr. 9/1/76, at pgs. 48-49).

7. Ventron's Pre-Phase I Waste Treatment System

(a) As of August 1970, Ventron's processed wastes, storm water, cooling water, boiler water and other utility waters were collected into the plant's sewer system (Faye Tr. I at p. 24; Faye Tr. III at p. 101).

(b) In August 1970, Ventron's entire plant effluent, including storm water, was directed by various drains and pipes to a concrete in-ground cylinder in the southeast corner of the property where it entered a drainage ditch across the Velsicol property for discharge into Berry's Creek (Faye Tr. I at pgs. 24-26).

(c) As of August 1970, a large collecting basin, a below-grade concrete cylinder, was located at the southeast corner of the Ventron property (Faye Tr. I at p. 25).

(d) The concrete cylinder had a capacity of approximately 1000 to 1550 gallons (Faye Tr. I at p. 25).

(e) As of August 1970, there were two pipes which conducted waste materials into the concrete cylinder (Faye Tr. I at p. 26).

(f) As of August 1970, waste materials exited the cylinder, which was below-ground with a removable wooden plank cover, through an overflow outlet located a few inches below the top rim of the cylinder (Faye Tr. I at p. 26).

(g) As of August 1970, the cylinder would overflow in a southerly direction and within 10 feet combined with another large

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pipe which directed the flow in an easterly direction (Faye Tr. I at pgs. 26-27).

(h) As of August 1970, the overflow from the plant combined with a ditch that ran along the southside of the plant the entire east-west length of the plant (Faye Tr. I at pgs. 26-27).

(i) As of August 1970, Ventron had two sedimentation systems: the red oxide system and the phenol mercury system (Faye Tr. I at p. 30).

(j) The red oxide system which consisted of vats and basins used for settling solvents was located inside building 18 (Faye Tr. I at p. 30).

(k) Some of the basins and vats were below ground level, while others were above-ground level (Faye Tr. I at p. 31).

(l) The in-ground basins were concrete; the above-ground basins were metal or wood (Faye Tr. I at p. 31).

(m) As of August 1970, the phenol mercury system consisted of a wooden vat and a concrete collecting basin, which was externally located adjacent to buildings 13A and B on the south side (Faye Tr. I at p. 31).

(n) An overflow pipe connected directly to the basin below-grade to conduct liquid wastes to the plant sewer system (Faye Tr. I at pgs. 33-34).

(o) As of August 1970, the exterior basin adjacent to buildings 13A and 13B received wastes from those buildings and settled out the solids from the liquids. The liquids overflowed through the pipe to the sewer system (Faye Tr. I at p.36).

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to sample effluent (Faye Tr. I at p. 44).

(x) As of August 1970, Ventron had neutralization tanks to neutralize certain spent liquors (Faye Tr. I at p. 45).

(y) As of August 1970, Ventron treatment of its mercury-bearing wastes consisted of neutralization and treatment with caustic soda, settling, and treatment with sodium chloride for the organic wastes (Faye Tr. I at p. 71).

8. 1970 U.S. Consciousness of Mercury Raised:

(a) "In early 1970, the national consciousness had been raised with respect to mercury . . ." (Ventron Answer to State Interrogatory No. 20)

(b) In 1970 Ventron became aware that a farmer in New Mexico had fed his hogs mecury contaminated seed grain. The slaughtered hogs were eaten by children who developed a severe case of mercury poisoning. (Bernstein Tr., 2/9/77, at pp. 294-96).

(c) Later in 1970, after receipt of alarming reports of mercury in Canadian waters, the Department of the Interior directed the Federal Water Quality Administration* to assess the problem in the United States. (Stopford Report, 12/27/77, at p. 1; Bernstein Tr., 2/9/77 at pp. 294-96).

* Prior to the fall 1970 formation of the United States Environmental Protection Agency (hereinafter, "EPA"), the Federal Water Quality Administration was the cognizant federal agency with primary responsibility for pollution control. Hereinafter, "EPA" refers to that federal agency with environmental regulatory authority.

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(d) In mid-1970 the EPA inaugurated an extensive pollution investigation of significant mercury users in the northeast region of the United States (Stopford Report, 12/27/77, at p. 2; DE-4B).

(e) In mid-1970 the EPA scheduled preliminary sampling for certain mercury-using companies (DE-4B).

(f) In 1970 the EPA commenced "[i]ntensive sampling for legal documentation" of Ventron (DE-4B).

(g) On August 12, 1970, the EPA sampled the Ventron outfall to Berry's Creek upsteam and downsteam, including water and sediment samples (DE-4Z).

(h) Insofar as the record shows, August 12, 1970 was the first time the sediment in Berry's Creek was sampled and analyzed for mercury.

(i) Laboratory analyses of the August 1970 water samples indicated mercury concentrations in Berry's Creek 100 yards upstream of the Ventron outfall was 10 parts per billion (ppb) and 100 yards downstream was 21 ppb (DE4-2; DE4C).

(j) The mercury concentration in the Ventron effluent in August 1970 was 5,000 ppb (DE4-2; DE4C).

(k) The effluent sample in August 1970 was based on an eight-hour composite with an estimated plant flow rate of 35 gallons per minute (gpm) (DE4C).

(l) Based on 35 gpm flow rate and 5,000 ppb mercury in an eight-hour composite effluent sample, in August 1970 the EPA

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calculated Ventron was discharging at least 2.1 pounds of mercury daily into Berry's Creek (DE-4C).

(m) The mercury assays of the sediment samples in August 1970 revealed mercury concentrations of 8,475 ppm upstream and 7,740 ppm downstream (DE-4Z; DE4C).

(n) The EPA sediment data obtained near the Ventron outfall "was nearly 2.5 times as great as the highest concentration previously reported in the available world literature (3,504 ppm in a small swamp in Ashland, Massachusetts)" and remains today the highest known concentration of mercury in fresh water sediment in the world (M-4; M-14).

(o) Additional analysis was performed by the EPA on Ventron's effluent to determine the dissolved mercury content. The data reflected a dissolved mercury level of 1500 ppb (DE-4O).

(p) On August 27, 1970 the EPA laboratory forwarded the Ventron data to EPA's Regional Office and to Washington, D.C. (DE4C)

(q) The EPA decided to direct Ventron to appear at an informal hearing in Washington, D.C. (DE-4C).

(r) In October 1970, the EPA performed an additional series of analyses on the samples it had collected on October 8, 1970. The samples included total Ventron plant effluent, filtered and unfiltered effluent (DE4H; DE-1QQ).

(t) On October 10, 1970, the EPA visited the Ventron plant to conduct a 24-hour composite sample and a continuous flow measurement of the overall plant effluent (DE4-Z).

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(u) The EPA assessed the collected data. It showed a mercury level of 7,000 ppb and a flow rate of 54.8 gpm (DE4-Z).

(v) In October 1970, the EPA calculated Ventron was discharging 4.6 pounds of mercury each day into Berry's Creek (DE4-Z).

(w) By letter dated October 22, 1970, the EPA notified Ventron that a meeting with the Acting Commissioner of Enforcement and Standards Compliance in Washington had been arranged for November 6, 1970 to discuss corrective action to eliminate the mercury problem (DE4-V).

9. Ventron Commences Design and Implementation of Phase I.

(a) Ventron personnel prepared a capital expenditure report dated October 23, 1970 which outlined Phase I of a projected three-stage program for its effluent treatment system (DW-26; Faye Tr. I at pgs. 56-58).

(b) Ventron admitted that the need to control the mercury effluent was then "at an emergency level" (DW-26).

(c) Ventron admitted that "[w]hile the main incentive for Phase I investment [was] the necessity for pollution control, there [was] also a fairly attractive economic return on investment to be realized" (DW-26).

(d) Phase I was based on reduction and precipitation of soluable mercury with sodium borohydride, followed by collection of the precipitated mercury through centrifugation and filtration.

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(e) Phase I called for the segregation of all mercuric effluent streams from non-mercuric effluent streams, collection of mercury-bearing effluent, and isolation from existing outfall drains.

(f) Under Phase I, the clarified mercuric effluent would recombine with the non-mercuric effluent in existing outfall drains for discharge to Berry's Creek.

(g) On November 6, 1970, Ventron representatives met with EPA in Washington. The EPA advised Ventron it was dumping 4.2 pounds per day of mercury in Berry's Creek. Ventron presented its Phase I program (Faye Tr. I at pp. 58-59). EPA advised Ventron to reduce its mercury discharge in total plant effluent to 0.5 pounds per day (lb/day) by January 31, 1971 at which time EPA would resample Ventron effluent, evaluate the mercury reduction, and determine the necessity for additional abatement measures (DE4-Z).

(h) On November 6, 1970, Ventron informed the EPA that it had not realized the extent of the mercury pollution because of the unsophisticated analytical techniques it employed (DE4-Z; Ventron Answer to State Interrogatory No. 20).

(i) During the November 6, 1970 meeting, the EPA declared the necessity of defining the extent of contaminated sediment in Berry's Creek (DE4-Z).

(j) In November 1970 the EPA and Ventron engaged in a discussion concerning the responsibility for and removal of the mercury-bearing sediment in Berry's Creek (DE4-Z).

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(k) The EPA advised Ventron it would defer decision on the removal of the contaminated sediment until it had the opportunity to evaluate Ventron's pollution control efforts (DE4-Z).

10. Phase I Goes into Operation

(a) On November 13, 1970 EPA laboratory technicians met with Ventron personnel to review analytical procedures and instruments to minimize the differences in test methods and results (Ventron internal memoranda dated November 9, 1970 and November 16, 1970).

(b) In late 1970 Ventron installed monitoring and measuring devices at the southeast corner of the Ventron property. The devices measured (1) the flow of all waste streams and drainage at that location where all pipes co-terminated and (2) the level of mercury in total plant effluent after treatment. Incident to Phase I, Ventron isolated the settling pit adjacent to building 13A by breaking its connection to the underground pipe and repiping to building 18. The original pipe was sealed and left in ground. (Faye Tr. I at pp. 67-68).

(c) Ventron's deadline for completion of Phase I was January 31, 1971.

11. Ventron Discovers The Residual Problem

(a) Phase I was operational by February 1971 (Faye Tr. I at p. 81).

(b) As part of Phase I, Ventron instituted an increased sampling program (Faye Tr. I at p. 64).

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(c) The Phase I sampling program called for increased frequency of sampling at the southeast corner and additional sampling points at locations along the sewer line and from process streams (Faye Tr. I at p. 65). Ventron also sampled its effluent immediately after treatment.

(d) The EPA's standard for mercury content of discharged effluent as of February 1971 was known to Ventron to be less than 0.5 lbs./day and would be reduced to less than 0.1 lb./day as of July 1, 1971 (DW-4).

(e) On February 9 and 10, 1971 Ventron collected samples of its treated and total effluent which it submitted to EPA for analysis (DW-5).

(f) Total effluent was the combination of treated effluent plus all streams (including storm water, boiler blowdown, and "non-mercuric" process wastes) which did not pass through the Phase I treatment system.

(g) In April 1971 EPA's analysis of the samples revealed that the mercury content in the total plant effluent was a factor of four larger than that in the treated plant effluent (DW-5).

(h) On February 16 and 17, 1971 Ventron's Barry Faye collected and submitted for analysis to EPA samples of treated plant effluent and total plant effluent (DE-1NN).

(i) EPA's analysis of the February samples showed mercury levels of 220 ppb in the treated effluent and 970 ppb in the

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total plant effluent (DE 1-OO dated February 1971). Ventron was not even discharging the mercury-bearing effluent from its manufacturing operations during the February sampling and so advised EPA (DE4-DD). EPA's analysis showed that Ventron was discharging approximately 0.1 lb./day mercury even without production occurring.

(j) On February 17, 1971 Ventron's plant engineer reported to Ventron's vice president Joseph Bernstein the fact there was a 50% increase or more in mercury concentration in the effluent from the concrete treatment tank adjacent to Building 18 to the final measuring point at the weir (Memorandum from F.H. Wilson to Joseph Bernstein dated February 17, 1971).

(k) At first Ventron's plant engineer attributed the increase to the incomplete flushout of the lines. (Id.)

(l) In February 1971 within Ventron personnel discussed the increase in mercury from treated to toal efluent with EPA's John Ciancia and imputed it to mercury in the waste lines (DW-2).

(m) EPA advised Ventron that the residual in the lines ought to flush in three to four weeks (DW-2).

(n) The DEP, which had continued to sample Ventron's effluent, reported mercury results of 950 ppb in the final effluent from a March 2, 1971 sampling (DV-97).

12. Ventron Commences Phase II

(a) Phase I had reduced processed effluent but had revealed a new and unknown source of mercury 2 to 4 times larger than the process waste. This became known as the residual problem.

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12. Ventron Commences Phase II

(a) Phase I had reduced processed effluent but had revealed a new and unknown source of mercury 2 to 4 times larger than the process waste. This became known as the residual problem.

(b) Efforts to further reduce plant discharge of mercury after February 22, 1971 were discribed by Ventron as part of Phase II (Faye Tr. I at p. 89). Plans for Phase II commenced March 8, 1971 (Memorandum from F. Wilson to B. Faye dated March 8, 1971).

(c) Phase II was to be a secondary treatment system. It called for isolation of existing lines and drains, repiping, recovery tanks, treatment of settled sludge, and installation of a sump and a pump (Memorandum dated March 19, 1971 from E.M. Mykowski to JHB, JGH, FHW).

(d) As Phase II was initiated, the residual problem did not terminate; mercury in total plant effluent appeared in quantities as much as ten times greated than treated effluent. (O'Rourke Tr. at pgs. 84-85).

(e) EPA's John Ciancia discussed with Barry Faye, Ventron, once more the mercury-laden sludge in Berry's Creek in the vicinity of the discharge (DE4-AA).

(f) On May 6, 1971 in a memorandum to EPA's Regional

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Office, John Ciancia, EPA, recommended as priority a meeting with Ventron (DE1-OOOO).

(g) On May 6, 1971 Ventron contacted James O'Rourke, Ph.D., Metcalf & Eddy, Inc., for an advice account concerning its effluent problem. O'Rourke met with Bernstein and Wilson to discuss their water problems (O'Rourke Ex. 2, dated May 6, 1971; O'Rourke Tr. at pgs. 10; 15-16).

(h) On May 27, 1971 Ventron representatives and O'Rourke met with EPA to discuss the company's mercury abatement program and its progress toward compliance with the 0.1 lb./day mercury discharge limit (Bernstein Tr., 9/21/76, at p. 195).

(i) Ventron informed EPA that it planned to replace its treatment system with a final system by June 30, 1971 (DE4-DD).

(j) Ventron admitted that the residual mercury problem appeared significant (DE4-OO).

(k) In their discussions, Ventron and O'Rourke concluded that mercury in the groundwater and soil could be infiltrating the underground lines (O'Rourke Tr. at pgs. 45-47; 54-55).

(l) At the meeting of May 27, 1971 Ventron told EPA that it attributed the problem to either mercury that had accumulated in or infiltrated into the underground lines (DE4-DD).

(m) EPA informed Ventron that it must eliminate all new sources of mercury discharge.

(n) EPA advised Ventron that it must reduce its total

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mercury discharge, including the residual, to less than 0.1 lb./day (DE4-DD; O'Rourke Ex. 4).

(o) EPA directed Ventron to submit bi-monthly reports of daily sampling for treated mercury-bearing effluent and overall plant effluent until Ventron implemented a new abatement program and until the level of mercury discharge met EPA's standards (DE4-DD; O'Rourke Ex. 4).

(p) Ventron admitted that until February 1971 its "typical" mercury discharge was in the range of 2.0 to 4.0 lb/day (DW-6).

(q) By letter dated June 4, 1971, Ventron admitted that since February 1971 the mercury content of the total plant effluent averaged higher than the mercury-bearing treated effluent (DW-6).

(r) Ventron claimed that the increase was due to residuals in the lines and leaching into the lines (DW-6; Faye Tr. II at pgs. 144-145).

(s) O'Rourke testified that in his recollection the term "residual mercury" was used to signify that mercury in ground water or in the soil at the site. He discussed this topic with Faye and Bernstein (O'Rourke Tr. at p. 20).

(t) Ventron intended to replace the underground line which conveyed all plant effluent streams to the collecting basin prior to discharge through the drainage ditch to Berry's Creek to alleviate the residual problem. (DE4-DD).

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(aa) On June 8, 1971 the DEP sampled and analyzed Ventron's final plant effluent (DV-93).

(bb) On June 22, 1971 the DEP informed Ventron's plant manager, Barry Faye, that the laboratory results revealed a mercury content of 5,800 ppb (5.8 ppm) (DV-93; handwritten notes dated June 22, 1971).

(cc) Faye admitted that mercury levels were high in early June 1971 but asserted that Ventron's current corrective measures would reduce the discharge to 0.1 lb/day (handwritten note dated June 22, 1971).

(dd) Sometime prior to July 8, 1971, O'Rourke visited the plant site in the company of Ventron's Faye and Hoffmann (O'Rourke Tr. at pgs. 35-36).

13. Ventron Completes Installation of Phase II

(a) On July 9, 1971 Ventron met with EPA officials in New York.

(b) Ventron informed EPA that it expected completion of the final steps of installation of its secondary treatment system (Phase II) during the week of July 19, 1971.

(c) Ventron stated that it could not accurately assess its system's efficiency until August 1971.

(d) Ventron claimed its system would meet at least the federal standard of 0.1 lb/day.

(e) EPA expressed concern about the high and inconsistent values of mercury indicated in Ventron's sampling reports (DE1-WWWW).

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(f) Ventron suggested that the reported results were due to an error in the sampling method (DE1-WWWW).

(g) EPA doubted that this could be the cause of such gross error (DE1-WWWW).

(h) EPA raised again with Ventron the problem of residual mercury (DE1-WWWW).

(i) Ventron admitted it did not know the actual extent of the residual problem.

(j) Ventron stated it would not evaluate the residual problem until Phase II was operational.

(k) Ventron replied that it was replacing old pipe in the collection network.

(l) Ventron requested additional time until its secondary treatment system was operational.

(m) EPA agreed to defer temporarily any decision on the residual problem.

(n) EPA reiterated that its standard of 0.1 lb/day of mercury in the plant's discharge was a short term goal (DE1-WWWW).

(o) EPA informed Ventron it ultimately expected total elimination of all mercury discharges (DE1-WWWW).

(p) EPA directed Ventron to increase its effluent discharge reports from weekly averages to daily reports (Faye Tr. II at pgs. 174-175).

(q) EPA directed Ventron to submit an explanatory statement of its mercury treatment problems, specifically, the

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residual problem (DE1-WWWW; Memorandum of Record dated July 20, 1971).

(r) By letter dated July 22, 1971 (DE1-YYYY), Ventron set forth the "unique" problems effecting its effluent and its control and treatment.

(s) Ventron admitted an enormously high volume of mercury used in its operations (DE1-YYYY).

(t) Ventron admitted that from January 1971 to June 1971, it produced 495,366 pounds of mercurial products which contained 347,629 pounds of mercury (DE1-YYYY).

(u) Ventron blamed the age of the facility, the residuals in the drains, and the age of the sewer system for the high level of its residual mercury discharge and the difficulties of controlling the residual (DE1-YYYY). It did not allude directly to mercury in the soil.

14. <u>September 1971: EPA Inspects Site</u>.

(a) By letter dated August 17, 1971, Ventron transmtted to EPA the bi-monthly report of its daily plant effluent log for the weeks of July 19 and July 26, 1971 (DW-7).

(b) Ventron's Barry Faye admitted discrepancies between treated and total plant effluent discharges (DW-7; Faye Tr. II at pgs. 195-196).

(c) In August 1971 Faye hypothesized that inadequate sampling methods could account for low treated effluent discharges versus high total effluent discharges (DW-7).

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(d) EPA requested additional information from Ventron on the specific sampling methods used (DE1-CCCCC).

(e) EPA requested clarification of the reported discrepancies between the mercury content of the treated effluent and total plant effluent (DE1-CCCCC).

(f) By letter dated August 31, 1971 to EPA, Ventron acknowledged the discrepancies and the residual problem (DE1-FFFFF).

(g) Ventron stated it required additional time before it could focus attention on a solution to the residual problem (DE1-FFFFF).

(h) Ventron's "immediate goal [was] to reduce new discharges (those out of the new secondary treatment system) to within the current criteria." (DE1-FFFFF).

(i) Ventron asserted that "the resolution of the reported discrepancies and potential residual contamination, must of necessity wait for the attainment of precise control and accurate measurement of new discharges." (DE1-FFFFF)

(j) In September 1971 EPA's William Horner expressed concern that "Ventron Corporation [was] either not being completely candid with [EPA] or that the Corporation [was] not doing its level best to eliminate problems it [was] having in sampling the nature and extent of its mercury discharge." (DE1-XXXXXX, dated September 9, 1971)

(k) EPA decided to schedule an on-site inspection of the Ventron plant (Id.).

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(l) On September 16, 1971, EPA's inspected the Ventron site (DE1-DDDDDDD).

(m) During the inspection, Ventron personnel provided EPA with internally prepared schematic charts of the plant, the effluent sewer system and the secondary mercury removal system (Phase II) (DE4-DD).

(n) EPA personnel noted "immediately extremely poor housekeeping throughout the plant" (DE1-DDDDDDD).

(o) EPA personnel observed that "the unkempt and disorderly analytical lab [was] not conducive to believable analytical data." (DE1-DDDDDD)

(p) EPA's Horner discussed with Ventron his concern that the amount of mercury in the total plant effluent exceeded that in the treated effluent (DW-8).

(q) Horner advised Ventron of his strong feeling "that it [was] residual mercury in the ground that [was] entering the total effluent discharge." Ventron has admitted Horner "was adamant on this point" (DW-8).

(r) EPA (Horner) requested Ventron to maintain and submit a record of rainfall to determine the existence, if any, of a correlation between heavy precipitation and high values of mercury in its plant effluent discharge (DW-8).

(s) EPA recommended that Ventron again coordinate its analytical efforts with EPA-Edison Technical Branch on identical effluent samples to determine any inconsistencies in methods and techniques (DW-8).

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(t) EPA recommended that EPA-Edison conduct additional sampling at various locations along the plant discharge line (DW-8).

(u) EPA directed Ventron to perform mercury assays on soil samples (DW-8).

(v) After EPA's (Horner, Tidwell) inspection tour, Ventron's Barry Faye and Frank Wilson concurred that "it [was] difficult to see how sampling can be the culprit . . . " (DW-8)

14. Ventron Consults Metcalf & Eddy

(a) Shortly after the EPA inspection of September 16, 1971, Ventron (Wilson) contacted Dr. O'Rourke, Metcalf & Eddy, Inc. (DW-8)

(b) O'Rourke and Wilson discussed the difference between total mercury and mercury in process waste water. They agreed the age of the facility made it a distinct possibility the extra mercury was as a result of mercury in the soil and in the ground water (O'Rourke Tr. at pp. 45-46). O'Rourke stated to Ventron that "in his estimation, the best ecological solution was to leave the plant soil as is. It [was] his opinion that in all probability, the majority of that which is going to leach out to any reasonable degree has already leached out." (DW-8; O'Rourke Tr. at pp. 45-46.)

(c) O'Rourke based his opinion on the retention capacity of the soil and the oral descriptions given to him as to the uses of the plant site over a long period of time (O'Rourke Tr. at p. 47).

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(d) O'Rourke discussed with Ventron personnel that if material were to be removed from the site to eliminate mercury leaching from the soil, there would still be a disposal problem: "The problem really would not have been solved, merely relocated." The amount of soil involved would have been considerable (O'Rourke Tr. at p. 49). After the EPA visit of September 16, 1971, Wilson discussed removal of contaminated soil with O'Rourke. Wilson reported that O'Rourke raised with Ventron the question "that were the plant property to be excavated, where would the excavated material be disposed?" (DW-8); O'Rourke Tr. at pgs. 49-50).

(e) The chief chemist of Ventron, Magier, admits that there were significant quantities of mercury in the open pits on site. His laboratory at Ventron analyzed samples of the soil in analyses separate from that later performed by Metcalf & Eddy (Magier Tr. at pp. 11-12) Magier claimed Bernstein had direct knowledge of this sampling (Magier Tr. at p. 13).

(f) Ventron admits that at one time the laboratory received and analyzed samples of soil for determination of mercury content "to see if it were rich enough" to reclaim. (Cadmus Tr. at pgs. 67-68)

(g) Ventron admits "[t]here was mercury present but not at an economic level to be processed" (Cadmus Tr. at p. 68).

16. Fall 1971: EPA Increases Pressure on Ventron to Investigate Sources of Continued Mercury Discharges.

(a) By letter dated September 17, 1971, Ventron transmitted to EPA its bi-monthly report of daily effluent dis-

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charges for the weeks of August 16 and August 23, 1971 (DE1-GGGGG).

(b) Ventron's mercury content of total plant effluent reported on August 27 and 28, 1971 coincided with heavy rainfall (DE1-GGGGG).

(c) Faye stated that the reported flow was unusually high and represented abundant ground water runoff from rainfall.

(d) By letter dated September 27, 1971, EPA indicated dissatisfaction with the results of Ventron's analysis. (DW-9)

(e) EPA (Horner) stated that the data indicated "that some other factors [were] operating in addition to runoff water to contribute to the total discharge at [the Ventron] plant." (DW-9)

(f) Ventron's reported data for the period August 29, 1971 through August 29, 1971 revealed a consistent, upwardly biased pattern for total effluent mercury discharge as compared to treated effluent mercury discharge.

(g) Ventron's August 1971 daily effluent data showed that mercury in the total plant effluent was on the average 50% higher than that in the treated effluent.

(h) By letter dated September 27, 1971, EPA directed Ventron to improve housekeeping procedures, remove potential areas and conditions for mercury conamination, such as inadequate curbing, and institute and maintain a clean analytical laboratory (DW-9).

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(i) EPA advised Ventron that EPA personnel would be implementing a sampling program (DW-9).

(j) Ventron transmitted the EPA's September 27, 1971 advisory letter and Ventron's August 1971 effluent data to its consultant, O'Rourke and requested a meeting with him to discuss the situation (Wilson Ex.2, dated October 4, 1971).

17. October, 1971: Ventron Commences Limited Soil Sampling; EPA Reinspects Site and Samples.

(a) On October 12, 1971 Ventron notified EPA that it was commencing sampling and analysis of ground water and soil (DW-10).

(b) Ventron informed EPA that its plant would be shut down for the Thanksgiving holiday and for the Company's inventory for the period November 25 through November 29, 1971 (DW-10; Faye Tr. III at pgs. 41-42).

(c) During the four-day shutdown period, there would be no processing of any mercurials.

(d) Ventron intended to conduct a sampling of its "various effluent streams during this period and perhaps shed some light [on] where non-processed mercury [was] entering [the] effluent stream." (DW-10; Faye Tr. III at pgs. 41-42; 44-45)

(e) On October 22, 1971, EPA personnel returned to the Ventron site and obtained five samples of liquid and one sample each of soil and sediment (DE1-KKKKKKK).

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fluent leaving the plant than that in the mercury-bearing effluent immediately after treatment (DW-152).

(p) EPA advised Ventron that there was insufficient variation in Ventron's analytical methods and techniques to justify the anomalous results (DW-152).

(q) EPA requested Ventron to undertake a detailed study to determine the likely sources of the additional mercury (DW-152).

(r) EPA again explicity raised the possibility of mercury-saturated soil (DW-152).

(s) EPA directed Ventron to carry out a detailed analyis of all flows and "strategic soil samples" (DW-152).

(t) "We [EPA] request this answer to include mercury concentration in all significant 'non-mercurial' processes and various soil samples, within six weeks." (DW-152)

(u) EPA reminded Ventron that the Thanksgiving shutdown would provide an opportunity to determine the background of mercury levels in the drainage system (DW-152).

(v) By handwritten memorandum dated November 4, 1971, Ventron's Frank Wilson transmitted to O'Rourke a copy of a decision in a matter entitled Rhodia, Inc. v. Harris County, et al., 2 ERC 1906. Wilson noted that in addition to Ventron's potential interest in the manufacture of arsenicals, "This may be of interest re Wood Ridge..." In Rhodia, the Texas Court of Civil Appeals modified a temporary mandatory injunction requiring

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Rhodia, a chemical company to prevent arsenic waste from entering public waters and to clean up arsenic in land around and adjacent to the company (O'Rourke Ex. 11).

(w) After receipt of the EPA's November 16, 1971 letter, Ventron retained Metcalf & Eddy to conduct a soil sampling program along the wasteline and at the pipe depths (O'Rourke Ex. 13).

(x) Ventron simultaneously resolved to investigate internally other potential sources for the residual mercury.

(y) On November 24, 1971 the DEP notified Ventron that based on samples taken November 4, 1971, its final effluent was unacceptable, particularly with respect to the mercury content (DV-681).

(z) The DEP warned Ventron that if the final effluent was not improved significantly, "appropriate action would be taken" (DV-681).

(aa) In response to the DEP, Ventron reported the EPA's review and surveillance of its mercury recovery system and invited DEP personnel to visit the plant to discuss the DEP's goals and objectives as they applied to Ventron (letter dated December 22, 1971, Wilson Ex. 2).

(bb) Data obtained during the Thanksgiving shutdown demonstrated that by November 1971 total mercury discharge was virtually unaffected by the absence of mercurial processing (DEl-CCC with daily effluent log annexed).

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18. Ventron Conducts Dye Test on Sewer Lines.

(a) The sewer lines carried all Ventron effluent, mercury and non-mercury bearing process streams, for discharge to Berry's Creek. In late 1970 or early 1971, Ventron's Barry Faye conducted a test in an effort to trace the sewer lines (Faye Tr. III at p. 69).

(b) Faye inserted fluorescent dye into floor drains and underground lines and looked for evidence of the dye downstream (Faye Tr. III at pp. 69-70).

(c) Between August and December 1971, Ventron excavated at points along the underground pipes at the Ventron property to determine the origin of certain sewer lines (Faye Tr. III at p. 68).

(d) During an examination of the excavation, Faye found evidence of the dye outside the sewer line (Faye Tr. III at p. 72).

(e) When Ventron opened up an excacation which contained some water, there appeared some evidences of the fluorescent dye (Faye Tr. III at p. 74).

(f) The dye observations were adjacent to known sewer lines on the Ventron property (Faye Tr. III at p. 74).

(g) Ventron admits that it could not explain how the evidence of the dye which had been inserted into the sewer line reached outside the sewer line (Faye Tr. III at p. 72).

19. January 1972: Metcalf & Eddy Soil Study.

(a) On or about January 5, 1972 Craig Testing Labora-

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tories, Inc. commenced sampling at locations at the Ventron site (O'Rourke Ex. 14).

(b) Soil samples, taken at depths of 3-1/2 to 5 feet, together with samples of groundwater which accumulated in the test borings, were obtained by Metcalf & Eddy personnel. (O'Rourke Tr. at p. 59)

(c) The soil sites were selected to be close to drainage lines and near major process areas (O'Rourke Tr. at p. 59). The purpose was to investigate the mercury leaching from the groundwater and contributing to the discrepancy in total mercury emanating from the plant (O'Rourke Tr. at pgs. 84-85)

(d) The soil and groundwater samples were sent to Metcalf & Eddy's Boston laboratory for analysis (O'Rourke Ex. 14).

(e) Metcalf & Eddy issued its laboratory report on or about January 18, 1972.

(f) The groundwater data is based on total mercury.

(g) The groundwater data revealed mercury content in the range from 5500 ppb to 2,000,000 ppb (DW-13; DW-14).

(h) The lowest ranges were found in those sampling points located furthest from the mercury processing activities (O'Rourke Ex. 14, sample location plot plan annexed thereto).

(i) The lowest level of mercury in groundwater were found in samples obtained from that portion of the site, an area presently designated as Lot 10A, the U.S. Life property.

(j) The highest levels of mercury in groundwater were

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reported from samples obtained along the eastern perimeter of the property and at the southeast corner, an area presently designated as Lot 10B, the Wolf property.

(k) Metcalf & Eddy's analysis of mud samples indicated mercury levels ranging from 5 ppm to 375 ppm.

20. Ventron Meets with EPA; Discussion of Residuals and Other Sources of Contamination.

(a) By letter dated January 14, 1972, Ventron issued its analysis of the "apparent anomaly" between the mercury content of the total plant discharge and that of the effluent immediately after treatment (DE1-WWWWW).

(b) Ventron acknowledged that inadequate sampling and/or analysis did not substantiate "the significant difference" between these data (DE1-WWWWW).

(c) Ventron concluded that there were "unexpected mercury inputs." (DE1-WWWWW)(Hoffman Tr. at pgs. 30-31).

(d) In its letter of January 14, 1972, Ventron cited five possible sources of mercury contamination:
1. infiltration of groundwater contaminated with mercury leached from deposits in the soil into the underground wasteline; 2. surface runoff into storm sewers of rainwater contaminated with mercury from surface deposits; 3. surface runoff of contaminated overflow from collecting pits and basins; 4. leaching of residual mercury in the wastelines; and 5. discharge of contaminated "non-mercurial" streams into the waste system (DE1-WWWWW; Hoffman Tr. at p. 31).

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(e) Ventron discussed each of the possible sources of contamination, with one exception, that of soil contamination.

(f) The discussion pertaining to contaminated groundwater infiltration is absent from Ventron's letter of January 14, 1972.

(g) On January 17, 1972 Ventron representatives and Dr. O'Rourke met with EPA officials in New York to discuss the reason for the continued and unacceptably high levels of mercury discharge in total plant effluent despite Ventron's improved treatment of its mercurial wastewater streams (DW-155).

(h) Ventron's Barry Faye orally presented Ventron's explanation of the possible sources of contamination as outlined in the January 14, 1972 letter (DW-155; DE1-WWWWW).

(i) Ventron identified two major sources of additional mercury.

(j) One possible source was previously unsuspected input into the sewer system from the boilers (DE1-WWWWW; DW-155).

(k) The other possible source was contamination of existing lines and basins (DE1-WWWWW; DW-155).

(l) The EPA raised the issue of contamination of the soil around the Ventron buildings (DW-155).

(m) Ventron (Bernstein) stated it would be amenable to sealing the ground with tar or oil to alleviate the mercury discharge problem (DW-155; O'Rourke Tr. at pgs. 87-88).

(n) O'Rourke and Bernstein discussed chemical mobili-

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the soil to prevent migration. Several possible ap-
ere discussed, along with the possibility of removing or
of the contaminated soil (O'Rourke Tr. at pgs. 88-89).

(o) O'Rourke raised the question whether the problem is
niform contamination or isolated spots of severe contami-
(O'Rourke Ex. 15).

(p) Ventron admitted that it was processing continuously
ng quantities of mercury (DW-155).

(q) Ventron conceded that despite increased mercury
mercury discharges were decreasing in treated effluent but
higher at the weir (where total mercury was measured)
O'Rourke Ex. 15; DE1-WWWWW).

(r) The discharge at the weir was 10 times higher than
processed effluent (O'Rourke Tr. at pp. 84-85).

(s) By letter dated January 26, 1972, Dr. O'Rourke
itted to Ventron the Metcalf & Eddy laboratory report and
aig Testing Laboratories, Inc. boring report (O'Rourke Ex.

(t) By letter dated February 24, 1972, Ventron forwarded
aig Testing and Metcalf & Eddy documents to the EPA (DV-44).

(u) Dr. O'Rourke did not do any significant research in
iterature on the subject of mercury in soil. He did consult
Dr. Sawyer of Metcalf & Eddy regarding the types of mercury
ounds that were deposited and how they might be leached from
soil. Dr. O'Rourke concluded from his discussions and general

ground that soluble mercury would be transported by the ground-
r and that surface water percolating through the soil would
e migration of soluble mercury (O'Rourke Tr. at pgs. 71-72).

(v) Ventron's chief chemist, B. Magier, was not asked
opinion relating to the mercury in the soils at the Ventron
(Magier Tr. at p. 23).

EPA Responds to Ventron's Soil and Groundwater Study.

(a) On or about March 3, 1972 EPA's legal advisor,
iam Horner, requested assistance from EPA's technical staff
determine whether Ventron's soil and groundwater study had
ered their recommendations in the matter (DE1-JJJJJJJJ).

(b) On or about March 15, 1972, Marcus Kantz, an EPA
mical engineer, considered the data and recommended chemical
cessing to retard leaching of the mercury into the discharge
e (DE1-MMMMMMMM).

(c) Kantz recommended that Ventron extend its abate-
t efforts to include trapped mercury in the soil (Id.).

(d) For the period December 13, 1971 through February
1972, the mercury level in Ventron's treated plant effluent
raged 0.038 lbs./day while total plant effluent averaged .36
./day.

(e) The total mercury discharge into Berry's Creek,
luding treated and untreated wastes, averaged 4.0 lbs./day.

(f) Kantz recommended that Ventron be encouraged to
e their ground preceded by chemical immobilization of the
apped mercury.

(g) By letter dated March 31, 1972, the EPA issued its official response to Ventron's mercury sources analyses and abatement plan (letter dated January 14, 1972) and its groundwater and soil data (Metcalf & Eddy Report; letter dated February 24, 1972). (DW-153).

(h) In the letter, EPA acknowledged the efforts made by Ventron in enacting this abatement program (DW-153).

(i) EPA advised Ventron that it devoted insufficient attention to the area of groundwater infiltration.

(j) EPA requested Ventron to "evaluate as soon as possible the feasibility of chemically immobilizing the mercury trapped in the soil around [the] plant and then paving this over." (DW-153)

(k) After March 1972, there is no evidence that Ventron required Dr. O'Rourke's services in evaluating the ground water data or in preparing a report on the groundwater data. Dr. O'Rourke was not consulted with respect to the EPA's March 31, 1972 letter (O'Rourke Tr. at pgs. 103-106; 133).

(l) By letter dated April 25, 1972, Ventron submitted its interim progress report to EPA on its abatement program (DW-154).

(m) Ventron reported that its efforts to control spills onto the ground, curb overflowing pits, and eliminate a previously unidentified input at basin "C" located between Buildings 13 and 18 had reduced the volume of plant discharge from values in excess

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of 100,000 gallons to 50,000 gallons (DW-154; Hoffman Tr. at pgs. 53-54).

(n) Ventron admitted that this reduction of effluent quantity did "[n]ot necessarily" indicate a change in mercury quantity of the plant effluent (Hoffman Tr. at p. 54).

(o) Ventron reported that after the conversion of the vacuum pump and plugging at basin "C", the mercury in the treated and total plant discharges appeared to be equalizing (DW-154).

(p) Ventron stated that total plant effluent had decreased by one order of magnitude (DW-154).

(q) Without further explanation, Ventron asserted that subsurface infiltration appeared as a minor source of mercury in total plant discharge (DW-154).

(r) Ventron advised EPA it was "inclined to believe that chemical soil immobilization and yard paving [would] not be required." (DW-154)

22. <u>March 1972-October 1972: Ventron's Residual Problems Persist</u>

(a) Ventron reported to EPA excessive mercury discharges in its final plant effluent between April 11, 1972 and April 18, 1972 (DE1-HHHHHH).

(b) Ventron claimed that an atypical mix of chemicals and desludging of the line caused the objectionable mercury levels (DE1-HHHHHH).

(c) Ventron informed EPA of the installation of a large sewerage tank as a "failsafe" system in preventing further high levels.

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(d) EPA expressed belief that the corrective measure oubtedly reduce the chance of objectionable mercury dis- manating from the treatment facility but that the tank affect mercury from residual sources (DE1-NNNNNNNN 24, 1972).

(e) EPA expressed its intention to urge Ventron to in- a plan immediately to reduce residual mercury discharge inue close supervision of Ventron's activities (DE1-).

(f) In or about June 1972 Ventron discovered a leakage minated effluent in the vicinity of buildings 13A and 18.

(g) Within Ventron, personnel suggested certain correc- asures, including the addition of a tile pipe and a pump to the stream into the treatment system (Memorandum dated June 2).

(h) Ventron projected completion of the corrective meas- August 1972 (Memorandum dated June 27, 1972).

(i) Ventron continued to report directly to the EPA its al plant discharges.

(j) On or about September 19, 1972 EPA's William Horner ntron's Barry Faye held a telephone discussion (DW-172 dated ber 21, 1972).

(k) During the telephone conversation of September 19, Faye did not reveal the discovery of the leakage from build- 8.

(l) After September 19, 1972, EPA resolved that Ventron need only submit its daily effluent discharge report on a monthly basis.

23. Ventron Evaluates Economic Feasibility of Wood Ridge Plant.

(a) In or about June 1972 Ventron issued a "Long Range Facilities Plan 1972-1977." (Report dated June 1972)

(b) The report concluded: "[T]he plant can no longer meet current mercury exposure limits -- which were tightened in the last six months. An intensive cleanup and housekeeping campaign provided perceptible but insufficient improvement; the plant is a veritable Aegean stable of residual mercury."

(c) Periodic visits by representatives of Ventron's workers' compensation carrier noted mercury in the soil around the recovery still on the east side of the plant (Bratt. Tr. at p. 73).

(d) Ventron reported in its June 1972 assessment that "environmental control problems are severe, mainly due to mercury." (Report dated June 1972)

(e) Joseph Bernstein, executive vice-president of Ventron and co-author of the report, recommended continuing operations at Wood Ridge and investing in pollution projects "to keep ahead of judicial enforcement standards" and "only when forced to do so."

(f) Bernstein urged full evaluation be given to the proposal to sell Wood Ridge prior to installing any major new facilities.

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(g) On or about September 12, 1972, Ventron issued its Long Range Environmental Protection Plan (DW-19).

(h) In its September 1972 report, Ventron acknowledged that mercury content of total plant discharge still often exceeds federal standards (DW-19).

(i) Ventron attributed the excessive discharges to a known leakage near building 18.

(j) In its September 1972 report, Ventron recommended suspension of future planning at the plant until remedial measures were installed and the severity of the problem assessed. (DW-19)

(k) Ventron forecasted that between 1973 and 1975 it would be forced to cease its current practice of dumping to Berry's Creek and either establish connection to the Bergen County Sewer System or install added treatment facilities (DW-19).

(l) Ventron projected capital expenditures for environmental control at its plant between 1973 and 1975 in the range of $120,000 and $180,000. (DW-19).

(m) On October 30, 1972, P.L. 92-500, the new federal Water Pollution Control Act, became law.

24. February 1972: Sports Authority Discovers Mercury in Berry's Creek Tidal Marsh

(a) In 1971 the New Jersey Legislature established the New Jersey Sports and Exposition Authority (hereinafter, the "Sports Authority") (M-3).

(b) The Sports Authority was directed to effectuate

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the development of a recreational facility in the Hackensack Meadowlands District.

(c) The Sports Authority commissioned Jack McCormick & Associates to review the environmental conditions and resources of the Hackensack Meadowlands, review the proposed site alternatives and examine and assess proposed construction plans for the Sports Complex for its environmental impact.

(d) A draft environmental impact statement was circulated in June 1972 (M-3).

(e) Preliminary sampling conducted in the course of McCormick's evaluation of water quality in the Hackensack Meadowlands revealed the presence of mercury "in unusually high concentrations in the muck beneath the surface and in the channels of Berrys [sic] Creek tidal marsh." (M-3 at p. 33).

(f) "These persistent toxic pollutants [chromium, arsenic and mercury] which represent long-term public cost of unregulated discharge by private industries," McCormick reported, "appear to be contained principally, in the upper 2 to 4 inches of the substrate." (M-3 at p. VII-11).

(g) Berry's Creek Tidal Marsh is located approximately two miles downstream of the property (McCormick Tr. at pgs. 25-26).

(h) Sediment samples were collected in the Tidal Marsh on June 5, 1972 and on June 15 and 16, 1972 (M-5 at p. 39; M-3 at p. VII-5).

(i) Results of the June 1972 mercury analyses on the

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sediment samples indicated concentrations in the upper two inches in the range of 2.3 to 26.0 ppm (M-5 at pgs 39; 41).

(j) At the depth of four to six inches, mercury concentrations in the June 1972 sediment samples ranged from 7.0 to 208.0 ppm (M-5 at pgs. 36; 41).

(k) Intensive water quality surveillance did not commence until January 1973 (M-5 at p. 36).

(l) "The mean concentration of mercury in the Berrys [sic] Creek tidal marsh (based on 30 analyses) is 34.13 mg./kg. [ppm] or more than seven times as great as the highest concentration reported" in previous studies (M-5 at p. 39).

(m) On or about July 10, 1972 the Hackensack Meadowlands Development Commission (HMDC) and the DEP commenced public hearings on the draft environmental impact statement (M-5 at p. 24; McCormick Tr. I at p. 37-38).

(n) During the July 1972 public hearings on the proposed development of the Sports Complex, it was acknowledged that the Berry's Creek Tidal Marsh, consisting of 130 acres, was contaminated with mercury (M-7A and M-7B).

(o) "The mercury problem is perplexing and no final plan has been formulated to deal with the problem. There is no little question about the severity of the contamination . . ." (M-5 at p. 43).

(p) Ventron (Faye) was aware of the contamination of the wetlands (Faye Tr. III at p. 162).

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25. 1973: Ventron Continues to Report Effluent Discharges in Excess of of Federal Standards

(a) By letter dated March 14, 1973, Faye transmitted the February effluent report to the EPA (DE1-BBBB).

(b) Ventron's daily plant effluent discharge report for February 1973 revealed excessive discharges of mercury in total plant effluent on February 5, 17 and 18, 1973 (DE-1-ZZZ).

(c) On February 5, 1973 Ventron reported the mercury level in treated effluent was 0.012 lb/day while the mercury level in total plant effluent was 0.820 lb./day (DE-1-ZZZ).

(d) In the March 14, 1973 letter, Faye stated that the excessive mercury discharges of February 5, 1973 was caused by contaminated sediment contained in a collapsed storm sewer (DE1-BBBB).

(e) Faye reported that the collapsed sewer had been repaired on March 13, 1973 (DE1-BBBB).

(f) Faye attributed the excessive mercury discharges in total plant effluent for February 17 and 18, 1973 to residuals in floor trenches (DE1-BBBB).

(g) Faye explained that prior to the discharges of February 17 and 18, 1973, the floor trenches were flushed out with water (DE1-BBBB).

(h) Faye reported that "[i]t was not realized that: a. the sludge contained mercury, and b. the discharges of the trenches bypassed the mercury treatment system." (DE1-AAAA).

(i) Faye proffered the same explanation to the DEP (DV-79).

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(j) By letter dated April 18, 1973, the DEP expressed its concern about the discovery of the floor trenches as sources of increased mercury discharges and directed Ventron to reroute the trench discharges onto the treatment system (DW-31).

(k) In the addendum dated May 1, 1973 to its monthly report, Ventron informed the DEP that it had rerouted the trenched discharges into its plant treatment system (DW-32).

(l) By letter dated May 15, 1973, Faye transmitted to EPA Ventron's daily effluent log for the period March 26, 1973 to April 29, 1973 (DE-1-4F).

(m) For the weeks of April 16 and April 23, 1973, Ventron reported higher mercury levels in total plant effluent than in treated effluent and in excess of federal standards (DE-1-4E).

26. January 1973 to February 1974: Ventron Sells the Business of Wood Ridge Chemical Corporation and the Ventron Site:

(a) No action to sell the plant was taken by Ventron immediately after the June 1972 and September 1972 assessments.

(b) In January 1973 Robert Petersen replaced Hoffman as plant manager (Petersen Tr. at p. 6).

(c) Sometime between the end of 1972 and beginning of 1973 the negative factors outweighed the positive factors and Ventron decided to discontinue the operation (Derderian Tr. III at pgs. 238-242).

(d) In the Spring of 1973, the decision was made to sell Ventron-Wood Ridge (Bernstein Tr, 9/16/76, at p. 133).

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(e) The soil contamination problem was pertinent to the opinion of some Ventron officers (Derderian) in determining to sell the property (Derderian Tr., 8/16/77, at p. 213-17).

26.1 Andover Realty Inc.

(a) On February 7, 1973, Leonard Gero of Andover Realty Inc., met with Bernstein (Ventron) to discuss the value of the land at the Ventron site. By letter dated February 8, 1973 Andover gave its opinion of a proper initial listing price of the property.

(b) Between February 1973 and July 1973, Ventron had dealings with other prospective purchasers (see paragraphs 26.2, 26.3, 26.4 and 26.5).

(c) On July 30, 1973 S.K. Dederian of Ventron spoke with a representative of Andover and advised Andover that at that time an offer of "$550-600" thousand dollars would make Andover "a leading bidder," but that an "agreement was imminent with someone else."

(d) On October 29, 1973, Ventron (Bernstein) sent Andover a plot plan of the Wood Ridge Chemical site.

(e) On December 20, 1973, Andover wrote Ventron to advise that it might have a buyer for the site in Scientific Chemical Processing of Carlstadt, New Jersey (DW-79).

(f) The same letter reflects that Andover had requested information on the particulars of the site from McCarter & English, Ventron's attorneys in Newark, New Jersey.

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26.2 Buschman-DiCioccio

(a) By letter dated May 4, 1973 (DW-47), Buschman-DiCioccio & Co. wrote Bernstein enclosing a copy of the Hackensack Meadowlands offical zoning map and stated that "I hope this information will be of some assistance to you in your determination of the property."

(b) By letter dated May 30, 1973, Buschman-DiCioccio advised Bernstein that it had received a copy of the title guarantee which it had passed onto potential purchasers for review. A question was raised whether any part of the property fell within the riparian rights claims of the State of New Jersey. Derderian advised Buschman-DiCioccio on May 31, 1973 that its New Jersey lawyers (McCarter & English) were looking into the matter (DW-95).

(c) Carmen DiCioccio visited the plant with Petersen on several occasions (Petersen Tr. at p. 22).

(d) By letter dated August 8, 1973 from the firm of Crummy, O'Neill, Del Deo & Dolan to Ventron, a proposed agreement to purchase on behalf of Arrow Carrier Corporation was made, which offer had been arranged through Buschman-DiCioccio as broker.

(e) The offer of Arrow Corporation was modified by Bernstein and the modified proposal appears as Exhibit DW-75.

(f) Among the provisions modified was one dealing with the standards of acceptability of test borings to be performed by the purchaser.

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(g) By letter dated August 24, 1973, Buschman-DiCioccio sent to Ventron "the copy of the boring report, as requested." (DW-89)

(h) Ultimately, Arrow could not purchase the property because of zoning problems (Bernstein Tr. 2/9/77, at pgs. 312-313).

26.3 Masi-Boyle

(a) Prior to November 8, 1973, Ventron sent to Fred Torstrup of Masi-Boyle Associates a copy of the plot plant. Masi-Boyle acknowleged that it was discussing the property with a number of developers, was giving them copies of the plot plan and showing the property "after clearance with Mr. Petersen."

(b) By letter dated November 21, 1973, Masi-Boyle forwarded to Peterson a proposed offer on behalf of Keith Realty Corporation.

26.4 Others

(a) In addition to the persons and companies identified in paragraphs 26.1, 26.2 and 26.3, Ventron had dealings with Lehman Associates (letter dated October 2, 1973) and Roy Lucas of James E. Hanson & Co., (letter dated August 24, 1973).

(b) Lucas was a former Ventron employee and college classmate of Ventron's Bernstein (Bernstein Tr., 2/9/77, at p. 310).

(c) On August 24, 1973 Ventron (Bernstein) wrote Lucas as follows (DW-ZZ):

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"Attached is the information we discussed, plus some additional detail which should be of interest."

26.5 Wolf

(a) By letter dated May 17, 1973, Wolf Realty (B. Scharf) wrote Venton (Peterson) to acknowledge its listing of the property for sale (DV-2; Wolf Tr., 9/23/76, at pgs. 125-26).

(b) By letter dated May 23, 1973, Ventron informed Wolf Realty the property was not to be listed with it as broker (DV-3; Bernstein Tr., 2/9/77, at pgs. 281-82; Wolf Tr., 9/23/76, at p. 127).

(c) Sometime after May 23, 1973, Wolf called Ventron (Bernstein) about the property (Bernstein Tr., 2/9/77, at p. 282).

(d) Sometime prior to June 6, 1973, Wolf made an oral offer to Bernstein (Bernstein notes dated June 6, 1973).

(e) In June and July 1973, Ventron (Petersen) obtained two cost estimates from two separate demolition contractors for clearing the Ventron property of buildings. The purpose was to help Ventron in analyzing any offers on the property (Petersen Tr. at pgs. 43-45; 46-48).

(f) On June 13, 1973, Wolf and Bernstein had a further conversation regarding offers for the purchase of Wood Ridge (memorandum dated June 15, 1973). On one or two occasions, Rovic (Andrews) toured the plant with Petersen (Petersen Tr. at pgs. 22-23) On these occasions Petersen told Andrews the plant

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was being shut down because of air emission standards and OSHA standards (Id. at pgs. 23-24).

(g) Shortly before July 9, 1973, Wolf spoke by telephone with Bernstein (Ventron) (Wolf Tr., 9/23/76, at pgs. 141-42). By letter dated July 9, 1973, Wolf made a written offer to purchase the Ventron property (DW-4).

(h) By letter dated August 10, 1973, Wolf supplemented his offer (DW-5).

(i) By letter dated August 13, 1973, Bernstein advised Wolf that his offer was being passed around the executive committee at that time (DV-6; DV-13).

(j) By letter dated August 14, 1973, Ventron inquired of Pioneer Title Guarantee Company whether a policy similar to that existing on the property could be issued to a subsequent buyer, "assuming no major changes have taken place in the past five years." (DW-134)

(k) By a letter dated August 16, 1973, Pioneer advised Ventron that under certain conditions the same title guarantee could be issued to a successor. The letter pointed out, however, that there was a riparian rights claim by the State involving the title, which was excluded from the policy.

(l) Wolf asked Ventron (Bernstein) for any information it had on soil bearing tests (Bernstein Tr., 2/9/77, at pgs. 300-302).

(m) On August 17, 1973 Frank Wilson reported to

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Bernstein that Jim O'Rourke of Metcalf & Eddy had found the Craig test data showing borings to five feet in depth (Memorandum dated August 17, 1973).

(n) By letter dated August 24, 1973, Bernstein sent a copy of the Craig test boring report to Wolf giving "permission to contact Craig Testing Laboratories for any additional information they might have which is not in the report." (DV-14)

(o) By the same letter of August 24, 1973, Bernstein proposed a form of sales contract to Wolf for comments (DV-14).

(p) Sometime after August 1973, Wolf told Bernstein the soil tests (Craig) were of no value and he would make his own borings (Bernstein Tr., 2/9/77, at p. 316).

(q) Wolf sent a copy of the Craig Testing Laboratories report to Rutenberg/Kolaranda, his architects. The architects responded that the boring report was "valueless " (Wolf Tr., 8/27/77, at pgs. 1004-1005; Wolf Tr., 11/23/76, at pgs. 235-238)

(r) By letter dated September 13, 1973, Wolf submitted a formal draft of agreement for review and approval by Ventron (DV-32; Wolf Tr., 11/23/76, at pgs. 259-61).

(s) By letter dated October 15, 1973, Ventron requested the firm of McCarter & English to represent it and determine if any portion of the site was within the State's riparian claims (DW-122).

(t) Ventron had used McCarter & English as its

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attorneys for New Jersey several times over the previous two years. There had been a boundary dispute with Velsicol and other legal questions.

(u) By letter dated October 22, 1973, McCarter & English advised Ventron that a portion of the site was within the State's claims.

(v) On November 1, 1973, Julius Poppinga, Esq. spoke with Mr. Derderian of Ventron and advised him that McCarter & English also had in the past represented Robert Wolf. Derderian advised Poppinga that "we'll do all negotiations."

(w) On November 2, 1973, Wolf sent to McCarter & English for its review his proposed form of option agreement with Ventron (DV-33; Wolf Tr., 9/23/76, at pgs. 176-178; Wolf Tr., 11/23/76, at pgs. 265-270).

(x) On February 5, 1974, Wolf met with Derderian and Bernstein in Beverly, Massachusetts, their only face to face meeting, and there executed the option agreement (DV-42; Wolf Tr., 8/24/77, at pgs. 815-16; Wolf Tr., 12/1/76, at pgs. 373-74; 382).

26.6 The Sale of Ventron's Mercury Business to Troy Chemical Co.

(a) Sometime prior to November 1973, Ventron entered into negotiations with Troy Chemical Company, Newark, New Jersey, to sell the mercury chemical business of WRCC to Troy (Derderian Tr. III at pgs. 192-93).

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(b) By letter dated November 29, 1973, Ventron sent Troy's attorney the executed copies of the acquisition agreement (DW-139).

(c) On December 12, 1973, the sale of the business closed effective January 1, 1974 (Derderian Tr. III at pgs. 193-194).

(d) From December 12, 1973 through approximately the end of March 1974, Ventron continued to produce mercury chemicals for Troy at the Ventron site.

(e) Between December 1973 and May 1974, the industrial processes were transferred to Troy's location and many pieces of equipment were removed from Wood Ridge and transported to Troy (Ventron Answer to State Interrogatory No. 4; Petersen Tr. at pgs. 51-52).

(f) After April 1974, certain material was produced at the Ventron site and stored at Troy.

(g) At the end of March 1974, some mercury production operations were terminated. There were some sublimate and calomel operations that Ventron ceased on April 4, 1974 (Ventron Answer to Wolf Interrogatory No. 4).

(h) All organic mercury manufacturing at Ventron ceased on April 15, 1974 (Ventron Answer to Wolf Interrogatory No. 4).

(i) All inorganic operations at Ventron ceased on April 16, 1974 (Ventron Answer to Wolf Interrogatory No. 4).

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(j) On May 22, 1974, Ventron cancelled its workers' compensation coverage, effective May 3, 1974 (Van Houten Tr. at p. 7).

27. March 1974: Rovic Construction Co. Arranges for Demolition.

(a) In March 1974, Rovic Construction Co. (hereinafter, "Rovic") solicited bids for demolition of the Ventron buildings according to plans and specifications.

(b) Rovic entered into a contract for demolition with V. Ottilio & Sons (DV-19).

(c) On March 27, 1974, Ventron gave written permission for the demolition contractor to leave its equipment on site "outside the battery limits" (DW-128). Rovic so informed Ottilio (PO-14).

28. April 1974: Wolf Exercises the Option.

(a) On April 3, 1974, Wolf requested an extension of time on the option because of delays in financing commitments (Memorandum dated April 3, 1974).

(b) On April 8, 1974, Ventron executed an extension of the option to April 22, 1974 (Letter dated April 4, 1974).

(c) By letter dated April 19, 1974, Wolf exercised the option (DV-43; Wolf Tr. 12/1/76 at pgs. 410-12).

29. March-April 1974: Ventron Terminates Operations and Purports to Clean Up the Plant.

(a) Between October 15, 1973 and January 1974, Ventron's house counsel, S.K. Derderian, became acutely aware of the mercury contamination problems (Derderian Tr. III at 191-92).

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(b) "Late in March [1974] mercury production operations [at the Ventron site] were terminated." (Ventron Answer to State Interrogatory No. 22).

(c) On March 29, 1974 Rovic (Joseph D'Amore) discussed with Ventron (Petersen) a pit located between buildings 18 and 3.

(d) By letter dated April 4, 1974, Petersen informed Rovic that Ventron would pump out the pit, backfill it with solid fill and cap it with concrete.

(e) Ventron sent all finished goods to Troy (Petersen Tr. at p. 51). "By April 1974 there were no longer any stocks of mercury chemicals remaining at the Wood Ridge site." (Ventron Answer to State Interrogatory No. 22).

(f) "Mercury chemical production equipment was either dismantled and transferred to Troy [Chemical Company] as part of the sale of business, or dismantled and transferred to another Ventron location in Massachusetts, or in a few cases was sold to used equipment or scrap dealers" (Id.).

(g) By letter April 17, 1974, Ventron notified the EPA that it had "liquidated" the operation.

(h) "When mercury chemical operations were terminated, equipment was flushed out [by Ventron] into the effluent treatment system. Ultimately, all of the collection pits, tanks, and lines were pumped dry, flushed with water, and this washwater run through the effluent system and analysis indicated that there was no mercury being discharged from the system or into the effluent pipes

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leading from the plant." (Ventron Answer to State Interrogatory No. 22).

(i) Ventron surveyed the property and cleaned up any mercury containing waste. Mercury wastes with any value were shipped to Troy Chemical for recovery (Petersen Tr. at pgs. 51-52).

(j) "In March 1974 [Ventron] contracted with Gaess Environmental Services for the removal and disposal of small quantites of laboratory chemicals which had no mercury value to Troy, and were of no use to anyone else. All mercury sludges for recovery were transferred to Troy, along with the recovery furnaces. There were no accumulations of mercury either in containers or in pits or tanks which were allowed to remain." (Ventron Answer to State Interrogatory No. 22; Petersen Tr. at pgs. 51-52). All materials whatsoever Petersen deemed hazardous were removed, and there were no mercury containing wastes left (Petersen Tr. at p. 53).

(k) In March and April, the plant site was "dusty and dirty" with "grey" buildings and piping (Scheil Tr. at pgs. 14-15). No witnesses recall seeing mercury on the premises. The last stage of the clean out was that the floors and trenches were washed down, and the pits were flushed out. After shut-down, the effluent treatment system was removed and delivered to Massachusetts for storage or to Ventron's Chicago plant (Petersen Tr. at pgs. 56-57).

(l) The underground lines were not sealed (Petersen Tr. at p. 57).

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(m) Through the end of April 1974, Ventron personnel were on site packing up material and equipment for Troy (Magier Tr. at p. 32).

30. The Ward Soil Report

(a) In February-March 1974, Wolf retained Joseph Ward & Co., soils engineers, to conduct a soils engineering study (Scheil Tr. I at p. 9).

(b) In April 1974, Ward took test borings to determine deep subsurface conditions (Id. at pgs. 9-10).

(c) The Ward soil report dated May 1974 (DV-D) is concerned solely with compressibility and permeability so as to determine the soil's ability to support structures, and whether it could do so by piles, footings, or other means (Id. at pgs. 10; 15; DV-D; Wolf Tr. 2/24/77, at pgs. 600-606).

(d) The purpose for which Wolf engaged Ward was to determine the quality and character of the soil with respect to bearing capacity, moisture content, and feasibility of construction of the structures on the site (Wolf Tr. 2/10/77, at pgs. 433-34).

(e) It is not custom and practice for soils engineers to test for chemicals for soil pollution. Chemical analysis is limited to situations where conditions may be injurious to the piles (if lumber) or footings (if concrete) (Scheil Tr. I at pgs. 16-17).

(f) Ward did not perform any chemical tests or analyses in connection with its report (Scheil Tr. I at pgs. 16-17).

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31. May 7, 1974 to May 20, 1974: Abandoned Chemicals and Residues On-site are Discovered by NJDOL and NJDEP.

(a) On May 7, 1974, Chester Morris, DEP inspected the Ventron site. He observed that the plant was abandoned, demolition equipment was present, and open containers of chemicals were in the laboratory and dispersed on floors and work benches throughout several vacated buildings (DV-680; DV-645).

(b) On May 7, 1974, Chester Morris, DEP, observed sludge in certain tanks on-site. He sampled water from a tank. Subsequent analysis revealed that it contained 20 ppb mercury (DV-645 dated May 21, 1974).

(c) On May 7 or 8, 1974, representatives of New Jersey Department of Labor (NJDOL) contacted the demolition contractor, Ottilio, about chemicals on-site and scheduled a meeting for May 9, 1974 regarding demolition procedures. (Van Houten Tr. at p. 10; DNJM-2).

(d) On May 8, 1974, Ventron placed a telephone order to Chem-Trol Pollution Services, Inc., a subsidiary of Gaess Environmental Services, to pick up some drums of chemicals in building 18 (Earthline-5).

(e) On May 9, 1974, Chem-Trol removed the laboratory waste on behalf of Ventron (Earthline-2 dated May 31, 1974, Invoice No. 4748).

(f) On May 9, 1974 representatives of NJDOL met with Ottilio and directed, by formal order (PO-4), that "no demolition is to proceed until all hazardous chemicals and residues have been

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removed from buildings" and further ordered that the buildings "be sufficiently clean so as to prevent any hazard to workmen during demolition." (PO-4)

(g) On May 15, 1974, Forrest Griffin of Ventron reported to his superiors a conversation with representatives of DEP. He noted that DEP expressed "concern over discharging from weir box and sludge in tank," and "material on floor and in barrels." The memorandum concludes: "be prepared for several calls as per above until the wrecker has his permit!!!" (Petersen Tr. at pgs. 59-69).

(h) Ventron (Petersen) maintains that the material referred to could not have been mercury as the property was free of mercury at the time (Petersen Tr. at p. 61).

(i) On May 20, 1974, R.C. Petersen of Ventron met on-site with the DEP's Chester Morris. Morris sampled water from the final weir tank. This water sample contained 12 ppb mercury (DV-637; DV-376; report dated June 6, 1974).

(j) By letter of May 20, 1974 Petersen wrote Harry Hughes of NJDEP to advise that Ventron had ceased operations in April 1974 and no production activities of any sort were taking place. Petersen wrote:

> Prior to shut down, all mercury chemicals and mercury-bearing residues were removed from the plant. Our collecting pits formally part of the effluent control system were de-sludged and all HG-bearing waste removed. Natually there remains some residual HG in the ground and caked against the walls and structural members of the building. The buildings are to be completely demolished by the soon-to-be new owner.

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Evidently an inspector from your department observed what was thought to be a pit full of waste and a waste water flow into an adjoining brook. This was not process waste and can only have consisted of ground and/or rain water.

The property changes hands on May 20th. Either prior or subsequent to that, I will be glad to answer any questions you may have. Perhaps direct communication with your inspector would be most helpful.

n (Petersen) admits the mercury referred to as being in the was a result of over 40 years of operating with mercury on- Petersen Tr. at p. 62).

(k) The foregoing letter was not contained in the files tron Corporation as produced pursuant to discovery. A copy letter was not sent by Ventron to Wolf or any of his agents presentatives.

(l) By letter dated May 29, 1974, the DEP notified on that its inspections of May 7 and May 20, 1974 had "re- d that several containers, pits and vats of labelled chemicals emained at the site as well as one tank of sludge adjacent to butary at Berry's Creek. In addition, the inspector noted accumulations of powdered chemicals on the floors of the va- d buildings during the inspections." The DEP directed Ventron nitiate all actions necessary to prevent any such waste from hing waters of the State, provide DEP with complete analysis ll materials and waste waters and residues remaining on the ises, devise a plan for waste disposal, and inform the depart- of its new plant location (DV-366; DV-633).

(m) By internal memorandum dated June 6, 1974 (DW-36) Petersen admitted to S.K. Derderian that "there were undoubtedly containers of miscellaneous chemicals and accumulated miscellaneous chemicals on the floors and walls of the buildings," at the time of the May 20, 1974 inspection by the DEP. He wrote that "all of these I have judged to be harmless and in fact, safe to leave on the vacated site." He further stated "any minor amounts of chemicals remaining on the ground and on building floors or walls will disappear as the plant continues to be demolished." He wrote that the materials referred to in the DEP's May 29, 1974 letter no longer remained and that they were cleaned up by Gaess after May 7, 1974.

(n) In his memorandum of June 6, 1974 to Derderian, Petersen suggested that Ventron respond to the DEP letter by saying there was "no action to initiate at this time since the plant is shut down; that materials no longer remain"; that there is no necessity for a plan of disposal inasmuch as Gaess had cleaned up the laboratory and miscellaneous waste, and that there was no new plant to name because the plant had been discontinued. He specifically recommended that Ventron "refrain from referring to Troy Chemical else we open Pandora's box for them." (DW-36)

(o) Ventron formally responded to the DEP letter of May 29, 1974 by letter dated June 17, 1974 advising DEP that "responsibilities for the site and any activities on it now belong with the new owners." (DV-639; DV-127).

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32. The Sale of the Property is Concluded and Demolition Commences.

(a) May 20, 1974 was the formal closing of the sale of the property and Robert Wolf became the owner of the Ventron site.

(b) Shortly after the meeting of May 9, 1974 with NJDOL personnel concerning demolition (¶31(f)), Rovic had contacted Bernard Magier, former chief chemist with Ventron and employed his services as a consultant.

(c) Magier became responsible for inspecting and clearing each building for demolition (D'Amore Tr. at pgs. 17-18; Magier Tr. at p. 33). Magier instructed the men in the removal of various containers and bottles from buildings.

(d) Magier saw some non-mercuric compounds in bags which were harmless. There were no piles of material anywhere. (Magier Tr. at pgs. 34; 35-37).

(e) By letter dated May 20, 1974, Magier reported certain recommendations concerning demolition of the existing buildings (PO-9; Magier Tr. at p. 34) Magier recommended that buildings 2, 4, 5, 6, 7, 14, 15, 16, 17, 19 and 22 could be demolished without any preventive action. He further recommended that buildings 3, 9, 13, 18 and 20 required precautionary measures as specified in his letter.

(f) On May 22, 1974, representatives of Rovic, in the presence of Magier, met with representatives of NJDOL. By formal order of the same date the NJDOL authorized the demolition of buildings 2, 4, 5, 6, 7, 14, 15, 17, and 22 "without any prelimi-

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nary work." It authorized the demolition of buildings 3, 9, 13, 16, 18, 19 and 20 on the condition that any remaining chemicals be removed and the buildings be watered down prior to the commencement of demolition upon certification of Magier that the buildings were "acceptable for demolition." (PO-10)

(g) On May 22, 1974 demolition of the buildings commenced (Ottilio Tr. at p. 9).

(h) By letter dated May 30, 1974, Magier informed Rovic's John Andrews that necessary precautionary measures had been taken with respect to building 8, 3, 16 and 20 and that it was his opinion that these may be demolished without any hazard (P-61; Magier Tr. at pgs. 40-43).

(i) By letter dated June 5, 1974, Andrews formally advised the NJDOL of Magier's conclusion.

33. May 30, 1974 to June 12, 1974: An Oil Spill in Berry's Creek Sends NJDEP and USEPA Representatives to the Ventron Site.

(a) Demolition of the Ventron site was in progress when on May 30, 1974 Hackensack Meadowlands Commission (HMDC) personnel reported an oil slick in Berry's Creek. Between May 30 and May 31, HMDC personnel appeared to trace the oil to the Ventron site (Memorandum dated June 21, 1974; DV-306, dated August 6, 1975).

(b) On June 3, 1974 Coast Guard personnel observed oil in Berry's Creek.

(c) On June 4, 1974, Andrews of Rovic contacted Tom Scheil of Joseph S. Ward Co., Inc. (hereinafter, "Ward") to request

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water samples of the discharge from the construction site and from Berry's Creek. Andrews acknowledged to Ward that Rovic "may possibly be cited for polluting Berry's Creek with oil from demolished tanks" but added he did not "feel Rovic was causing the problem." The conversation related strictly to oil, not to mercury (Scheil Tr. II at pgs. 157-158; Scheil Tr. I at p. 20; Ward Memorandum dated June 4, 1974).

(d) On June 4, 1974, Rovic contacted U.S. Testing Co. to sample and inspect the premises for oil.

(e) On June 5, 1974 U.S. Testing Co. inspected the site (U.S. Testing Co.-5).

(f) Rovic was eventually cited for the oil spill by the Coast Guard and a fine was paid.

(g) On June 7, 1974, HMDC personnel observed a red chemical, possibly mercury, in the water in Berry's Creek. They immediately contacted the NJDOL and the Coast Guard and went themselves to the Ventron site.

(h) On June 7, 1974, Andrews of Rovic received a telephone call from the USEPA complaining that this time there was runoff of chemicals from the site. NJDEP, on the same date, also called to complain of chemicals washing down from the site.

(i) On June 7, 1974, the DEP dispatched personnel to the Ventron site to take various samples of Berry's Creek upstream and downstream of the demolition site (DE2-UUU, dated June 19, 1974; DV-534).

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(j) On June 7, 1974, Andrews of Rovic called Petersen of Ventron about the statements made by EPA and DEP personnel. Petersen told Andrews that there were no dangerous chemicals around the site, that Gaess had removed from the site all such chemicals.

(k) On June 7, 1974, Ottilio found a five-gallon drum of chemicals on site (DV-68).

(l) By telegram dated June 10, 1974, the DEP ordered demolition to cease and desist, citing an alleged illegal discharge of June 7, 1974. This telegram (DV-F) was read to Rovic (Andrews) over the telephone by David Longstreet of the DEP who in turn relayed it to Wolf (Wolf Tr., 3/4/77, at pgs. 647-52).

(m) On June 10, 1974, Rovic commenced to clean out again all settling pits and catch basins. Wolf retained Gaess Environmental Services for these services (DV-F; P-45).

34. The Meeting of June 12, 1974.

(a) On June 12, 1974, there was an on-site meeting among representatives of Rovic, the DEP and the EPA to establish the requirements of the [DEP's] telegram order of June 10, 1974 (P-43; P-59; DV-636). Robert Petersen was present on behalf of Ventron.

(b) At the meeting, Petersen discussed David Longstreet's letter of May 29, 1974 [paragraph 31(l), supra.] and advised the DEP that the matter was now the responsibility of Wolf and Rovic (Petersen Tr. at p. 71; DW-127).

(c) Petersen asserted that the sludge on-site contained less than one ppm mercury (DW-127; P-43; P-59; DV-636).

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(d) The DEP obtained a sample of the sludge on-site. Analysis showed that it contained 17,700 part per billion mercury (DV-68).

(e) At the meeting of June 12, 1974, Rovic personnel and DEP and EPA personnel discussed the demolition operation and procedures to prevent contaminated runoff.

(f) At the meeting of June 12, 1974, the State DEP advised Rovic that the DEP suspected the soil may be contaminated and advised Rovic to commence an investigation of soil conditions. David Longstreet, DEP, informed Wolf there was a good deal of contamination by mercury and other chemicals but he could not be more specific than that it was extensive. He suggested Wolf retain an outside consultant to test (Wolf Tr., 8/29/77, at pgs. 1012-1014).

(g) By letter dated June 17, 1974 (P-59) David Longstreet of N.J.D.E.P. purported to summarize the agreements reached at the June 12, 1974 meeting to implement the requirements of the telegram order of June 10, 1974 (DV-43):

> At the meeting it was agreed that prior to commencing demolition, action would be taken (1) to collect and analyze run-off water; (2) to remove any remaining containers or drums of chemicals; (3) to plug drain lines; and (4) to determine mercury contamination of the soil and if contaminated, to investigate steps to remove, treat or dispose of it (DV-636).

35. Demolition After June 12, 1974.

(a) On June 17, 1974, Petersen (Ventron) visited the site "in an attempt to determine whether recent confrontations be-

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tween the EPA and Bob Wolf could expand to involve us (Ventron)." (DW-37; Petersen Tr. at pgs. 66-67). Ventron (Petersen) admitted that "Wolf's problems [with EPA] are occurring because he is required to wash down buildings prior to demolition (State DOL edict). This causes runoff into the creek carrying residual chemicals from the ground and building floors and walls." (DW-37)

(b) By its letter dated June 17, 1974, the DEP stated that Rovic had agreed at the June 12, 1974 meeting that prior to continuing demolition it would "1A. dig a lined catch basin (ditch) around the property at the end of the natural slope to collect run-off of water and other liquid. The liquid so collected must be analyzed for mercury, cadmium, zinc, petroleum, and other toxic materials as required by this Department. The analysis must be made prior to disposal of the liquid." (P-59)

(c) Rovic took exception to the provision of paragraph 1A of the DEP's June 17, 1974 letter dealing with a lined ditch. After discussion with the DEP and the EPA, it was agreed the item need not be implemented (Lepre Tr at pgs. 51-52; U.S. Testing-4, dated June 27, 1974).

(d) After June 12, 1974, the demolition contractor plugged off all drain lines (LePre Tr. at pgs. 52-53).

(e) A small earthen dam was created at the culvert to prevent water leaving the site. The water was pumped to tank trucks and transported offsite for treatment (D'Amore Tr. II at pgs. 96-97).

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(f) After June 12, 1974, Rovic collected all runoff water used in demolition and pumped it into on-site fuel storage tanks (Lepre Tr. at pgs. 14; 91-92; D'Amore Tr. II at pgs. 95-96).

(g) After June 12, 1974, Rovic employed the services of Gaess Environmental Services, Division of Chem-Trol Pollution Services, to remove by tank truck the contaminated liquids from the site (Wolf Tr. 3/4/77 at pgs. 637-641). A copy of the Gaess-Rovic contracts dated July 19, 1974 and August 8, 1974 was part of a file designated P-43 and P-44 (Wolf Tr. 3/4/77 at pgs. 641-42).

(h) Between June 13 and June 24, 1974, U.S. Testing Co. sampled water and other liquids on and about the site (U.S. Testing Co-6).

(i) By letter of June 17, 1974, the DEP confirmed that among the matters agreed to at the June 12, 1974 meeting was that prior to continuing demolition "debris from demolition prior to June 12, 1974 may be removed if desired as long as water spray is not required or used." (P-59)

(j) On either June 17 or June 20, 1974*, EPA's William Librizzi and DEP's Karl Birns conducted an on-site inspection (DV-530).

(k) At the time of their on-site inspection, no demolition activity was underway and no debris had been removed from the site (DV-530, dated June 20, 1974).

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* The Andrews letter of June 27, 1974 refers to a June 17, 1974 meeting (Ex. U.S.T.-4); William Librizzi's memorandum dated June 20, 1974 refers to a meeting of June 20, 1974 (DV-530).

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(l) At the time of their on-site inspection, Librizzi confirmed that "water discharging through the drain system and into the small wet well is being diverted from the wet well to the empty fuel tanks located on the property." (DV-530)

(m) At the time of their on-site inspection, DEP's Birns and EPA's Librizzi advised Rovic that "(1) the present method of utilizing drains and diverting run-off from the wet well to the empty storage tanks is acceptable providing sufficient pumping is available to avert overflows. In addition, the outlet pipe should be sealed. (2) Before any new demolition is initiated, a disposal method for the liquids and solids collected thus far and in future operations in the storage tanks should be developed and approved by New Jersey EPA and Federal EPA."*

(n) On June 20,1974, Birns and Librizzi advised Rovic that "operations to remove rubble thus far collected could be initiated providing that the operation is conducted in such a manner as to not cause the removal of surface soil or soils."

(o) Sometime on or about June 19, 1974, a water leak began (DV-607 dated June 6, 1974; DV-698). On June 24, 1974, HMDC called David Longstreet of the DEP to check on the status of the water. Longstreet advised HMDC:

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* John Andrews by letter dated June 27, 1974 in referring to a June 17 meeting with Mr. Librizzi and Mr. Birns states:

> "At that time, it was agreed that it would not be necessary to comply with this item [paragraph 1A of P-59], but to pump the water directly from the last catch basin of the existing drainage system on the site." (U.S. Testing - 4).

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"It is a break or hole in a pipe caught 'upstream' from Ventron which was washing onto the property. Otillio has dug a sump hole on the property 'upstream' from the actual demolition activity. The water is trapped in this plastic lined hole and is pumped directly to the nearest creek. Thus, the water is no longer washing over the property and demolition material and carrying hazardous material into the creek." (HMDC memorandum dated June 21, 1974)

(p) By letter dated June 19, 1974, Rovic advised NJDOL that Magier had certified buildings 9 and 13 for demolition and obtained Magier's certification letter dated June 16, 1974 (DW-62).

(q) On June 24, 1974, U.S. Testing took samples of liquid in the tanks (P-3).

(r) On June 27, 1974, U.S. Testing reported that water in the fuel storage tanks contain 4.6 ppm mercury (U.S. Testing Co. - 4).

(s) On July 1, 1974, there was a meeting at the job site among representatives of EPA, DEP and Rovic. Attending also on behalf of Wolf was Martin S. Tanzer of the United States Testing Co. (DV-620; DV-521; DV-3).

(t) At the meeting of July 1, 1974, Rovic advised DEP and EPA that the present capacity of 25,000 gallons of the fuel storage tanks had been reached and additional tanks would be obtained to store the water.

(u) At the meeting of July 1, 1974, DEP advised Rovic that "it doesn't care if the [Ventron] drainage system is used as

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long as no contaminated water reaches waters of the state." The DEP required all analytical data on chemical and residual materials in the drums and tanks be sent to it. At the meeting, DEP advised the parties present that "it is suspected that the soil is contaminated down to ten feet." It insisted that all soil remain on-site until analyzed.

(v) At the meeting of July 1, 1974, the DEP agreed that all masonry rubble, concrete slabs and wood can be disposed of. Rovic advised DEP it would dump the material in Hackensack or Port Newark. Rovic advised DEP that the steel debris would be sent to Jersey City.

(w) On July 1, 1974, Rovic engaged the services of Modern Transportation Company to provide additional storage capacity for potentially contaminated run-off water from the site. (DV-C, letter dated July 1, 1974 from Modern to Rovic).

(x) On July 2, 1974, Mr. Pike of the DEP visited the site for an inspection. Rovic's daily log for July 2, 1974 reports that "water under control at all times."

(y) Pike reported to Longstreet (DV-626) that on July 2, 1974 "no water was being used" in demolition. Mr. Pike observed a steel crane was knocking down a steel quonset hut (Building 19) and that no violations were observed. Rovic was pumping water from the drainage collection hole to four tanks on the site. He personally observed two men pumping out the pit. He also observed some packaged chemicals from one of the buildings (DV-626 dated July 3, 1974; DV-309 dated July 14, 1974; DV-367).

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(z) On July 2, 1974, Pike instructed the Rovic workmen to correct a leaky connection in the pumping hose and advised them in the future to pump out the pit before it overflowed (DV-626; DV-367).

(aa) On July 2, 1974, the dry chemicals were placed into containers and stocked on the south side of the job site. Rovic's LePre summoned Magier who identified the material as a harmless catalytic agent (LePre Tr. at p. 101). On July 16, 1974, Ventron arranged with Gaess for the removal of the drums of the chemicals from the site.

(bb) By letter dated July 2, 1974, Martin Tanzer of U.S. Testing advised the DEP that it had been retained to perform chemical analysis of run-off water collected and stored in tanks on the site. U.S. Testing also advised DEP that Rovic had contacted handlers for the liquid waste material (DV-627).

(cc) On July 3, 1974, representatives of the DEP and the EPA visited the site to take samples at various on-site places. On that date, the demolition subcontractor was wetting and demolishing building number 9 (DV-16).

(dd) Rovic's daily log report states that on July 3, 1974 "no water leaving site." (DV-16)

(ee) On July 3, 1974, U.S. Testing Co. was on-site to take samples from the fuel storage tanks of the retained water (DV-16).

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(ff) On July 5, 1974 Longstreet, DEP, inspected the job site. On that day, Rovic recorded in its daily log that there was no water run-off from the site (DV-16).

(gg) On July 8, 1974, Michael Polito of the EPA visited the site and observed demolition in process (DV-621 dated July 15, 1974).

(hh) On July 8, 1974, Polito observed water being sprayed with a fire hose and from these washings, there was a rate of out pouring "similar to an open hose tap."

(ii) Late in the day of July 8, 1974, Ed Faille of the DEP reported Polito's observations to Rovic's LePre. LePre claimed the only water leaving the area was from storm drainage on the south end of the site being fed from a plant south of the Rovic site.

(jj) By July 9, 1974 demolition of the buildings, except for a metal quonset hut (building 19) was completed (DV-607).

(kk) By contract with Rovic dated July 19, 1974, Chem-Trol Pollution Services, Inc. agreed to dispose of "aqueous mercury waste" containing an average of 50 ppm mercury (P-44).

(ll) On July 22, 1974, Andrews (Rovic) called the DEP (Longstreet) to request permission to have Chem-Trol dispose of the liquids stored in tanks on site. The DEP (Longstreet) advised Andrews that disposal would require transportation to the Model Cities Project in upper New York state. The DEP (Longstreet) stated that this brought the matter within the jurisdiction of the

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EPA and that a letter should be written to Polito requesting permission to dispose (DV-616).

(mm) By letter dated July 23, 1974, Chem-Trol, on behalf of Rovic, wrote to the EPA requesting permission to dispose of the liquid wastes at its disposal site in upper New York state (DV-511; DV-614; DV-516).

(nn) On July 25, 1974, Chem-Trol informed Rovic that the EPA had cleared the removal of water from the site and that it would proceed to remove contaminated water from the tanks (DV-16).

(oo) On July 26, 1974, Chem-Trol commenced removal of contaminated water from the on-site storage tanks (DV-16).

(pp) Between July 24 and August 7, 1974, contaminated water was pumped from the Modern Tank Coropration storage tanks and the fuel storage tanks into the Chem-Trol tanker and removed from the site (DV-16; Wolf Tr. 3/4/77 at pgs. 693-96).

(qq) By letter dated August 8, 1974, U.S. Testing reported to the EPA that water in the holding tank, as of June 21, 1974, contained 88 ppm mercury (DV-487).

(rr) On July 22, 1974, Robert Wolf called Longstreet (DEP) to request permission to start construction. Longstreet stated that the DEP would not permit construction without completing analysis of the soil (DV-615).

(ss) By letter dated August 22, 1974, Andrews (Rovic) notified the DEP and the EPA that the N.J. Bureau of Solid Waste Management had authorized Rovic to remove the "stock-piled demoli-

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tion material and concrete slab" from the job site to a Bergen Couty Landfill (DV-605; DV-483).

(tt) Demolition was finally completed in mid-August 1974 (Ottilio Tr. 3/23/77, at pgs. 42-43).

35. July/August 1974: The U.S. Testing Co. Soil Study.

(a) On July 11, 1974 the EPA and the DEP staked out nine sites on the Ventron property for soil analysis (DV-601; DV-621; DUS-3 is a sketch of the site location).

(b) Commencing July 11, 1974, U.S. Testing, pursuant to contract with Rovic, removed core soil samples from the nine sites designated by the EPA and the DEP (DV-617 dated July 22, 1974).

(c) Soil samples were split with the EPA.

(d) U.S. Testing analyzed four soil samples from each of the nine corings, representing soil at depths of 0, 1, 2 and 3 feet, respectively, for mercury and other chemicals.

(e) U.S. Testing's analyses of the 36 samples of soil at the Ventron site reports mercury as follows:

Site	Depth	Mercury (ppm)
1	0	415
	1	215
	2	2,175
	3	185
2	0	515
	1	265
	2	315
	3	275
3	0	3,215
	1	1,825
	2	1,450
	3	930

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Site	Depth	Mercury (ppm)
4	0	7,625
	1	18,750
	2	3,425
	3	6,875
5	0	10,750
	1	13,750
	2	16,750
	3	47,000
6	0	1,825
	1	16,250
	2	5,625
	3	39,500
7	0	9,500
	1	8,250
	2	67,500
	3	1,775
8	0	182,500
	1	29,500
	2	195,000
	3	117,500
9	0	82,500
	1	9,500
	2	23,000
	3	43,000
Mean		26,900
Maximum		195,000

(f) The substance of the U.S. Testing report was transmitted to the EPA and the DEP in mid-August 1974.

(g) The soil at the Ventron site, as indicated by the soil samples tested by U.S. Testing, contained mercury in the range of 0.0215% to 19.5% (U.S. Testing 4).

(h) The EPA's analysis of soil samples obtained from U.S. Testing showed a maximum mercury content of 20.0% (DV-609 dated August 8, 1974).

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(i) In August 1974, DEP personnel reviewed the preliminary data and were of the opinion that the Ventron site contained about 766,656 lbs. of mercury (DV-606, DV-385).

36. The August 16, 1974 Agreement.

(a) The Ventron industrial buildings had been confined generally to the eastern portion of the Ventron property.

(b) The nine sites selected by the EPA and the DEP for the U.S. Testing soil study were confined to the eastern portion of the Ventron property.

(c) Wolf intended to construct the larger of the two proposed warehouse buildings on the western side over the old Ventron parking lot.

(d) The most westerly of the nine sites sampled by U.S. Testing, sites 1, 2 and 3, were, according to the data, among the least contaminated with mercury.

(e) Mercury concentrations in the soil sample from sites 1, 2, and 3, as analyzed by U.S. Testing, were as follows:

	Site 1	Site 2	Site 3
Surface	.0415%	.0515	.3215
1 foot	.0215	.0265	.1825
2 foot	.2175	.0315	.1450
3 foot	.0185	.0275	.0930

(f) On August 16, 1974, the following people met at the EPA office in Edison, New Jersey: Longstreet; Faille (DEP); Gluckstern, Librizzi, Polito (EPA); Andrews; Wolf (Wolf) (DV-382).

(g) On August 16, 1974, a Memorandum of Understanding (P-48) was executed by EPA, DEP and Wolf. It provides:

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(1) Rovic shall remove six inches of soil from the easterly line of Building No. 2 then running westerly and southerly to the western boundary of the property. This soil will be stock-piled and segregated from construction rubble at a point in the northeast corner of the cross-hatched area indicated on Rovic Plan A1-3574

(2) Samples will be taken to a depth of one foot at points 1A through 4A as indicated on Rovic Plan A1-3574.

(3) Rovic will notify Mr. David Longstreet of the New Jersey Department of Environmental Protection, or his representative, of the results of sample tests, which will be for mercury only.

(4) New Jersey Department of Environmental Protection will coordinate with the Bureau of Solid Waste Management, NJDEP, and designate a proper site for disposal of stock pile material if contaminated. If the material is not contaminated, it need not be removed from the site, at Rovic's option.

(5) In consideration of the above, provided that test borings do not indicate a mercury content exceeding that found in borings taken at Sites 1, 2 and 3, Rovic may proceed with construction provided that such construction is limited to areas west of the easterly line of Building No. 2, as indicated in Rovic Plan A1-3574.

(6) No construction or field work shall be done east of Building No. 2 until additional tests are performed. The results of these tests will be given to EPA and NJDEP.

(7) Prior to removal of contaminated excavated material, Rovic will provide for approval by EPA and NJDEP a plan for removal and disposal. EPA and NJDEP upon receipt of the plan will respond to Rovic within five working days.

(8) Rovic reserves the right to formulate a plan of taking additional test borings to further define the pattern of contamination of the site. The plan must be approvable by Mr. Michael Polito of EPA, or his designee. Results of additional testing will be evaluated by Rovic, EPA, and NJDEP to determine whether any change in excavation or method of disposal of excavated material is warranted. Any additional findings shall be submitted no later than September 30, 1974. EPA and NJDEP will advise Rovic of their requirements within ten days of receipt of Rovic's statement.

(9) Subject to the above, Rovic agrees to remove contaminated soil to a depth of three feet beginning 65 feet east

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of Building No. 2 and extending to the easterly property line across the width of the property as indicated in the cross-hatched area on Rovic Plan A1-3574.

(h) Building No. 2, as referred to in the August 16, 1974 Agreement, is the rectangular building at the top of Rovic plan A1-3574. Building 2 was not to be demolished by Ottilio in demolishing the remainder of the site. It was to remain and did remain as a field office (Wolf Tr., 2/10/77, at pgs. 465-66; D'Amore Tr. I at pgs. 12-13). As of August 16, 1974, it was the only building left standing on site. The reference to building 2 in the August 16, 1974 Agreement is not to the warehouse building No. 2 ultimately erected by Wolf on Lot 10B.

37. Construction of Building 1 (Lot 10A).

(a) Paragraph 5 of the August 16, 1974 Memorandum of Understanding (P-48) provided:

> In consideration of the above, provided that test borings do not indicate a mercury content exceeding that found in borings taken at sites 1, 2, and 3, Rovic may proceed with construction provided that such construction is limited to areas west of the easterly line of Building No. 2 as indicated in Rovic Plan A1-3574.

(b) Building No. 2 as referred to in the Memorandum of Understanding and as shown on Rovic Plan A1-3574 is just east of the proposed building line for the warehouse building to be constructed on the westerly portion of the site (Lot 10A).

(c) On August 21,1974, U.S. Testing collected four additional soil samples from the area west of the easterly line of Building No. 2 (DV-604, dated August 29, 1974).

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(d) By letter dated August 29, 1974, U.S. Testing reported to Rovic that the maximum concentration of mercury among the four samples obtained on August 21, 1974 was 0.005% (DV-482; DV-604; Wolf Tr., 3/10/77, at pgs. 757-760).

(e) By letter dated August 30, 1974, Rovic forwarded to the EPA and the DEP a copy of the U.S. Testing analysis of the four additional samples. In the letter, Rovic advised NJDEP that in view of the U.S. Testing Co. results, and in accordance with paragraph 5 of the August 16, 1974 agreement (P-48), Rovic would proceed with construction of warehouse Building No. 1 (DV-481; DV-603; P-50).

(f) Warehouse Building No. 1 was constructed by Rovic on Lot 10A in accordance with its plans and specifications in the period September 4, 1974 to approximately September 30, 1975 (Wolf Tr. 2/10/77, at p. 490)

(g) In order to construct warehouse building No. 1, the construction rubble was removed along with 6 inches of surface soil and vegetation. The soil was separated from the demolition debris and stockpiled (LePre Tr., at pgs. 44-45; 47; Wolf Tr. 3/10/77, at pgs. 745-457).

(h) The original parking lot was not disturbed (LePre Tr. at pgs. 115-116).

(i) Three foot of fill was brought to the site to raise the ground elevation. (Id. at pgs. 115-116).

(j) The site was excavated for footings. The building was erected on footings in the ordinary manner (LePre Tr. at p. 13).

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(k) The six inches of top soil remained stockpiled on site until late summer of 1975 when it was removed to the Building 2 area on the eastern side of the site (Wolf Tr., 3/18/77, at 760-765; 769-775).

(l) Wolf and USEPA and NJDEP agreed that construction over Lot 10B would be held off until a satisfactory solution to the mercury could be found. (Wolf Tr., 3/10/77, at pgs. 781-782).

38. Preliminary Estimates of the Mercury Problem on the Eastern Portion of the Ventron Site (Lot 10B).

(a) In August 1974, DEP personnel, based on preliminary data, estimated that the Ventron site contained about 766,656 pounds of mercury. (DV-606; DV-385).

(b) In August 1974, the DEP was of the opinion, based on preliminary data, that "the heavy metals could probably be removed from the soils at a profit, or at almost no cost," and that the mercury recovery would be economical (Memorandum from Dalton to Longstreet, no date).

(c) In forming its opinion in August 1974, the DEP relied in part on U.S. Geological Survey Paper 820 and U.S. Bureau of Mines Bulletin 650, indicating mercury is minable at 0.1% (Id.).

(d) In August 1974, the DEP was of the opinion that the size of the mercury impregnated area "should be delinated (sic.) by borings and analysis." (DV-606; DV-222; DV-385).

39. The Jersey Testing Laboratories Soil Study.

(a) Sometime prior to September 6, 1974, Larry LePre, on behalf of Rovic, laid out a grid system over a Ventron site

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plan, Exhibit (LePre Tr. at pgs. 132-133; 137-138). The intersections of the horizontal and vertical lines were assigned alphanumeric designations.

(b) From September 6 through 10, 1974 Jersey Testing Laboratories, Inc. (hereinafter "Jersey Testing") bored and sampled at the site at the locations indicated by the intersections on the grid system laid out by LePre.

(c) Between September 6 and 10, 1974, Jersey Testing sampled 35 sites. From each site, Jersey Testing removed soil samples at the one, two and three foot levels.

(d) Jersey Testing analyzed approximately 100 soil samples for the presence of mercury.

(e) Jersey Testing prepared and submitted its report dated October 1, 1974 setting forth its findings of the mercury concentrations at the locations sampled (Jersey Testing - 2).

(f) The Jersey Testing report notes mercury concentrations as high as 14.25% at a depth of two to three feet (Id.).

(g) Based on the Jersey Testing report, other experts concluded there were 200,000 lbs of mercury at lot 10B (Hazen Report dated April 4, 1975).

40. August 1974 to September 1975: Investigation of Means and Methods to Reclaim, Recover or Remove Mercury from the Soil.

40.1 Initial Review.

(a) Rovic's initial review of the U.S. Testing data in August 1974 led Andrews (Rovic) to conclude only loca-

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tions 8 and 9 (the most heavily contaminated) "would be minable." (Andrews Memorandum dated August 13, 1974).

(b) On August 13, 1974, Andrews reported to Wolf that "elsewhere throughout the site, it would be impractical financially for us to pay to cover the cost of excavating and processing the fill to recover the mercury." (Id.)

(c) On August 15, 1974, Andrews reported to Wolf that Magier, former chief chemist for Ventron, told Joseph D'Amore, that "unless there is a 50% or better content of mercury, it would not be profitable to mine."

40.2 Merck Chemical Division.

(a) In early August 1974 Wolf's employee, Bernard Scharf, asked Merck Chemical Division (hereinafter, "Merck") about a mercury recovery project (Memorandum dated August 8, 1974).

(b) Merck was not interested in the project (Id.).

40.3 Phillip Bros. Division of Englehardt Industries.

(a) On September 6, 1974, Andrews wrote to Phillip Bros. Division of Englehardt Minerals and Chemicals and transmitted a copy of the U.S. Testing report for review and a meeting was scheduled.

(b) Phillip Bros. performed tests at the site in or about August/September 1974 (EPA memorandum dated September 19, 1974).

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(c) By letter dated October 3, 1974, Rovic sent Phillip Bros. a copy of the Jersey Testing report of October 1, 1974.

(d) After further meetings and consultations, Phillip Bros. advised Wolf that it was not prepared to recover the mercury from the site.

40.4 Gaess Environmental Services.

(a). By letter dated August 13, 1974, Gaess Environmental Services expressed interest in a reclamation project for mercury on the site. Gaess requested additional information.

(b) By letter dated August 22, 1974, Rovic sent Gaess a copy of the U.S. Testing report.

(c) After further review and discussion, Gaess was not interested in the project.

40.5 Efraty.

(a) By letter dated October 19, 1974, Wolf contacted Professor Efraty of Rutgers University concerning mercury reclamation.

(b) Professor Efraty was not interested in the project.

40.6 Ventron.

(a) By letter dated September 18, 1974, Robert C. Petersen of Ventron sent Rovic a copy of an EPA document describing methods of tying up or "gettering" mercury in soil.

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(b) Ventron expressed no interest in solving the mercury problem on site.

(c) Ventron recommended Metcalf & Eddy and Lucius Pitkin to Rovic as experts to help in the mercury problem.

40.7 Ollis/Johnson

(a) By letter dated October 14, 1974, Wolf contacted Dr. David Ollis, Department of Chemistry, Princeton University, confirming a meeting at which they had discussed the "abnormal mercury deposit" on the property. Wolf enclosed the U.S. Testing and Jersey Testing reports.

(b) On October 29, 1974, Wolf met with Dr. Ollis and his associate Professor Johnson, also of Princeton (Letter dated October 22, 1974 from Ollis to Wolf).

(c) By letter dated November 6, 1974, Drs. Johnson and Ollis reported to Rovic its "preliminary conclusions" that the "levels were appropriate to direct recovery of the mercury by retorting, i.e., batch heating in closed systems to distill off the mercury." In addition, they preliminarily concluded that the idea of capping off the contaminated region and sealing its boundaries with appropriate material should be reviewed with the EPA.

(d) On December 5, 1974 Robert Wolf, in the company of Dr. Johnson, met with Michael Polito and Henry Gluckstern (EPA) and David Longstreet (DEP) (DV-405; DV-406).

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(e) At the meeting of December 5, 1974, Dr. Johnson outlined his plans for treatment of mercury contamination at the Ventron site (DV-404, dated December 6, 1974).

(f) At the meeting of December 5, 1974, the EPA requested a written proposal from Rovic "spelling out details of excavation, storage and subsequent processing of highly contaminated earth with timetables and supportive data."

(g) At the meeting of December 5, 1974, Rovic informed the DEP that Gaess Environmental Services (Chem-Trol) was too far away for processing the mercuric wastes with sulfuric acid and dumping in the Buffalo area.

(h) By letter dated December 9, 1974, Rovic submitted to DEP the procedures to be followed by Drs. Johnson and Ollis and requested authorization to proceed with the development of building No. 2 on lot 10B (Letter dated December 9, 1974).

(i) In its proposal of December 9, 1974, Rovic stated that it would excavate the material from the site where analysis indicated a mercury content greater than 1%. The removed material would be stockpiled on the job site and covered with a polyethlene vapor barrier held securely in place to prevent contaminated material from being washed into the building area. Thereafter, following the recommendations of Drs. Johnson and Ollis, the soil would have its mercury content reduced using a method which Drs. Johnson and Ollis had found worked on the basis of bench top experiments of an air flotation process.

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(j) On December 20, 1974, Polito (EPA) discussed with Rovic personnel the proposal of December 9, 1974.

(k) By letter dated December 24, 1974, (P-51) David Longstreet of NJDEP informed Rovic that its proposal of December 9, 1974 had been rejected. In particular, DEP stated:

> "if the soil is to be treated at the site to remove mercury, the soil cannot be stockpiled to permit construction.
>
> "2. The soil in the area in question should be removed or treated on the entire site, not just in the areas indicated on your plan. The depth of soil that must be removed and treated depends on additional sampling results.
>
> "3. Provisions must be made to contain all water used in the processing. This water must be treated to remove all mercury and mercury compounds." (See also DV-591).

(l) By letter dated December 30, 1974, Dr. Ollis informed Andrews (Rovic) that a series of bench scale experiments to determine the appropriate parameters for the air flotation mercury recovery scheme had "failed." Dr. Ollis reported that in a subsequent series of experiments, a "simple gravity separation scheme appeared to be quite effective."

(m) As of December 30, 1974, Drs. Johnson and Ollis were working on a plan for on-site separation and recovery of mercury by gravity separation.

(n) By letter dated January 9, 1975, Drs. Johnson and Ollis concluded that after discussions with Philip Bros. and

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its studies of Ventron's earth samples, a relatively simple mechanical separation process appeared feasible to recover virtually all of the mercury present in the earth as metal: "It is our belief that most of the mercury is in metallic form and analyses of samples are now being undertaken for quantitative confirmation." Drs. Johnson and Ollis estimated that it would take ten months to reduce the mercury content of the earth "to levels acceptable for ultimate disposal." Because of this time, they advised that contaminated earth would have to be removed and stored safely for processing if construction were to go forward.

(o) In their letter of January 9, 1975, Drs. Johnson and Ollis stated that the only practical alternative (to mechanical separation) was to seal off the contaminated area by enclosing it with water proof dikes and capping the top. Such efforts would "effectively preclude any significant release of mercury in any form to the surrounding area."

(p) On January 10, 1975, Dr. Johnson attended a meeting among representatives of EPA, DEP and Wolf in New York City to discuss the alternatives of on-site gravity separation and possibilities for containment on site (DV-455; DV-586).

(q) On January 14, 1975, additional soil samples were delivered to Professor Ollis (Letter dated January 14, 1975).

(r) On January 29, 1975, Dr. Ollis reported his experimental findings to Rovic. On the basis of experiments with air flotation and gravity sedimentation he concluded that: "It

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does not appear feasible to recover the metal values of mercury as metal for soils assaying less than 3% mercury."

(s) On January 29, 1975, Drs. Ollis and Johnson reported the only two alternatives where entombment by sealing off the site with dikes or digging out the mercury deposits and processing on adjacent property by other means, but, the letter concluded, the mercury complexes at the Ventron site were "irrecoverable by known techniques."

(t) On March 4, 1975, Drs. Johnson and Ollis submitted their final report "assessing several possible treatment schemes for the mercury contaminated land." The two major conclusions of the report were: "the bulk of the mercury is irrecoverably by the simple process schemes that we studied experimentally, and the entombing of the contaminated volume should, according to our calculations, reduce the mercury concentration in the horizontal effluent to Berry's Creek to approximate proposed legal limits."

40.8 Hazen Research, Inc.

(a) Sometime during the week of February 21, 1975, Wolf met with representatives of Hazen Research, Inc. to discuss the mercury contaminated soil.

(b) By letter of February 28, 1975, Hazen suggested that it examine some representative samples to determine the mode of occurrence of the mercury and to indicate the optimum recovery method.

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(c) On March 25, 1975, Wolf entered into a professional services agreement (dated March 7, 1975) for the initial phase of a program for the study of the recovery of mercury from the soil at the site (Cover letter dated March 7, 1975).

(d) In March 1975, Hazen gathered some samples of soil for analysis (Letter of March 25, 1975).

(e) On April 4, 1975, Hazen forwarded to Wolf its "Recovery of Mercury from Soil, Progress Report No. 1." (hereinafter, the "Hazen Report").

(f) The Hazen report concluded:

> Almost complete elimination and possible recovery of the mercury could be obtained by retorting which is the standard method for treating mercury ores.
>
> Preliminary calculations indicate that the site contains at least 3,875 tons of soil averaging over 2.5% mercury or some 200,000 lbs of mercury. At current market prices this mercury would be worth over $700,000. It is suggested that the work be undertaken to locate a commercial mercury retorting operation which would process this material on a toll basis. If this can be done then arrangements should be made to remove the soil, transport it to the processing plant, probably by rail, and sell the recovered mercury to defray the removal, transport, and processing costs.

40.9 Jerry Rudy.

(a) By letter dated February 4, 1975, Rovic forwarded to Jerry Rudy copies of relevant laboratory reports and data concerning the mercury contamination problem at Wood Ridge.

(b) Rudy was not interested in the project.

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40.10 Fluid Separation Design, Inc.

(a) On February 13, 1975, Rovic met with representatives of Fluid Separation Design, Inc. at the project site, and again at the Wolf offices on February 18, 1975.

(b) By letter dated February 20, 1975, Fluid Separation Design, Inc. proposed to recover the mercury economically and attached to the letter a preliminary economic analysis.

(c) The Fluid Separation Design preliminary analysis indicated approximately 36,000 pounds of recoverable mercury from the high concentration areas of the Ventron site E-5, F-5 and G-5.

(d) By letter dated February 21, 1975, Andrews (Rovic) advised Fluid Separation Design, Inc. that if it still was interested in recovery of mercury, Rovic would be happy to have further conferences.

(e) Fluid Separation Design, Inc. expressed no further interest in the project.

40.11 Clorox.

(a) Sometime prior to April 17, 1975, Wolf contacted Larry Gillengerten of Clorex Company.

(b) By letter dated April 17, 1975, Wolf sent Gillengerten reports, including the U.S. Testing, Jersey Testing and Hazen reports.

(c) By letter dated April 25, 1975, Gillengerten reported to Wolf that the chemical deposits on the site were "most interesting." Gillengerten advised that on-site retorting

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was possible only if people paid "no attention to EPA requirements for emissions." Gillengerten advised Wolf of other potential experts, including a company known as Quick Silver Products, Inc. and a local "wizard" named Mike Fopp who specializes in mercury mining and reduction. Gillengerten advised that it was doubtful that the EPA would allow rail transportation of mercury because "the mercury would be spilled and cause some pollution in the eyes of the EPA."

(d) Clorox expressed no further interest in the project for itself.

40.12 Michael Fopp.

(a) Sometime prior to April 25, 1975, Wolf had a lengthy conversation with Michael Fopp of Gordon I. Gould & Company of San Francisco, California.

(b) Further telephone conversations between Wolf and Fopp occurred on May 2, 1975.

(c) By letter dated May 5, 1975, Fopp reported to Wolf of his study of the problem and named some mining companies which might be willing to process the materials for a charge on a per ton basis provided the material were hauled from the site to the mine. This shipment would require rail movement of the mercury laden soil from New Jersey to Nevada or California.

(d) The EPA rejected any plan which would require removal of the soil from the site by rail unless accompanied by guarantees that no mercury would leak from the tank cars (LePre Tr. at pgs. 39-40).

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40.13 Simmons Refining Co.

(a) By letter dated April 18, 1975, Andrews, on behalf of Rovic wrote Simmons Refining Company and enclosed the Hazen, U.S. Testing and Jersey Testing reports.

(b) Simmons was not interested in the project.

40.14 Chicopee Manufacturing Co.

(a) By letter dated April 21 1975, Wolf wrote to Chicopee Manufacturing Co. enclosing the U.S. Testing, Jersey Testing and Hazen reports.

(b) Chicopee was not interested in undertaking the project.

40.15 Mercury Refining Co.

(a) By agreement dated May 5, 1975, Mercury Refining Co. agreed with Wolf to test, refine and distill at its own cost and expense approximately one ton of mercury impregnated material.

(b) Six or seven 55 gallon drums of material were sent to Albany, New York by Wolf for test processing (Wolf Tr. 3/10/77 at pgs. 766-792).

(c) Mercury Refining Co. was not interested in the project and advised that the material was not economically recoverable.

40.16 Arco.

(a) Sometime prior to June 1975, Michael Polito of EPA asked Andrews (Rovic) to contact William Jud of Atlantic Rich-

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field Company (Arco) concerning mercury recovery (DV-40, dated June 3, 1975).

(b) By letters dated June 5, 1975 and June 2, 1975 Arco advised the DEP and the EPA, respectively, that Arco had decided not to pursue the "mercury resalvage project", stating that "it's fairly small to be of interest to A. R. Co., and the construction company wants far too much money for the recovered mercury." (DV-575; DV-439; DV-574)

(c) By letter dated June 20, 1975, Polito forwarded to Rovic Arco's letter of June 2, 1975.

(d) On June 23, 1975, Polito reported to Gluckstern (EPA) that he would attempt to bring Arco and Rovic together (DV-437).

(e) Sometime shortly prior to June 25, 1975, Wolf did meet with H.E. Bond, vice-Ppesident of Arco.

(f) By letter of June 25, 1975, Wolf set forth the mercury problem and concluded:

> We are most interested in proceeding with our construction program and entering into an equitable program relevant to the recovery of this mercury, I would greatly appreciate your personal and prompt attention to our request.

(g) By letter dated July 3, 1975, Arco advised Rovic that

> After reviewing all the facts available to us, we have decided not to pursue this potential venture further at this time. However, we sincerely appreciate the opportunity to consider the

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venture and your cooperation in providing us data.

(i) By letter dated July 8,1975 Polito of USEPA requested Arco to send it any cost estimates it had prepared in connection with the Rovic proposal (DV-435).

(j) On July 8, 1975, Polito reported to his supervise that Arco had backed down from the proposal for treatment. (Memorandum dated July 8, 1975; DV-436).

(k) On July 8, 1975, Wolf requested of Polito additional names of firms that could do retorting.

(l) By letter dated July 25, 1975, Arco advised the EPA that the company "has no interest for participation in any project or lands of the Rovic Construction Company." Arco advised USEPA that "since we are not in that rather specialized business and do not have the required expertise, we did not consider the matter further." (DV-423).

40.17 Placer Development Co.

(a) By letter dated July 9, 1975, Wolf wrote Placer Development Co. Ltd. of Vancouver, British Columbia including information and inquiring of mercury recovery.

(b) By letter dated July 15, 1975, Placer Development, Ltd. advised Wolf that it estimated 3,875 tons of soil averaging 2.5% mercury for a total of about 200,000 lbs. of mercury on site, mainly as metallic mercury oxide.

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(c) Placer Development, Ltd. advised Wolf that it doubted that it would be economical to feed furnaces it had available to it with "feed containing only 2.5% mercury." There was also a problem of physically handling and introducing 4,000 tons of outside material into the furnace; pieces larger than fine would require crushing or screening. Placer further advised that "it is not possible to add your material at the head of the ore treatment process because metallic mercury and oxide mercury would not be recovered by the floatation process." Placer further advised that "you have estimated rail freight to Nevada of $125,000. The nearest rail siting would be at Winnemucca, requiring unloading and trucking a further 80 miles."

(d) By letter dated July 28 1975, Placer Amex, Inc., an affiliate of Placer Development, Ltd., confirmed the problems with respect to the type of material from the Wolf site. Placer advised:

> Accordingly, after serious consideration, we must advise that we are unable to accommodate you in this matter.

40.18 <u>International Recycling Corporation</u>.

(a) Sometime prior to June 1975, Wolf had commenced conversations with representatives of IRC Resources Corporation (hereinafter, "IRC") of Sayreville, New Jersey.

(b) By proposed agreement dated June 2, 1975, IRC offered to move up to three cars of mercury dirt from the Wolf site to test for refining of mercury.

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(c) On June 6, 1975, Andrews (Rovic) met with Hogan of IRC (Memorandum dated June 5, 1975).

(d) At the meeting of June 6, 1975, it was agreed that material would be shipped to Nevada in the middle of June and the results would be obtained by June 30, 1975. If the results proved satisfactory, the material would be stockpiled by July 31, 1975 and removal from the site commenced (Handwritten notes bearing the date June 6, 1975).

(e) By letter dated July 8, 1975, Wolf forwarded to Hogan an original and copy of an agreement between Wolf and IRC relative to the mercury recovery.

(f) By Agreement dated July 25, 1975 Wolf and IRC agreed on a program for testing and then removal and refining of mercury from the site.

(g) The agreement with IRC required stockpiling material of three grades, depending on mercury content. Work was scheduled to commence the beginning of August 1975 on the stockpiling. Wolf was to arrange for placement of the material on gondola cars of the Erie Lackawanna Railway for transportation to Nevada. Transportation charges in excess of $35 per ton would be paid by Wolf.

(h) On Monday August 4, 1975, IRC commenced stockpiling the material on site into three areas, that with over 5% mercury, that between 3 and 5% mercury, and that between 1-1/2 and 3% mercury.

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(i) By letter dated August 4, 1975, IRC confirmed that it would like to "sample the stockpile" to make certain that what is shipped is "economical material."

(j) On August 5, 1975, Wolf advised the DEP and the EPA by telephone of its plans to remove the contaminated soil from the property pursuant to the IRC agreement (Polito memorandum dated August 11, 1975).

(k) By letter dated August 14, 1975, IRC wrote to Wolf complaining of DEP and EPA precipitated delays in shipping material to Nevada. IRC advised that "delivery must commence before Friday August 22 in order to meet other pressing customer orders or shippers." IRC offered to attend any meetings with the EPA which might be helpful.

(l) Sometime shortly prior to August 25, 1975, IRC received the results of its most recent sampling program.

(m) By letter dated August 25, 1975, Wolf confirmed to IRC that on the basis of recent samplings it "is no longer economically feasible for you (IRC) to remove this mercury from our property. With this understanding and more particularly pursuant to our agreement of July 25, 1975", the agreement was terminated as between IRC and Wolf.

40.19 <u>EPA Efforts</u>.

(a) In February 1975 Gluckstern (EPA) wrote to the following firms concerning any interest they might have in undertaking a solution to the mercury problem at the Ventron site:

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1. El Paso (DV-445).

2. Consolidated Minerals, Ltd. (DV-447).

3. New Indira Mining (DV-446).

4. Bonanza Oil and Mineral Company (DV-448).

(b) None of these companies, so far as the records indicate, expressed any interest in the problem.

41. The Entombment Plan.

(a) As early as November 6, 1974, Dr. Johnson of Princeton recommended to Andrews that:

> "the idea of capping off the contaminated region and sealing its boundaries with appropriate material should be reviewed with EPA. Simple leaching tests with water on representative samples of the earth might show that the amount of soluble mercury is such that no contamination of local aquifers or waterways could come from your site." (Letter dated November 6, 1974).

(b) By letter of December 24, 1974 (P-51), DEP rejected the Wolf proposal of December 9, 1974 to stockpile and recover mercury on sight by a method suggested by Drs. Johns and Ollis. (DV-591).

(c) On December 30, 1974, Andrews (Rovic) called Scheil (Ward) and told him Rovic needs a procedure to prevent mercury contamination of Berry's Creek for submission to EPA by January 9, 1975 (Scheil Tr., 9/19/77, at p.29).

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(d) On December 31, 1974, Andrews (Rovic) met with Scheil (Ward) to discuss a plan of entombment to present to the DEP and the EPA (Scheil Tr., 9/17/77, at pgs. 30-31; Scheil memoradum dated 12/30/74).

(e) On December 30, 1974, Scheil (Ward) suggested to Rovic that since the building area encompasses the major portion of the site (10B), exterior continuous footings could be used as a cut-off to prevent infiltration. He also suggested that the concrete should be poured "neat with water stops between any separate pours." It was also considered that if mercury continued to leach from the site after the exterior footings, a further cutoff wall might be necessary. After discussing the matter John Andrews requested a letter from Joseph S. Ward spelling out the recommendations (Scheil memorandum dated December 31, 1974).

(f) By letter dated January 2, 1975, Ward presented to Rovic a written plan to entomb the mercury (P-54; DV-589; (Scheil Tr., 9/19/77, at pgs. 35-36) (hereinafter, the "Ward I" Report).

(g) The Ward I Report is based on the data contained in the Jersey Testing Report of October 1, 1974, showing mercury up to 14% on the eastern sector of site. The Ward I Report notes that on the site there is "natural one-half to one foot thick layer of thick organic silt and peat which is essentially impervious." Ward proposed:

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"to contain the contaminated fill materials that no flow of water occurs into or out of it. Since the fill is underlain by an impervious organic soil layer, containment will only be required around the perimeter of the area. In light of the fact that the proposed structure is about 25,000 feet sq. and encompasses most of the problem fill, we recommend that the exterior concrete footings be designed as a cutoff wall as follows:

1. exterior footing should be a continuous footing founded in the sand directly below the organic layer.

2. in order to preserve the impervious nature of the organic layer, the footing should be poured neat, without forms, in contact with the organic soil. The concrete wall on the footing may be formed.

3. since the exterior footing would not be able to be poured monolithically, keyed joints with water stops should be used between pours."

(h) The Ward I Report further states that "if significant contamination is recorded [after the exterior footings] it would be necessary to surround the entire site with cutoff wall at the property line. This wall, as previously discussed, consists of concrete."

(i) The Ward I Report concluded that "if the recommended procedures are followed, it is our opinion that an effective seal can be created, thereby preventing contamination of the waterways."

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(j) On January 10, 1975, representatives of Wolf (including Tom Scheil of Ward) met with representatives of the DEP and the EPA to discuss the Ward I alternative, as well as to continue discussion of off-site recovery. (see paragraph 40.7(p) supra) (Scheil Tr., 9/19/77, at pgs. 45-46).

(k) Wolf advised the DEP and the EPA that the cost of retorting and shipping off-site was prohibitive. The EPA advised it would not permit on-site retorting (Wolf Tr. 3/10/77, at pgs. 783-786).

(l) Scheil elaborated at the meeting on his entombment proposal and the construction techniques to be employed (Scheil Tr., 9/19/77, at pgs. 45-46; Scheil notes dated January 10, 1975, DV-546).

(m) At the meeting of January 10, 1975, the EPA requested and Wolf agreed to have Jersey Testing perform five additional shallow borings to test the impervious nature of the organic clay layer (Scheil Tr., 9/19/77, at p. 46). The EPA was advised by Tom Scheil that there were risks in the sampling process but EPA wanted the test taken anyway (Scheil notes dated January 10, 1975).

(n) On January 13, 1975, Scheil prepared a shallow boring program to obtain samples of sand below the organic silt layer for testing for mercury contamination (Notes dated January 13, 1975).

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(o) By memorandum dated January 23, 1975, Longstreet reported to his superior Carl Birns that the silt layer at the site "is apparently impervious." He concluded his report of the meeting with Ward as follows:

> "this plan seems to be the best available to protect the environment at this time if the additional technical information requested is satisfactory. Actually, the soil should be removed and treated. The cost of this method would be very high even if the technology would be available to reclaim the heavy metals." (Memo dated January 23, 1975, DV-364)

(p) On January 13, 1975, Jersey Testing obtained the additional shallow boring samples. The samples, when tested, showed mercury from the five samples as follows:

	Depth	Mercury in %
a.	7-1/2 feet	0.0013
b.	5 feet	0.0002
c.	6 feet	0.00055
d.	6 feet	0.0025
e.	6 feet	0.0015

A water sample was also taken of the ground water and it showed .003 parts per million mercury. (Jersey Testing Laboratories Report dated January 28, 1975, P-43; DV-450).

(q) By letter report dated January 29, 1975 Ward submitted to Rovic its revised report (hereinafter the "Ward Report II") (DV-306; P-49; Scheil Tr., 9/19/77, at P-48).

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(r) After discussing the information that the "impervious clay" extends over one hundred feet beneath the surface and is "essentially impervious," the Ward II Report recommended four alternative programs or stages to eleviate the mercury pollution problem at the site:

> "Alternate one - continuous building perimeter footing plus complete impervious paving of the remaining area.
>
> Alternate two - alternate one above, plus shallow cutoff walls around portions of the southern, eastern and western property lines.
>
> Alternate three - Alternates one and two above, plus completion of the shallow cutoff wall along the entire eastern and southern property lines.
>
> Alternate four - alternate one above, plus a deep cutoff wall along the entire eastern and southern property lines."

(s) The Ward II Report details the construction methods to accomplish the foregoing procedures (P-49).

(t) By letter dated January 30, 1975, Rovic forwarded the Ward II Report to the EPA and the DEP together with the Jersey Testing shallow borings test results of January 28, 1975 (DV-519).

(u) The EPA and the DEP discussed a response to the Ward II Report.

(v) By letter dated February 28, 1975, Meyer Skolnick on behalf of EPA formally responded to Rovic (hereinafter, the "Skolnick" letter). The EPA's proposal was essenti-

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ally the same as the recommendations of the Ward II Report. The EPA concluded, "After you have had time to consider and comment upon our proposal in writing to both the EPA and NJDEP, the final version will be written as a stipulation and final disposition for signature by the Regional Administrator, Region II, EPA, and the Commissioner, New Jersey Department of Environmental Protection, along with Rovic Construction and Wolf Enterprises." (P-52)

(w) The Skolnick letter adopted a concept of a continuous building perimeter footing, a wall around the perimeter of the southern and eastern property lines as set forth in alternative three of the Ward II Report, complete impervious paving of the surface of the construction site, and all drainage by water impervious ditches (P-52).

(x) The Skolnick letter also required a monitoring program, semi-annual inspection of all above ground structures, a file maintained on the property available for inspection by EPA and NJDEP, an obligation to repair all cracks in paving and drainage within 14 days of detection, and a requirement that the conditions of the final stipulation appear in deeds executed in transferrance of ownership or proprietorship of the property, with the stipulation becoming a covenant running with the land (P-52).

(y) The Skolnick letter required that if any later surveys or studies determined that the abatement actions were not sufficient to satisfy any EPA requirements, or NJDEP re-

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quirements, it would be required that Rovic agree to "comply with any additional requirements which may be imposed." (P-52)

(z) Following February 28, 1975, there were discussions between Wolf and Henry Gluckstern of USEPA concerning some slight modifications to the terms of the February 28, 1975 agreement. Wolf objected to the monitoring requirements, any requirement that the stipulation be a covenant running with the land, and the open-ended commitment to do anything necessary to comply with any additional requirements.

(aa) After February 28, 1975, Wolf continued his efforts to find an on-site or off-site disposition of the contamination (paragraph 40 supra.)

(bb) By agreement dated July 25, 1975, Wolf entered into a contract with International Recycling Company to provide for the shipment of the excavated contaminated fill to Nevada by rail car for recovery there.

(cc) The IRC/Wolf agreement of July 25, 1975 required stock piling of the contaminated fill into three piles based on mercury content. On August 4, 1975 IRC commenced stockpiling in accordance with the agreement (paragraph 40.18 supra; IRC letter dated August 4, 1975).

(dd) On August 5, 1975, Lloyd Ganon of Rovic telephoned the DEP to inform it of the IRC removal plans. The DEP immediately protested that it was not in accordance with an al-

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leged agreement arrived at on January 10, 1975 and because the Skolnick letter was still unanswered (P-53).

(ee) By telegram on August 8, 1975, the DEP ordered Rovic to cease all removal and stockpiling. It ordered Rovic to "completely cover and seal all removed and stockpiled material to prevent any waters from contacting said material. You are hereby further ordered to cover and seal any and all excavated areas to prevent any waters from contacting said excavated areas." (DV-423)

(ff) By letter dated August 11, 1975, Rovic advised the DEP of details of the IRC plans in writing and stated that "during the stockpiling operation, the piles would be protected from the weather by means of polyethylene covers. The stockpiled material would be on the site approximately one month."

(gg) On August 11, 1975, Polito (EPA) visited the Ventron site to inspect the stockpiling (Memorandum dated August 12, 1975). By internal memorandum, Polito concluded that EPA did not have authority to prevent the scraping.

(hh) On August 13, 1975, the EPA determined that the IRC proposal was not technically acceptable and Polito raised the concern that in stockpiling the impervious layer may have been penetrated (Memorandum dated August 13, 1975; DV-567).

(ii) On August 22, 1975, the EPA and the DEP met with representatives of Rovic to discuss the question of the de-

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struction of the impervious layer by sampling and digging on site and the status of the Skolnick letter of February 28, 1975.

(jj) Attending the meeting on behalf of the DEP were Longstreet, Frank Coolick, and Morton Goldfein, then head of the Attorney General section of the DEP.

(kk) At the meeting of August 22, 1975, Wolf advised the DEP and the EPA that the IRC agreement and plan to ship to Nevada was no longer viable as a result of recent samplings (DV-664, memorandum dated August 25, 1975; Wolf Tr. 3/10/77, at pgs. 801-805).

(ll) The EPA formally advised Wolf that "the federal government has no legal basis to prevent him from building. The only instance where it would have jurisdiction is if the mercury pollution were declared a public health emergency." (Polito memorandum dated August 24, 1975).

(mm) On August 22, 1977 discussion proceeded on the entombment proposal. Wolf advised that the time from February 28, 1975 had been spent unsuccessfully attempting to locate a mercury reprocessing company in the US.

(nn) It was determined that Ward, Wolf's engineering consultant, should be contacted as to whether the impervious layer was still impervious and as to what the best entombment procedure would be if it were.

(oo) At the meeting of August 25, 1975, the EPA stated that "it would remove the soil necessary to attain a con-

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centration of mercury recommended by EPA's chemists and that EPA would sue Ventron for the cost involved (DV-664)."

(pp) A meeting was then set up for September 3, 1975 with Ward to discuss the entombment proposals and the possibility that the impervious layer had been permeated.

(qq) On August 25, 1975, Wolf discussed with Scheil (Ward) the problem of the impervious barrier (Scheil notes dated August 28, 1975)

(rr) On September 3, 1975, there was an on-site meeting among Longstreet and Richard Dalton (DEP), Thomas Schiel (Ward) and Lloyd Ganon (Rovic), Wolf and Polito (EPA) (DV-663; (Schiel memorandum dated September 3, 1975).

(ss) At the meeting of September 3, 1975, the parties present inspected the area of mercury contamination, the pits in the mercury contaminated area filled with water, and the organic clay barrier. On the basis of the elevations observed and measured by Scheil, he expressed the opinion that the impervious clay barrier had not been penetrated (Scheil Tr. 9/19/77, at pgs. 58-59).

(tt) The September 3, 1975 meeting concluded "after much discussion" and EPA tentatively approved building with continuous wall footings, paved areas, a cut off wall on the eastern and part of the southern property line. (Scheil Tr., 9/19/77, at p. 60)

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(uu) At the meeting of September 3, 1975, the parties reached the understanding that Wolf would proceed with construction as set forth in the Skolnick letter as modified by subsequent discussions (Wolf Tr. 3/4/77, at pgs. 704-715). Wolf advised that the area south of the building was a rail line which could not be paved. At the meeting, Wolf acknowledged that he would proceed with construction in accordance with these plans, and that there would be further discussions concerning a formal stipulation if one were possible.

(vv) By memorandum dated September 3, 1975, Polito confirmed to the director of the EPA that Rovic had "basically accepted the proposals of Meyer Skolnick." (DV-415).

(ww) At the meeting, Wolf also agreed to pump two holes on the site dry, dispose of the water in a proper manner, install a concrete rat slab and cover with clean fill, place the contaminated stockpile adjacent to the rail siding within the building confines surrounded by an earthen dike, install curbs, streets and storm drainage forthwith. The DEP agreed to provide details of monitoring pipes to be installed inside and outside the cut off walls (Letter dated September 4, 1975; never sent).

42. Building 2 is Constructed with Entombment Structures, Monitoring Wells, and Paving.

(a) In July-August 1975, initial site grading and preparation work was done for Warehouse Building 2 on Lot 10B (DV-17;

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Daily Logs, July 23, 25; August 6, 7, 8, 1975) (Scheil Tr., 9/19/77, at pgs. 52-53).

(b) From September 8 to September 16, 1975, Rovic completed site preparation, excavation, and fill for Building 2 (DV-17; Daily Logs, September 8, 9, 10, 11, 12, 15, 16, 1975).

(c) Fill from the Building 1 area was moved to the Building 2 area (D'Amore Tr., 4/27/77, at p. 104).

(d) On September 17 and 18, 1975, Rovic cleaned out the flume and riser ditch (DV-17; Daily Logs, September 17, 18, 1975).

(e) On September 24, 1975, Ward advised Rovic to pour the concrete footings nine inches thick to insure waterproofness. (Scheil Tr., 9/19/77, at pgs. 60-61; Scheil notes dated September 24, 1975).

(f) From September 29, 1975 to November 30, 1976, Building 2 was constructed with a continuous building perimeter, the exterior footings of which formed a continuous footing founded in the gray sand directly below the organic layer of the soil and above the impervious layer (Scheil Tr., 9/19/77, at p. 49; D'Amore Tr. 4/27/77, at p. 78).

(g) The footings for Building 2 were placed in contact with the organic soil to effect a seal between the concrete and the soil (Scheil Tr., 9/19/77, at p. 53).

(h) The concrete wall of the foundation of Building 2 was formed. Key joints with water stops were used between pores and between the footing and the foundation wall of Building 2.

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(i) A shallow cut-off wall was constructed around the perimeter of the southern and eastern property lines of Building 2. The walls of the shallow cut-off walls were constructed to a depth of approximately 3-1/2 feet.

(j) The entire site of Lot 10B, with the exception of a portion on which the railroad siding is located was paved with an impervious asphaltic pavement (Wolf Tr., 3/4/77, at pgs. 701-703).

(k) A storm water flume between Buildings 1 and 2 was constructed and paved with water impervious paving to carry water from the northerly to the southerly direction to the drainage ditch on the southerly side of the property (Wolf Tr., 2/10/77, at 473-498).

(l) Drainage from the property along the southern boundary was replaced with underground concrete piping (D'Amore Tr. 4/27/77, at pgs. 113-114; Wolf Tr., 8/24/77 at pgs. 944-946); Wolf Tr. 3/4/77, at pgs. 701-703).

(m) During construction of Building 2, "rat slabs" were installed for purposes of holding waters pumped from the foundation trenches (Wolf Tr., 2/10/77, at pgs. 492-493).

(n) By letter dated January 9, 1976, Rovic advised the DEP of the name of liquid waste remover it had hired to remove the contaminated pumped waters from the site. On the same date, Rovic issued a purchase order for the removal.

(o) Waters pumped into the rat slab during construction of Building 2 were stored in a tank on site and removed from

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the site by tank truck and disposed of by environmental services (Wolf Tr., 3/4/77, at p. 701; Wolf Tr. 2/10/77, at pgs. 493-498).

(p) At the September 3, 1975 meeting, the EPA had expressed concern over existing holes on site where water could pond (Scheil Tr., 9/19/77, at p. 59). The existing hole on Lot 10B was capped with concrete and filled with clean fill.

(q) There were problems in pouring the footings because the trench collapsed as a result of tidal action (Wolf Tr., 7/4/77, at pgs. 698-700). Because of difficulties in pouring the footings neat, on October 21, 1975, Scheil (Ward) met on site and recommended a procedure for pouring with back fill to provide watertight footings. Scheil met with Wolf on the property site on November 13, 1975. Any deviations from the original proposal were corrected in the field (Scheil Tr., 4/14/77, at pgs. 116-117). By letter dated November 17, 1975, Ward confirmed the modified procedures would work (P-55).

(r) By letter dated January 23, 1976, Rovic requested permission of the DEP to have Hackensack Water Company put in the water service line (DV-555). By letter dated February 24, 1976, the DEP gave such permission (DV-554).

(s) On March 22, 1976, DEP visited the site to examine the foundation footings and to choose locations for the monitoring wells (Memorandum April 6, 1976; dated DV-550).

(t) By letter dated April 2, 1976, Rovic confirmed with the DEP an on-site meeting for April 9, 1976 to site the moni-

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toring wells. By letter dated April 12, 1976, Rovic confirmed to the DEP the location and installation of the monitoring wells (DV-549; DV-552).

(u) In or about April 1976, three monitoring wells were installed on the site, one in the interior of Euilding 2 and two on the exterior. These wells were designated respectively as the interior well and well east and well south. Well east is located near the eastern property boundary of Lot 10B just outside the shallow cut-off wall. Well south is located on the southerly side of Lot 10B just outside the cut-off wall.

(v) The entire site was eventually paved (Wolf Tr., 8/24/77, at pgs. 236-242). Lot 10A was paved in December 1975; Lot 10B, with the exception of the eastern edge, was paved November 1976. The balance of 10B was paved in 1977.

43. Final Negotiations and Commencement of Litigation.

(a) At the on-site meeting of September 3, 1975, the DEP, the EPA and Wolf agreed they would attempt to enter into a formal agreement concerning the entombment measures taken and resolving other aspects of the pollution problem.

(b) By letter dated September 17, 1975, the DEP forwarded to the EPA its draft of a proposed agreement with Wolf. (DV-560). The DEP acknowledged that Wolf had objected to any deed stipulation (DV-4014a, b).

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(c) In September 1975, Wolf retained the law firm of Lowenstein, Sandler, Brochin, Kohl & Fisher to represent him in attempts to negotiate final terms of agreement with the DEP and EPA.

(d) By letter dated October 3, 1975, Wolf's counsel put Ventron on notice of the demands of the EPA for a final settlement and invited Ventron to participate in any negotiations. Wolf also made demand for indemnification of all past, present and future expenses.

(e) On October 8 and 20, 1975, Wolf and his counsel met with representatives of EPA and DEP, respectively, in attempts to negotiate settlement.

(f) By letter dated October 30, 1975, Ventron responded to Wolf's counsel's letter of October 3, 1975 and "denied any liability."

(g) In November 1975, Ventron (Bernstein) admits it destroyed documents in its files relating to the Ventron site (Bernstein Tr., 9/14/76, at pgs. 63-64; 87-88).

(h) None of the files produced by Ventron in the course of discovery were produced in their original form (Faye Tr. I at pgs. 63-64). Bernstein and Derderian admit they assembled all the documents ultimately produced by Ventron's counsel in the lawsuit and reorganized them into folders of their own selection (Bernstein Tr. 9/14/76 at pgs. 82-94).

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(i) By letter dated November 4, 1975, Wolf offered a settlement proposal to EPA and DEP.

(j) On December 22, 1975, representatives of Wolf, the EPA and DEP met for the last time to negotiate the stipulation. No agreement was reached.

(k) On April 9, 1976, the DEP commenced suit against defendants Wolf, Ventron, Velsicol and U.S. Life with respect to the mercury contamination at the Ventron site.

44. Mercury Data Obtained on the Velsicol Tract.

(a) In 1974-75 the Velsicol site contained bottles, drums, plastic bags, roofing material, asbestos siding, tanks, barrels, vats and drums. (LePre Tr. at p. 63).

(b) Outsiders used the Velsicol property to dump trash in 1974-75 (Id. at pgs. 64; 63-66; Wolf Tr., 8/24/77, at pgs. 936-938).

(c) In January and February 1977, the DEP personnel observed dump areas on the Velsicol property (Reed Tr. at pgs. 38-39).

(d) On March 9, 1976, Edward Cotterell and David Longstreet of the DEP sampled five sites at varying depths on the Velsicol property adjacent to the Ventron site (DV-305, dated March 9, 1976; DV-296, photographs).

(e) The results of the sampling revealed mercury concentrations as follows (DV-309, dated May 12, 1976):

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Site	Depth	Mercury (ppm)
1	0"	3.3
	7"	4.2
2	0"	5.6
	10"	5.2
3	0"	4.2
	11"	4.3
	17"	4.8
4	12"	4.2
	17"	5.2
5	0"	5.2

(f) Prior to July 1976, Wolf had been negotiating with Velsicol about an option to purchase the Velsicol property and had orally informed the DEP of his intention.

(g) By letter dated July 20, 1976, the DEP informed Wolf that its preliminary data indicated the Velsicol tract was contaminated by mercury.

(h) By letter dated September 23, 1976, Wolf informed Velsicol that it was not possible to proceed in view of the State's concern for contamination at the Velsicol site.

(i) On September 29, 1976, the DEP sampled 18 sites on the Velsicol tract (DV-297) with the following results:

Site	Mercury (ppm)	Source Doc.
01	3300	DV-46
1A1	5000	DV-47
2A1	3200	DV-48
3A1	3200	DV-49
4A1	5000	DV-50
5A1	3000	DV-51
6A1	3260	DV-52
8A1	3500	DV-53
9A1	3500	DV-54
10A1	4200	DV-55
11A1	3200	DV-56

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Site	Depth	Mercury (ppm)
12A1	13600	DV-57
13A1	4200	DV-58
14A1	4200	DV-59
15A1	3800	DV-60
X1	3300	DV-61
Y1	6600	DV-62
Z1	3300	DV-63

(g) In or about December 1976, the State amended its complaint to add that the Velsicol tract to the property subject to the pending litigation.

45. Mercury in Berry's Creek Tidal Marsh: February 1972 to Date.

(a) Mercury in sediment in Berry's Creek adjacent to the Ventron/Velsicol site was known to the DEP and the EPA as early as August 1970 (DE4-O).

(b) Responsibility for clean up of sediment in Berry's Creek was discussed between the EPA and Ventron officials as early as October 1970, but was not resolved (DE4-U).

(c) Approximately one hundred thirty acres of tidal marsh known as Berry's Creek Tidal Marsh is located approximately two miles downstream of the Ventron/Velsicol property and adjacent to the opposite bank of Berry's Creek.

(d) Berry's Creek Tidal Marsh is within the Hackensack Meadowlands Development Commission boundaries and is part of the New Jersey Sports and Exposition Authority site ("Sports Complex" site).

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(e) Mercury sediments in Berry's Creek Tidal Marsh were first measured by Jack McCormick & Associates (JMA) in June 1972 (M-5 at p. 39; M-4 at p. 13).

(f) In June 1972, JMA issued its "Draft Assessment of the Potential Environmental Impact of the Construction and Operation of a New Jersey Sports and Exposition Complex at a Site in East Rutherford, Bergen County, New Jersey." (M-3)

(g) The report noted that "chromium, arsenic, and mercury are present in unusually high concentrations in the muck beneath the surface and in the channels of the Berry's Creek Tidal Marsh." (M-3 at pgs. 33; VII-11)

(h) The analysis of sediment from the Berry's Creek Tidal Marsh showed mercury along the channel bottom as follows (M-3 at VII-14):

Depth	Mercury (PPM)
0-2"	74
2-4"	38
4-6"	0.32

(i) The results of the 1972 sampling were aired at public hearings on the Sports complex held by DEP and HMDC in July 1972 (M-4 at p. 12)

(j) In 1972, the Feick Report on control of mercury contamination in fresh water sediments noted the contamination of Berry's Creek adjacent to Ventron to be the highest ever recorded in the world (M-14).

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(k) In July 1974, JMA issued a preliminary draft report assessing alternate solutions to the problem of mercury contamination of Berry's Creek Tidal Marsh (M-23).

(l) In making its July 1974 report, JMA made explicit reference to the Feick Report on control of mercury contamination in fresh water sediments.

(m) No person, so far as the record shows, ever gave Wolf a copy of the July 1974 JMA report or the 1972 Feick Report (M-14) until produced during discovery in the pending suit.

(n) The July 1974 JMA report discussed twelve alternate solutions to the mercury contamination, all with varying pros and cons. These were:

Alternative	Cost($)
1. No action	0
2. Dredge and remove to landfill.	approx. $4,000,000
3. Number 2, plus recovery of mercury from spoils.	same as 2, if cost of recovery is self-liquidating.
4. Recovery of mercury on-site by hypochlorite solution.	$650,000 plus cost of diking-labor, etc.
5. Entombment by iron-sand overlay.	$325,000 to $390,000 for materials, plus cost of diking, etc.
6. Entombment by polymer film overlay.	$120,000 for material plus cost of labor, diking, etc.

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Alternative	Cost($)
7. Entombment by waste wall overlay.	$377,000 to $754,000 plus cost of labor, etc.
8. Chemical fixation of mercury in situ.	$39,000 (if it works).
9. Gettering by roasting in situ.	Not given.
10. Entombment by sand and gravel overlay.	$3,276,000 to $3,549,000.
11. Inpoundment by diking.	Not given.
12. Paving	Not given.

(o) In late 1974 and early 1975 JMA prepared a proposed environmental impact statement on behalf of the Sports Authority in compliance with the National Environmental Policy Act of 1969 (M-3).

(p) In April 1975, the Corps of Army Engineers circulated the JMA draft EIS for comment by interested Federal and State agencies and by the general public.

(q) The JMA draft EIS which ultimately was approved and became final noted that JMA had observed mercury in Berry's Creek downstream of the Ventron site, and reported:

> "because the ground at the factory site seems to be saturated with the contaminant [mercury], rainfall may leak mercury into Berry's Creek for several decades." (M-5 at p. 36)

(r) The JMA draft EIS also noted that data on mercury from sediments in Berry's Creek Tidal Marsh had been

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collected in February 1974 in an attempt to confirm the results of June 1972 (M-3 at p. 39). Concentrations of mercury in the 1974 samples ranged from 5.5 to 75 ppm mercury.

(s) The JMA draft EIS concluded that mercury in Berry's Creek Tidal Marsh was more than seven times as great as the highest ever recorded in the available literature (M-3 at p. 39).

(t) JMA studied the levels of mercury at different strata of the sediment in Berry's Creek Tidal Marsh and concluded:

> "[T]he source of mercury [to the Berry's Creek Tidal Marsh] have been abated prior to February 1974." (M-5 at p.39)

(u) The JMA draft EIS concluded:

> "with respect to the mercury contamination, the chemical spills which have occured are anticipated to serve as a continuing source of contamination for several decades."

JMA concluded in general that the Tidal Marsh could be "reclaimed" (M-5 at p. 223)

(v) The U.S. Department of Commerce, in commenting on the draft EIS, questioned the ability to reclaim the Marsh (M-5 at p. 222; A-9).

(w) In response to the U.S. Department of Commerce, JMA amended the EIS to read (M-5 at p. 43):

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> The mercury problem is perplexing and no final plan has been formulated to deal with the problem. There is no little question about the severity of the contamination, but no information is available on the form or the rate of movement of mercury. An investigation has been designed to determine the "mercury budget" of the Tidal Marsh. This investigation will require approximately 16 months to complete after it is initiated. Based on the findings, a plan to deal with the contaminated sediments will be formulated and submitted to the State agencies with jurisdiction.

(x) In October 1975, the Corps of Engineers issued the final environmental impact statement for the Sports Authority (M-5).

(y) A "mercury budget" was prepared by JMA dated August 5, 1975 (DV-306).

(z) The mercury budget report noted that the "marsh scraping process" technique "now is known to be inadequate." (August 5, 1975 letter from JMA to Jack Krumpe, Executive Director, New Jersey Sports and Exposition Authority)

(aa) The mercury budget report observed:

> "The marsh now is contaminated grossly with mercury that apparently originated from former industrial discharges."

(bb) In the mercury budget report, JMA recommended an investigation at an approximate cost of $104,000.

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(cc) JMA did not get funding for itself for the mercury investigation it proposed to the Sports Authority.

(dd) In October 1976, JMA met with representatives of Ventron in Beverly, Massachusetts and Ventron agreed to fund that portion of the JMA mercury investigation dealing with collecting specimens in the area (M-4 at p.39).

(ee) In November 1976, JMA issued a report to Morton Goldfein, Deputy Attorney General, and the New Jersey Sports and Exposition Authority entitled "Summary Report of Analysis From Mercury In Sediments and Waters of The Hackensack Meadowlands District." (M-4)

(ff) The November 1976 JMA report concluded that:

> "The available data indicate that the streams and wetlands of the Hackensack Meadowlands District are more severly contaminated with mercury than any other area known in the world." (M-4)

The report also stated however that "the mercury seems to be present in a relatively inert form, and does not appear to pose an immediate or serious threat to wildlife or to human beings."

(gg) The November 1976 JMA report recommended further detailed investigation of the problems and set forth an extensive program (M-4).

(hh) The November 1976 JMA report also proposed three alternatives for restoration of Berry's Creek Tidal Marsh which "may be viable.":

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1. Remove and replace surface sediment. Estimated cost of $35,000 per acre.

2. Entombment of the marsh by embankments and impermeable cover, at a cost of in excess of $45,000 per acre.

3. No action, allow the contaminated sediments to remain in place and rely on natural processes to purge the area of mercury. (M-4 at pgs. 41-42)

(ii) JMA did not receive any funding or authority from the Sports Authority to continue with its work.

(jj) On February 28, 1977, Jack McCormick wrote to David Bardin, Commissioner, DEP, and William McDowell, Executive Director, Hackensack Meadowlands Development Commissioner. The letter is marked "urgent and confidential." (M-6)

(kk) In the letter of February 28, 1977, JMA summarized some of the test data and background on mercury in the Hackensack Meadowlands. He concluded:

> "Information in my opinion suggests that this mercury problem is regional in scope, and is beyond the reasonable, direct concern of the Sports Authority. The Authority has been exceptionally cooperative and has fulfilled its obligations many times over. The Authority does have a continuing responsibilty in regard to the Berry's Creek Tidal Marsh and the ultimate restoration of that Marsh, but it does not appear to be appropriate to expect the Authority to fund further investigations of this

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regional problem. I recommend that the Department [NJDEP] and the Commission seek the further guidance and assistance and the additional regulatory powers, of U.S.-EPA Region II to continue this investigation. U.S.-EPA has maintained liasion with your two agencies and the Authority during the past five years, we have provided them with copies of all our monthly reports and special reports, including a copy of this letter." (M-6)

(11) To date, no action has been taken with respect to treatment, entombment or removal of mercury from Berry's Creek Tidal Marsh.

46. DEP's Post-Lawsuit Study.

(a) In early 1977, the DEP retained Jack McCormick & Associates (JMA) and they jointly undertook to obtain additional data for purposes of the pending litigation.

(b) On March 8, 1977, monitoring wells on the Ventron site installed by Wolf were sampled:

Well	Mercury (ppm)
Interior	.067
South	.0012
East	.0006

(c) In April and May 1977, the report was discussed among DEP and JMA.

(d) In May 1977, sampling of the drainage ditch across the Velsicol property was begun.

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(e) In May 1977, deep monitoring wells were installed on the Velsicol property.

(f) In late May and June 1977, animal life was captured for analysis.

(g) In June 1977, a "full scale" tidal sampling was begun.

(h) In June 1977, sediment samples of Berry's Creek were obtained.

(i) In June 1977, soil borings were taken on the Velsicol tract.

(j) In June 1977, the first of a series of "mercury dump sites" was discovered in the vicinity of well #5 on the Velsicol property. The following items were removed:

A 1966 newspaper;

flask;

tags and seals dated 1966;

plastic chemical bottles, with a resin type material; and

glass mercury and mercury bottles.

(k) In July 1977, a dump area east of well #1 was discovered on the Velsicol property. Among the items recovered:

glass and plastic chemical bottles labeled "triple distilled mercury-ten pounds net-Wood Ridge Chemical Co." and a newspaper dated April 28, 1970 (Memorandum dated August 5, 1977).

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(1) In August 1977, JMA issued its report to DEP for use as its expert's report in the pending litigation (M-2).

[THE PARTIES DO NOT AGREE AS TO ALL THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS OF THE VARIOUS EXPERTS IN THE LAWSUIT. THEIR RECOMMENDATIONS ARE INCLUDED IN THIS STIPULATION ONLY FOR PURPOSES OF COMPARING THE DIFFERENCE IN RECOMMENDATIONS AMONG THE EXPERTS RETAINED BY THE RESPECTIVE PARTIES]

47. McCormick's Recommendations.

(a) The JMA expert report on behalf of the State makes a number of specific recommendations based on its findings and conclusions (M-2).

(b) JMA recommends that the Ventron property be modified by a revised version of alternative four of the Ward II report to supplement the mercury containment system. Specifically, JMA recommends that an additional deep cut-off wall be constructed around the eastern, southern and northern property perimeter (M-2).

(c) As an alternative to the deep cut-off wall, JMA recommended a water pumping plan (M-2).

(d) JMA recommended that the entire property be re-paved with another material and that the surface be maintained to prohibit any fissures or openings in the surface (M-2).

(e) JMA recommended that any alteration or improvement of the property be subject to a mandatory notice requirement in perpetuity (M-2).

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(f) JMA recommended that the culverts carrying drainage from the Ventron property be excavated, cleaned and removed. JMA recommended that all ditches on or adjacent to the Ventron property and the Velsicol property be cleaned, excavated and removed and that drainage be revised and re-routed surfaced with an impermeable liner such as concrete and that no buried culverts should be designed into the system.

(g) JMA recommended that the channel of Berry's Creek should be cleaned with a small suction dredge and that the excavated material should be placed on the Velsicol property in the basins created by the excavation of the culvert.

(h) JMA recommended that the tide gate in Berry's Creek be reconstructed and repaired to prevent high waters from surcharging the drainage system on the Velsicol property.

(i) JMA recommended the termination of all dumping on Velsicol property and erection of fencing and signs.

(j) JMA recommended as one alternative for the Velsicol property that the "mercury-rich soils on the Velsicol property be removed and decontaminated, and the mercury recovered."

(k) JMA provides no details as to what means or technologies should be employed to recover the mercury.

(l) JMA recommended that soil on the Velsicol property containing mercury in excess of 500 ppm should be excavated and decontaminated and the remaining soil recontoured to

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OUNSELLORS AT LAW
744 BROAD STREET
EWARK, N. J. 07102

slope away from Berry's Creek. JMA recommended that should the Velsicol property be developed, it be paved with an impervious pavement where there are no structures.

(m) JMA recommended that any alteration on the Velsicol site be subject to the written approval of the DEP, and a mandatory requirement for approval of any alteration or improvement be a condition of the deed in perpetuity.

(n) As a second alternative to the Velsicol property JMA recommended a containment system "if it is not feasible to excavate and reclaim."

(o) JMA's containment system would be a cut-off wall based on the impermeable varved clay and enclosed by a concrete structure similar to the foundation of the building on the Wolf property.

(p) JMA recommended the remainder of the Velsicol site be recontoured to provide a slope away from Berry's Creek.

(q) JMA recommended monitoring of the wells on the Wolf property as well as the observation wells on the Velsicol property at least once each month.

48. <u>The Gregor Report</u>.

(a) On November 14, 1977, Harry P. Gregor, Ph.D., issued his expert report on behalf of defendant Wolf.

(b) Dr. Gregor is professor of the Department of Chemical Engineering and Applied Chemistry, Columbia University.

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(c) Dr. Gregor recommended that surface runoff from the Ventron site should be conducted to avoid the eastern edge of the Ventron property and the heavily contaminated portions of the Velsicol soil, rather than run through it.

(d) Dr. Gregor recommended that raw earth on the east and along the southeast corner of the Ventron property not covered by warehouse building No. 2 be sealed with blacktop, and that this top seal be extended to the Velsicol property along the eastern border of the Ventron property.

(e) Dr. Gregor recommended that the Velsicol property and the southeast corner of the Ventron property should also be coated over with an impervious layer.

(f) Dr. Gregor recommended that any cracks in the pavement around the warehouses and the like be repaired and maintained.

(g) Dr. Gregor recommended that future management of the property "be subject to an appropriate degree of control by the authorities so it is not altered in such a way as to make for a public hazard."

(h) Dr. Gregor recommended appropriate monitoring of the existing wells on the Ventron property.

(i) Dr. Gregor recommended that the old storm drain system on the Velsicol property be renewed to make it water tight and not permit storm drain water to contact the area of already high contamination on the Velsicol property.

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(j) Dr. Gregor recommended that the Velsicol property be developed for appropriate commercial uses and the residual areas blacktopped over with appropriate provision for storm sewers.

(k) Dr. Gregor recommended a limited dredging of Berry's Creek and placement of any contaminated spoils removed therefrom to areas underneath buildings on the to-be-developed area of the Velsicol property.

(l) Dr. Gregor recommended that nothing be done with the western portion of the Ventron property (Lot 10A). He recommended that if the building were razed it should be done in a way as such that the ground underneath is "not wantonly dispersed or removed from the site."

49. The Stopford Report.

(a) On December 27, 1977, Ventron submitted the report of Woodhall Stopford, M.D., of Hillsboro, North Carolina as its expert report.

(b) Dr. Stopford recommended that further runoff of contaminated matter from the Ventron site should be controlled by blacktopping the eastern portion of the Ventron site to prevent any erosion.

(c) Dr. Stopford recommended that the present drainage system be re-routed so as not to pass through the heavily contaminated portions of the Velsicol property and to decrease the liklihood of distrubing sediments adjacent to the dis-

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CHIN, KOHL & FISHER
COUNSELLORS AT LAW
744 BROAD STREET
NEWARK, N. J. 07102

charge culvert. He recommended that the drainage system be constructed to pass through areas of less contamination on the Velsicol property using lined ditches.

(d) Dr. Stopford recommended a flood gate be constructed at the outlet to Berry's Creek.

(e) Dr. Stopford recommended that the Velsicol tract be planted with ground cover to decrease chances of erosion of contaminated soils.

(f) Dr. Stopford recommended a berm constructed of clay/silt soil be constructed along the borders of the Velsicol property adjacent to Berry's Creek and the ditch along the southwest border of the Velsicol property. He recommended that the berm be planted with ground cover as an erosion control measure.

(g) If monitoring suggests continued movement of contaminated soils into Berry's Creek, Dr. Stopford recommended similar berms downslope from any heavily contaminated areas.

(h) Dr. Stopford recommended the tidal gate in Berry's Creek downstream should be repaired and made operational.

(i) Dr. Stopford recommended sediment in the outflow area along Berry's Creek be covered with a thin layer of clay/silt soil as used in the berm.

(j) Dr. Stopford recommended certain monitoring efforts to assure that containment efforts are effective.

(k) Dr. Stopford recommended that once effective erosion control and monitoring programs are instituted, develop-

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ROCHIN, KOHL & FISHER
COUNSELLORS AT LAW
744 BROAD STREET
NEWARK, N. J. 07102

ment of the Velsicol tract can be allowed and should encouraged, provided precautions are taken not to disturb any areas of heavy contamination.

(l) Upon development, appropriate storm drainage of any covered areas should be put in place to eliminate erosion problems from runoff.

50. The Dames & Moore Report.

(a) On February 8, 1978, Velsicol submitted the report of Dames & Moore, consultants, of Cranford, New Jersey, as its expert report.

(b) Dames & Moore recommended a "more careful estimate be made of the amount of mercury in the ground."

(c) Dames & Moore recommended a study of "the surface water-ground water regimes at the site."

(d) Dames & Moore recommended a new monitoring system to measure groundwater flow.

(e) Dames & Moore recommended that based on new data from studies, a containment system with appropriate grading and paving could be used to control the spread of contamination.

LOWENSTEIN, SANDLER, BROCHIN,
KOHL & FISHER
Attorneys for Defendants
Robert and Rita Wolf

Dated: March 1, 1978

By: Michael L. Rodburg
Michael L. Rodburg

LOWENSTEIN, SANDLER,
BROCHIN, KOHL & FISHER
COUNSELLORS AT LAW
744 BROAD STREET
NEWARK, N. J. 07102

Rcd 4/5/78

State of New Jersey

DEPARTMENT OF LAW AND PUBLIC SAFETY

ENVIRONMENTAL PROTECTION SECTION

36 WEST STATE STREET
TRENTON 08625

JOHN J. DEGNAN
ATTORNEY GENERAL

STEPHEN SKILLMAN
ASSISTANT ATTORNEY GENERAL
DIRECTOR

STEVEN A. TASHER
DEPUTY ATTORNEY GENERAL
SECTION CHIEF

March 31, 1978

TO ALL ADDRESSEES LISTED BELOW:

Re: State v. Ventron Corp.
Docket No. C-2996-75

Gentlemen:

Enclosed for your information is a copy of the State's proposed "Statement of Undisputed Basic Facts," submitted to the Court in the above captioned matter.

Very truly yours,

JOHN J. DEGNAN
ATTORNEY GENERAL

Ronald P. Heksch

Ronald P. Heksch
Deputy Attorney General

RPH:mp
Enc.

TO: Jack McCormick & Associates, Inc.
William Librizzi, EPA
Michael V. Polito, EPA

State of New Jersey
DEPARTMENT OF LAW AND PUBLIC SAFETY
DIVISION OF LAW
ENVIRONMENTAL PROTECTION SECTION
36 WEST STATE STREET
TRENTON 08625
TELEPHONE (609) 292-1557

JOHN J. DEGNAN
ATTORNEY GENERAL

STEPHEN SKILLMAN
ASSISTANT ATTORNEY GENERAL
DIRECTOR

STEVEN A. TASHER
DEPUTY ATTORNEY GENERAL
SECTION CHIEF

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September 4, 1979

Mr. Michael V. Polito
U.S. EPA, Region II
Edison, New Jersey 08817

Re: State of New Jersey v.
Ventron Corp., et al.
Docket No. C-2996-75

Dear Mr. Polito:

Enclosed for your information is a copy of Judge Lester's opinion in the above matter.

Very truly yours,

JOHN J. DEGNAN
ATTORNEY GENERAL

Ronald P. Heksch
Deputy Attorney General

RPH:lm
Enc.

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APPROVAL OF THE COMMITTEE ON OPINIONS.

SUPERIOR COURT OF NEW JERSEY
CHANCERY DIVISION
BERGEN COUNTY
DOCKET NOS. C-2996-75
C-1110-78

STATE OF NEW JERSEY, DEPARTMENT OF ENVIRONMENTAL PROTECTION,

Plaintiff,

v.

VENTRON CORPORATION, a Massachusetts corporation; WOOD RIDGE CHEMICAL CORPORATION, a Nevada corporation; ROBERT M. WOLF & RITA W. WOLF, his wife; UNITED STATES LIFE INSURANCE COMPANY, a New York corporation & F. W. BERK & CO., INC.,

Defendants

FILED
AUG 27 1979
SUPERIOR CT. CHESTER
J.S.C.

MOBIL OIL CORP., et al.

Plaintiff,

v.

STATE OF NEW JERSEY, DEPARTMENT OF ENVIRONMENTAL PROTECTION, et al.

Defendants.

DECIDED: August 27, 1979

Mr. John Degnan, Attorney General of New Jersey for plaintiff (Mr. Ronald Heksch, Deputy Attorney General of counsel and on the Brief).

Mr. Steven A. Tasher, for the State of New Jersey, plaintiff.

Mr. Harry R. Hill, Jr., for defendants. (Messrs. Backes & Backes)

Mr. William F. Tuohey, for defendants. (Messrs. Milton, Keane & Brady)

Mr. John F. Neary, for defendants.
(Messrs. Connell, Foley & Geiser)

Mr. Murry D. Brochin, for defendants.
(Messrs. Lowenstein, Sandler, Brochin, Kohl & Fisher)

Mr. John J. Francis, Jr., and Mr. Richard A. Levao, for defendants.
(Messrs. Shanley & Fisher)

Mr. Robert Wilentz, for plaintiff Intervenors.
(Messrs. Wilentz, Goldman & Spitzer)

Ms. Margaret Dee Hellring, for defendants.
(Messrs. Hellring, Linderman, Goldstein & Siegel)

LESTER, J. S. C.

INTRODUCTORY STATEMENT

These complicated consolidated environmental cases require a delicate balancing of private and public interests. To what extent may private persons conduct themselves in a manner which adversely affects the public welfare before those persons may be held to answer to the public for such actions? How far may the Government go in imposing strict liability upon enterprises or industries that pollute or have the tendency to pollute? May the State direct polluters to abate a situation (nuisance) created over the years when during many of those years neither polluters nor State had reason to know of the vast cumulative effect of the pollution problem? What is the State's duty to protect the public?

The technical arguments and procedures which have accompanied the 55 day trial have left the court with over 500 pages of briefs and proposed findings, many thousands of pages

of transcripts, over 40 volumes of depositions and 5 cartons of physical exhibits. Several months have been spent in reviewing this mountain of legalese. This opinion, thus, is an effort to preserve the rights of all parties without losing sight of the goal of the Legislature and the obligation of this Court -- that is -- the protection of the public.

I. NATURE OF THE STATE'S CASE

The State of New Jersey, Department of Environmental Protection (hereinafter State or DEP) brought this action against Ventron Corporation (hereinafter Ventron), Wood Ridge Chemical Corporation (hereinafter WRCC), F. W. Berk and Company (hereinafter Berk), Robert M. Wolf and Rita W. Wolf (hereinafter Wolf), and the United States Life Insurance Company (hereinafter U.S.Life). Rovic Construction Company (Rovic) intervened in the action.[1]

The State alleges that the defendants violated N.J.S.A. 58:10-23-1, et seq. New Jersey Water Quality Improvement Act of 1971 (hereinafter 1971 Act); N.J.S.A. 23:5-28 (as of 1971 part of New Jersey Water Quality Act) (hereinafter 1937 Act), and created or maintained a public nuisance under both statutory and common law.

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1. Rovic Construction Company was Wolf's general contractor for the development project and for the demolition. In 1974 Wolf was the principal but not the sole shareholder. However, he later became the sole shareholder. All claims asserted by the State against Wolf are deemed to have been asserted against Rovic. All crossclaims against Wolf are similarly deemed to have been asserted against Rovic. Rovic asserted a counterclaim against the State and a crossclaim against Ventron.

The State seeks injunctive relief requiring defendants to abate the conditions resulting from the emanation of mercury from the subject properties located in the Boroughs of Wood-Ridge and Carlstadt, New Jersey and to prevent further pollution of the waterways. It seeks to hold all defendants jointly and severally liable for the statutory penalties provided in the various acts and for any damages it might prove on its nuisance claim.

The State claims that defendants' actions constituted a public nusiance by virtue of their violations of the various statutes and that their conduct also constitutes a nuisance at common law.

Judgment has heretofore been granted in favor of defendant, U. S. Life. The Court held that mere ownership, without more, would not be a proper basis for the imposition of liability upon U. S. Life under the circumstances of this case. In the absence of any conduct whatsoever by U. S. Life which might have contributed to the flow of mercury into Berrys Creek, and in the absence of any knowledge of the existance of mercury contamination, U. S. Life was simply an owner under a sale and leaseback agreement who could not be burdened with remedying a situation resulting entirely from the conduct of others. (See, State v. Exxon, 151 N.J. Super 464 (Ch.Div.1977). U.S.Life was merely a financier, lending money under the legal fiction of sale and leaseback, instead of utilizing the usual mortgage approach. The Legislature did not intend to impose liability upon such an innocent entity under the anti-pollution statutes under scrutiny here. Thus, U. S. Life's motion for judgment was granted at the close of Plaintiff's case.

II. BACKGROUND OF THE CASE

The history of this case must be traced back to 1929 when defendant Berk commenced its operation of a mercury processing facility upon a portion of the subject premises. At that time all of the property involved in this suit was leased to Berk from Carlstadt Development and Trading Company, a Maryland corporation. From 1943 until 1960 Berk owned the property and operated its plant thereon. In 1960 Berk sold its assets to Velsicol, which formed WRCC, a wholly-owned subsidiary, to own and operate the chemical plant. In 1967 WRCC declared, to its parent and sole shareholder, a land dividend of approximately thirty-three acres (hereinafter Velsicol Tract). Velsicol retains title to this tract to date. WRCC retained title to the 7.1 acres upon which the operating plant was located (hereinafter Wolf Tract).

In 1968 all of the capital stock of WRCC was purchased from Velsicol by Ventron. WRCC, than a 100% owned subsidiary of Ventron, continued to operate the processing plant and continued as record owner of the 7.1 acres.

In 1974 WRCC/Ventron sold the operating assets to Troy Chemical Corporation and conveyed the 7.1 acres to Wolf, a broker and real estate developer in the area. Sale of the business to Troy Chemical Corporation was effective January 1, 1974. Title was conveyed to Wolf on May 21, 1974 by deed dated May 7, 1974, pursuant to the February 5, 1974 option agreement which had been exercised on April 19, 1974. All organic and inorganic mercury operations were terminated by April 16, 1974.

Wolf planned to demolish the existing structures and to build five warehousing and distribution facilities on the site. Demolition was a prerequisite to the development or sale of the properties.

On May 7 or 8, 1974, but prior to conveyance, the Department of Labor conducted a site inspection from which it concluded that some hazardous chemicals remained in the building and that prior to commencement of demolition all hazardous chemicals and residues had to be removed to prevent unsafe working conditions. Bona fide attempts were made by Wolf and Rovic to remove the residual chemicals. Wolf and Rovic felt that they had abided by the directive and demolition commenced on May 22, 1974.

On or about June 7, 1974 the DEP and the United States Environmental Protection Agency (hereinafter EPA) advised Wolf that the demolition process could cause the discharge of chemicals into Berrys Creek, a tributary of the Hackensack River. By telegram dated June 16, 1974 Wolf was ordered to suspend demolition. The problem no longer was chemical dust on the walls but mercury ground pollution.

On June 21, 1974 Wolf and Ventron representatives were informed by representatives of the EPA and DEP that soil contamination at the Wood-Ridge site was the probable source of the pollution in Berrys Creek and in a portion of the Meadowlands. Wolf was ordered to analyze and determine the extent of mercury in the soil and to institute a containment program. Wolf retained the services of firms with expertise in soil analysis to ascertain the extent of the pollution and to devise an abatement or containment program which would satisfy the DEP and EPA directives as

they then existed. There is no question as to the good faith efforts of Wolf and Rovic to cooperate with these regulatory agencies.

In August 1974 representatives of Wolf, Rovic, the DEP and the EPA agreed that construction could proceed on the westerly portion of the site on the condition that Wolf remove to the easterly portion the upper layer of contaminated soil. This was done and the first building erected. However, the situation as to the easterly portion was more complicated. The cost of removal of the hundreds of thousands of cubic yards of contaminated soil from the easterly portion would be prohibitive. Indeed, another obstacle was the disposal of this contaminated soil.

The DEP and the EPA then agreed to a plan involving entombment of the polluted soil whereby the soil would be contained under the building still to be erected. The containment system was installed.[2] The effectiveness of the system has been challenged by the State. The State has failed to demonstrate that the system is not working. The evidence indicates that the Wolf containment system and the natural land barrier between the Wolf location and Berrys Creek guard against pollutants within the Wolf containment system further polluting the waterways of this State.

After the conveyance, Wolf had subdivided the tract into lots 10A and 10B. In December 1975, long after demolition had been completed, Wolf conveyed lot 10A to U. S. Life under a standard

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2. The entombment system was only part of the overall plan proffered by the State. The portions of that plan which sought future monitoring of the site at Wolf's expense and a deed restriction were rejected by Wolf.

sale and lease back arrangement. Title to 10B remains in Wolf to date.

The State must prevail on its claims against Berk, WRCC, Velsicol and Ventron. Liability arises under the 1937 Act as originally enacted and amended; under the 1971 Act; and under theories of public nuisance. The State may not prevail against defendants Wolf and Rovic.

III. NATURE OF COUNTERCLAIMS

Defendants[3] counterclaim against the DEP based upon N.J.S.A. 58:10-23.11 (g); Liabilities for clean up and removal costs and direct and indirect damages, which provides in pertinent part:

> a. The fund shall be strictly liable, without regard to fault, for all cleanup and removal costs and for all direct and indirect damages no matter by whom sustained.

N.J.S.A. 58:10-23.11 (f) provides:

> Whenever any hazardous substance is discharged, the department shall act to remove or arrange for the removal of such discharge, unless it determines such removal will be done properly and expeditiously by the owner or operator of the major facility or any other source from which the discharge occurs. (Emphasis added).

It is the position of all defendants that the Spill Fund was created to secure an immediate source of funding so that the State could act rapidly to clean up any pollution as soon as it became apparent that the polluters would not or could not clean

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3. Rovic asserted a counterclaim against the State for damages under these provisions of the Act. Whatever directives were given to Rovic, Wolf and Rovic together undertook to prevent further discharge by installing the containment system.

up the environment. Defendants argue that this portion of the Act applies to any spill, regardless of the time of its occurence because of the public policy considerations set forth in the Act itself, N.J.S.A. 58:10-23.11 (a). The Legislature there declared:

> "The Legislature finds and declares that the discharge of petroleum products and other hazardous substances within or outside the jurisdiction of this State constitutes a threat to the economy and environment of this State. The Legislature intends by the passage of this Statute... to provide liability for damages sustained within this State as a result of any discharge of said substances, by requiring prompt containment and removal of such pollution and substances, and to provide a fund for swift and adequate compensation to resort business and other persons damaged by such discharge." (Emphasis added).

Defendants do not see this as a retroactive application of the Act. Even if it were, defendants argue that the Act expresses an intent that the Spill Fund provisions be retroactively applied. In any event, they argue that there is no infirmity in retroactive application here, as the Fund provisions of the Act, in their view, create a remedy only, but do not create new substantive rights.

Plaintiff on the other hand argues that an interpretation of the words "shall be strictly liable" in N.J.S.A. 58:10-23.11 (g) when considered in their common meaning compels the conclusion that the Fund provisions of the 1977 Act were to be applied prospectively only. "Shall be," plaintiff says, implies some future date and some future spill or discharge. Plaintiff argues that application of the 1977 Act to it, for acts or omissions which occurred prior to the effective date of the 1977 Act would be improper.

Yet, plaintiff DEP has argued that the Spill Compensation and Control Act is applicable to defendants, whether or not there is a "current discharge." Can plaintiff DEP have it both ways?

not true

In support of its position that the 1977 Act applies to defendants, plaintiff argues that the liability provisions are in fact remedial and create no new substantive obligations which did not exist at common law. On the other hand, DEP argues that the Spill Fund creates new substantive obligations on the part of the State and that Act, therefore, cannot be applied retroactively as to it.

Due to the potential possibility of a conflict of interest, the Spill Fund was made a party defendant on the counterclaims, and was represented by independent counsel. That result was also mandated by the State's affirmative defense to the defendants' counterclaims of failure to join a necessary party, i.e., the Spill Fund.

The Spill Fund resists imposition of liability and is joined therein by the intervenors, Mobil Oil Corp.; Chevron, U. S. A., Inc.; Texaco, Inc. and Exxon Co., U.S.A. They argue collectively, that a finding of Fund liability would be an impermissible, unintended and unfair retroactive application of the 1977 Act.

The Court permitted the oil companies to intervene in the action for the purpose of opposing the counterclaims.(4) Their application to intervene was based upon R. 4:33. The Court indicates that permission to intervene was not mandatory. R. 4:33-1. The Spill Fund's opposition to the application would have adequately protected intervenors' interests. Intervention was permitted under R. 4:33-2 because of the important contribution of the oil companies to the economy of this State and because of the disastrous financial effect possible as a consequence of this Court's determination. (5)

Defendants' counterclaims allege that the State DEP has failed to mitigate the condition complained of and has, therefore,

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4. The oil companies are "major facilities" who, under the 1977 Act, are required to pay a tax "to insure compensation for cleanup costs and damages associated with any discharge of hazardous substances." N.J.S.A. 58:10-23.11 (h). Prior to the filing of their motion to intervene, the oil companies had instituted an independent action in this court seeking a declaratory judgment that the Spill Fund provisions could not be applied retroactively. (Mobil Oil Corp., et al., v. State of New Jersey, et al., C-1110-78). That action has been consolidated with this action, State v. Ventron, C-2996-75.

5. The Act provides for a rate of tax of $0.01 per barrel. However, the 1977 Act provides that: In the event of a major discharge resulting in claims against the fund exceeding the existing balance of the fund, the tax shall be levied at the rate of $0.04 per barrel transferred until the balance of the fund equals pending claims against the Fund ***. N.J.S.A. 58:10-23.11 (h) (b).

failed to discharge its obligations under N.J.S.A. 58:10-23.11 (f) to "remove or arrange for the removal of such discharge." Defendants argue that the State should have undertaken corrective measures and assessed the Spill Fund for the costs thereof. The Spill Fund is, in their view, strictly liable under N.J.S.A. 58:10-23.11 (b).

The defendants cannot prevail on the counterclaims.

IV. NATURE OF CROSSCLAIMS

Numerous crossclaims have been asserted between and among defendants.

Wolf's crossclaim against Ventron alleges fraudulent concealment of the gross mercury contamination in the soil. Wolf contends that all the elements of intentional nondisclosure are present and that under New Jersey law, fraudulent concealment in the sale of realty is as tortious as intentional misrepresentation. Wolf also charges Ventron with negligent concealment.

Ventron denies any intent to defraud Wolf and argues that it could not have done so as it had no knowledge, or should it reasonably have had any knowledge, of any latent contamination that might interfere with Wolf's intended use of the property. In any event, Ventron argues, the doctrine of caveat emptor applies. Wolf vigorously resists the application of the caveat emptor doctrine.

Wolf further crossclaims for damages and indemnification if he is held liable to the State based upon the covenant against

grantors' acts contained in the deed of conveyance which provides:

> The grantor convenants that it has not done or executed any act, deed or thing whatsoever whereby or by means whereof the premises conveyed here, or any part thereof, now are or at any time hereafter, will or may be charged or encumbered in any manner or way whatsoever.

Ventron denies that it has done any act or deed to encumber the property and, in any event, denies the applicability of the covenant to the present situation.

Similarly, Rovic's crossclaim against Ventron alleges fraudulent and negligent concealment. Rovic seeks complete indemnification for any expenses incurred by virtue of its demolition and containment activities, that is, for lost profits and increased costs due to construction delays. Ventron's defenses to Rovic's claims parallel its defenses to Wolf's claims. Ventron further argues that it owed no duty to Rovic in the absence of privity of contract. Rovic, however, fashions itself a third-party beneficiary of the deed covenant from Ventron to Wolf.

Ventron's crossclaim against Velsicol seeks indemnification from Velsicol to the extent that Ventron is held liable for the acts of WRCC during the period of Velsicol's stock ownership -- 1960-1968. Ventron relies on a "control theory" as a basis for Velsicol's liability. Ventron (as does the State) argues that Velsicol exercised such control over the affairs and management of WRCC that Velsicol may be held directly liable for the acts of its 100% owned subsidiary by piercing the corporate veil.

Velsicol argues that the knowledge of its subsidiary may not be imputed to it, the parent, by virtue of its mere stock ownership. Its position is "that mere stock ownership by one corporation in another corporation is insufficient to render the former liable for the torts of the latter." citing Mueller v. Seaboard Commercial Corp., 5 N.J. 28, 34 (1950). It thus argues that a corporation must abuse the corporate relationship to the point where corporate formalities become a sham before the separate corporate identity of the subsidiary may be disregarded. It takes the position that normal participation, stock control, common directors and officers are not enough. It posits that the "corporate identity will be disregarded in equity only when necessar to do so in order to prevent fraud, deception, evasion or injustice." citing Cintas v. American Car and Foundry Co., 131 N.J. Eq. 419, 25 A. 2d 418 (Ch. 1942), 132 N.J.Eq. 460, 28 A. 2d 531 (E. & A. 1942).

Velsicol further argues that there must be some fraudulent act by the parent such as stripping the subsidiary of its assets or rendering it insolvent so as to result in injury to a third party before a parent may be held liable for the acts of its subsidiary. Velsicol denies that such was the case here and thus denies liability to any party.

In fact, Velsicol's position in this regard is that the merger of WRCC into Ventron renders Ventron fully accountable for WRCC's actions, including activities during the Velsicol years. This approach in Velsicol's view would preclude any recourse by

Ventron against Velsicol.

Ventron further alleges fraudulent concealment by Velsicol and claims that Velsicol, at the time of the transfer, fraudulently concealed the fact of the potential liability which might arise as a result of WRCC's prior activities. Ventron argues that it would not have acquired WRCC had it been aware of the alleged wrongdoing. Ventron claims that it acted in reliance upon Velsicol's misleading silence.

Ventron thus contends that Velsicol had full knowledge of the extent of the pollution and intentionally did not disclose the true facts to Ventron. This claim parallels the theory of the Wolf/Rovic claims against Ventron.

Velsicol denies any intent to defraud, denies having any knowledge which had not been passed on to Ventron, and argues that any knowledge of WRCC may not be imputed to it. It relies on the specific disclaimer in the stock purchase agreement of any warranty that "The Wood Ridge plant would not at some time entail alterations or other steps to comply with applicable Federal, State and Local environmental laws and regulations."

Velsicol in turn asserts that it is entitled to indemnification from Ventron on the theory of fraudulent concealment.Velsicol's thrust is that Velsicol took title to part of the allegedly contaminated property on June 28, 1967; that it was conveyed to Velsicol by WRCC; that WRCC fraudulently concealed these facts from Velsicol; that by virtue of the merger of WRCC into Ventron, Ventron is liable for WRCC's acts;

that Ventron, therefore, is liable to Velsicol for fraudulent concealment of the contamination of the Velsicol trust.

Ventron responds that Velsicol's position with regard to pollution of the Velsicol tract is absurd; that Velsicol arranged the land dividend; that Velsicol exercised actual control over WRCC between 1960 and 1968; and that Velsicol cannot now seek to exonerate itself from liability for the alleged pollution on the Velsicol tract for which it is primarily responsible by saddling responsibility upon Ventron. Ventron further argues that by reason of Velsicol's control of WRCC, Velsicol had or should have had any knowledge WRCC had, and that it should have, and, in fact, did know of the dumping of polluted waste material on the Velsicol tract by WRCC and by its processing predecessor, Berk.

Ventron and Velsicol both allege that Wolf and Rovic knew of the existence of mercury on the Wolf tract prior to the commencement of demolition and that they nevertheless permitted the demolition of the structures in a grossly careless and inappropriate manner. They seek indemnification by Wolf and Rovic under the New Jersey Joint Tortfeasors Contribution Act.

All crossclaims must fall except the crossclaim by Wolf/Rovic against Ventron, and there, recovery is to be limited.

V. INTRODUCTORY FINDINGS AND CONCLUSIONS - LIABILITY

Findings of fact and conclusions of law are made throughout this opinion. It seems appropriate, however, in a

case as complex as this that some specific determinations be made here and the reasoning discussed where necessary. Certain findings, of course, relate to more than one issue or claim. Many of the proposed findings of fact submitted by counsel are accepted and that acceptance will be clear in the results reached. By failing to mention any one or more of the hundreds of proposed findings, one should not conclude that the Court either accepts or rejects any particular conclusion.

A. MISCELLANEOUS BASIC FINDINGS OF FACT

1. Every operator of a mercury processing plant on the property here involved has contributed to the pollution of Berrys Creek. These include:

a. 1929-1960 Berk

b. 1960-1968 WRCC (A Velsicol wholly-owned subsidiary)

c. 1968-1974 WRCC (A Ventron wholly-owned subsidiary)

In every case the pollution resulted in mainly the discharge of effluent from the processing procedure into Berrys Creek. Surface water flow over contaminated soil also contributed.

2. The entire tract is polluted. The Wolf tract where the processing plant stood is heavily polluted. Most of the concentration is within the so-called "Wolf containment system" and is some distance from Berrys Creek. The Velsicol tract has polluted or is polluting Berrys Creek by virtue of:

a. dumped polluted materials on the Velsicol tract;

b. movement of surface water both within the so-called drainage system and in general; and perhaps by

c. leaching or movement of ground water.

3. Generally, all plant waste waters were directed from the southeast corner of the Wolf property through pipes and open drainage ditches over the Velsicol property and into Berrys Creek. Until 1968 these waste waters were discharged in such manner directly, without treatment. In 1968 steps were first taken by WRCC/Ventron to study and treat the plant effluent.

a. In March 1968 Metcalf and Eddy, Inc. was engaged to make such a study.

b. In June of 1968 the V. Notch Weir was installed at the southeast corner of the plant property to aid in measurement of plant effluent.

c. In December 1968 the Metcalf and Eddy report was submitted showing high levels of mercury pollution in the effluent.

d. The State and WRCC/Ventron tried to work together and by August 1970 the effluent was being treated by a combination of neutralization, settling and chemical treatments. The level of mercury in the effluent was still unsatisfactory.

4. It was about this time (August 1970) that tests were made of the discharges into Berrys Creek. The polluted effluent plus any pollutants picked up as the fluid traversed the Velsicol property, discharged into Berrys Creek. Samples taken in Berrys Creek showed mercurial concentrations higher than anywhere in the world in fresh water sediment.

5. WRCC/Ventron took steps to establish its initial treatment program. It was discovered that the total plant effluent

was more polluted than the treated plant effluent. Investigation of this residual problem continued. The Court has never been certain of the exact cause, but it is clear that it was the result of one or more of the following problems:

a. some waste water being untreated; and

b. residuals, leaching into the lines by polluted ground water or surface water.

It was Horner (EPA) in September of 1971 who advised that it was his strong feeling that the problem was in groundwater contamination.

6. As late as August 1971, mercury in the total plant effluent was on the average 50% higher than in the treated effluent.

7. While it was true that the regulatory agencies directed WRCC/Ventron to improve the situation, for instance, by improving housekeeping procedures, they offered no specific suggestions and it was, in fact, WRCC/Ventron that was educating these agencies, cooperating with them and learning with them. This cooperative effort continued as did the pollution. The agencies kept on requesting that WRCC/Ventron undertake studies and marine samplings. They did this and all learned together of the enormity of the problem. Dye tests were conducted but were not conclusive. Soil samples were taken and mercury was found in the groundwater, especially next to the plant, where dumping had taken place over the years.

8. As late as January 1972, WRCC/Ventron cited five possible sources (other than plant effluent) to explain the residual problem:

a. groundwater infiltration;

b. surface runoff into storm sewers;

c. surface runoff from overflowing collecting pots and basins;

d. leaching of residual mercury into the wastelines, and

e. discharge of contaminated "non-mercurial" streams into the waste system.

9. The process of give and take, suggestions and action, cooperation and progress continued between the plant operator and the governmental agencies. Yet in late 1972, the problem persisted. Capital expenditures were projected and all that was feasible was being done (except shutting down the plant). As progress was made by WRCC/Ventron, the regulatory agencies pressed on; new standards were set; new legislation was passed; the Hackensack Meadowlands were being developed and the Sports Authority became involved; and in the spring of 1973, a decision was made to discontinue operations of WRCC and to sell the property.

10. Assessments of the situation continued. Several interested buyers of the business and of the land appeared on the scene. Wolf and Ventron finally entered into the option agreement of February 5, 1974.

B. MISCELLANEOUS CONCLUSIONS

1. The State has failed to prove specific statutory or regulatory standards pertaining to mercury in the effluent emanating from the plant. Such failure to establish specific standards, however, is not fatal to the State's case either under the statutes or under the nuisance theories. That there were effluent discharges while the plant was in operation which resulted in a dangerous and hazardous mercurial content in Berrys Creek is apparent. The only fact question regarding mercury movement which remains open is whether after the plant ceased operations in April 1974 mercury reaches Berrys Creek via ground water leaching from the premises in question and if so, does that mercury create and/or present a further hazard.

The actions of the parties, the closing of the plant and the testimony of the experts, all lead the Court to the firm conclusion that prior to April 1974, despite all good faith efforts, the waste effluent (by the time it reached Berrys Creek after traversing the Velsicol land) was at a dangerous level. Of course, it was worse before the effluent was treated, and of course, as less mercury was left in the effluent the level decreased, but the problem was never solved. The plant effluent was the primary source of the pollution.

The effluent was further contaminated as it traversed the Velsicol property (in the drainage system or on the surface). Berrys Creek was thus being polluted at least until late April.

Surface water during past years and today, running over the polluted Velsicol land, undoubtedly added to the mercurial content in the creek, thus, a good reason to urge development of the land as a means of avoiding surface water runoff. In the last few years there is no data available to indicate how much mercury is reaching Berrys Creek from the Veliscol property either by way of any drainage system through surface water or through leaching. The difficulty in monitoring is highlighted by the fact that Berrys Creek and the surrounding area is affected by tidal waters.

2. Mere ownership of property without more is insufficient as a basis for imposing statutory liability. Ownership with knowledge, combined with acquiescense in the acts of others or with a failure to act, is a basis for statutory liability.

3. Defenses of accord and satisfaction, laches, estoppel, unclean hands and statute of limitations are not available here. The limitations period provided in N.J.S.A. 2A;14-10 is inapplicable to any of these statutes, which are merely quasi-penal. Surely, the statute of limitations did not run against the State on its nuisance theories. Clearly, there was a continuing nuisance.

4. The State has met its burden of proof as to the pollution of Berrys Creek. However, it has not demonstrated that pollutants are now entering that waterway from the premises in question through ground water. This gap in the State's case, however, does not preclude future tests and future liability on the part of the defendants Berk, WRCC/Ventron and Veliscol.

relevance

The problem was not unconstitutionally vague statutes but rather individuals, motivated by public or private interests, who failed to act definitively.

C. THE STATE'S CASE - LIABILITY OF DEFENDANTS

1. There is liability in varying degrees under the 1937 Act, the 1971 Act and on the theories of statutory and common law nuisance.

2. The liability, in the case of Berk and WRCC is direct and primary. The liability of Velsicol is partly direct. and partly derivative under the so called "control theory." The liability of Ventron is direct under the merger theory, and derivative under the "control theory."

3. The Court rejects the joint and several liability theory espoused by the State as between Ventron and Velsicol. Those defendants may not be held jointly and severally liable. Their liability is several. As between those defendants the Court is able to and will make a rough apportionment of responsibility. City of Newark v. Chestnut Hill Land Co., 77 N.J. Eq. 23 (Ch. 1910); Jenkins v. Pennsylvania R. R. Co., 67 N.J.L. 331 (E&A 1902)

> "In the usual case the interference with the plaintiff's enjoyment, by noise, smoke, odors, pollution or flooding is regarded by the Courts as capable of some rough apportionment according to the extent to which each defendant has contributed, and it is held that each will be liable for only his proportionate share of the harm." Prosser, Hornbook of the Law of Torts (4th Ed. 1971) at 608.

This applies only as between Velsicol and Ventron. As between Berk and WRCC the liability is joint and several. The method used as between Velsicol and Ventron cannot be used as between Berk and WRCC. Standard principals of joint and several tort liability apply.

Considering the number of years involved, the actions of Velsicol and Ventron and the basis of liability referable to each, the responsibility for the acts of WRCC should be shared equally. Velsicol, in addition shall have the responsibility of preventing pollution caused by surface water runoff on its 33 acres.

D. LIABILITY OF THE STATE OR THE FUND

1. The Fund constitutes a source of money which is available (and has been available) to abate problems such as the one before the Court.

2. Such use of the Fund's money does not constitute an impermissible retroactive application of the statute. Such use is a proper means to remedy a hazardous or dangerous situation caused by a spill or discharge. This is the result contemplated by the Legislature.

3. The utilization of the Fund money does not and will not preclude ultimate recovery of the money expended from those who caused or created the situation.

4. Where any element of expense (remedy) is not chargeable or collectible from any defendant or where the expenses are the result of an inappropriate State action or

inaction, the Fund is the appropriate source of funds to remedy the hazardous situation.

5. The Fund is not available, however, for payment to any of these defendants on the theory that any such defendant has sustained damages through the discharge of hazardous substances. Thus, the counterclaims against the State must fall. The State's failure to act does not make plaintiff affirmatively liable to any defendant in this case.

6. It was (and is) plaintiff's obligation to take a corrective action. This is especially true of the situation in Berrys Creek, where there is pollution. At least since 1977 funds have been available. From 1971 to 1977, the source of funds for State action was not apparent. The 1977 Act provided a source.

E. THE WOLF/ROVIC CLAIMS

Ventron is liable for the costs incurred in making Wolf's property available for the use intended by Wolf. The elements of damages which apply are:

1. The costs of demolition over and above that which reasonably would have been anticipated in demolishing a chemical plant;

2. The costs of "containment system" insofar as it added to the reasonable cost of foundation and footings; and

3. Legal fees of Wolf necessary to defend the action of the State (based on the deed covenant).

The actions of Ventron as seller were far from honorable. Wolf has proven the necessary elements of fraudulent concealment.

Wolf's failure to attempt to mitigate damages, and his continued efforts as an expert real estate developer to further the project after he had both full knowledge and a choice does not change the result, but does limit his right to recovery.

Wolf, however, who was not liable, was forced by State directives and WRCC/Ventron inaction to take affirmative steps to correct the problem. Wolf should be made whole. Whether Wolf utilized the services of Rovic or some other contractor, Ventron is liable to Wolf for those costs. Whether those sums are paid directly to Wolf or to Rovic matters not. Ventron must pay for the work which was necessitated by its actions and inaction.

F. REMEDY

The remedy involves directives to the State, liability of the Fund, and liability of the defendants. The solution will cover a period of time during which certain funds will have to be expended, certain restrictions will have to be enforced, and certain steps mandated. The "remedy" outline will be the subject of another portion of this opinion and undoubtedly will be the subject of more detailed supplementing opinions as data is gathered and as development of the land progresses.

VI. DISCUSSION - STATUTORY LIABILITY - 1937 and 1971 ACTS: Piercing the Corporate Veil; Merger.

Plaintiff alleges that all defendants have violated N.J.S.A. 23:5-28 in its original and amended forms, as well as

the subsequent statutory enactments providing for environment control and regulation, N.J.S.A. 58:10-23.1 et seq. and N.J.S.A. 58:10-23.11 et seq.

As originally enacted in 1937 N.J.S.A. 23:5-28 provided that:

> "No person shall allow any foodstuff, coal tar, sawdust, tanbark, lime, refuse from gas houses, or other deleterious or poisonous substance to be turned into or allow to run into any of the waters of this state in quantities destructive of life or disturbing the habits of the fish inhabiting the same, under the penalty of two hundred dollars for each offense." (Emphasis added).

In 1968 after WRCC was sold to Ventron the statute was amended as follows:

> "No person shall put or place into, turn into, drain into, or place where it can run, flow, wash or be emptied into, or where it can find its way into any of the fresh or tidal waters within the jurisdiction of this State any...deleterious, destructive or poisonous substances of any kind...in case of pollution of said waters by substances known to be injurious to fish, birds or mammals, it shall not be necessary to show that the substances have actually caused the death of any of these organisms." (Emphasis added).

The maximum penalty was increased from $200 for each offense to $500 for the first offense and $1000 for any subsequent offense.

Then in 1971 the last sentence quoted above was amended to read as follows:

> "In a case of pollution of said waters by any substances injurious to fish, birds or mammals, it shall not be necessary to show that the substances have actually caused the death of any of these organisms."

The penalty was increased to no more than $6,000 for each offense. Clearly, this statute and its amendments, while not criminal statutes, are quasi-penal and may not be applied retroactively.

N.J.S.A. 58:10-23.1 the "New Jersey Water Quality Control Act of 1971" was enacted with the goal of "the prevention and abatement of pollution of the waters of the State resulting from the discharge therein of petroleum products, debris, and hazardous substances..." (Senate Bill No. 928, L. c. 173). The Act states that:

> "The discharge of petroleum products, debris and of hazardous substances into the waters of this State is inimical to the best interests of the people and constitutes a threat to the environment." N.J.S.A. 58:10-23.2

N.J.S.A. 58:10-23.4 provides:

> "The discharge of hazardous substances, debris and petroleum products into, or in a manner which allows flow or runoff into or upon the waters of this State and the banks or shores of said waters is prohibited."

The plain language of the last cited section (and, in fact, of all the relevant statutory enactments) requires an act, some conduct by the entity sought to be held. New Jersey v. Central Jersey Power and Light, 69 N.J. 102 (1976); State v. Exxon, 151 N.J. Super. 464 (Ch. 1976). Not knowledge necessary, but an act. The purpose of all of these statutes and logic dictates that there be an affirmative act with or without knowledge or a failure to act with knowledge.

If any defendant has comitted such a statutorily proscribed act or has failed to act where required to act, the primary determination is the date of the action or inaction. These quasi-penal statutes may not be retroactively applied.

The Court abandons, for the moment, the chronological approach and goes to a discussion of the 1971 Act. This seems appropriate in light of the greater emphasis by the State on that Act than on the 1937 Act. The 1977 Act must be treated separately.

In order to determine what acts are proscribed by the 1971 Act, the term "discharge" must be considered. "Discharge" is defined in N.J.S.A. 58:10-23.3 (c) as follows:

> "Discharge shall mean, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping."

As Judge Kentz stated in State v. Exxon, 151 N.J. Super. 464 (Ch. Div. 1977), "these verbs connote some activity, some human agency, even if that activity is accidental or unintentional." 151 N.J. Super. at 471.

The State argues that the statute is not limited to acts set in motion directly and immediately by human behavior, and that, therefore, leaching or exuding or other phenomena may be read into the statute. Thus, the State argues that mere ownership of polluted land equals liability where the pollutant through leaching or otherwise (i. e., surface water runoff) either reaches or has the capacity to reach the waters of this State. This line of reasoning would encompass the "time bomb"

situation which the State employs, in part to avoid any retroactively problem, by attempting to establish a post-1977 discharge.

The definition of "discharge" may not be so broadly interpreted. The Court has heretofore rejected that theory with respect to U. S. Life. To so hold would be contrary to the sound rules of statutory construction and violate the standards of fair play and justice we hold so dear. The absurd consequence of adopting the State's theory could be that the innocent purchaser of a home built upon polluted land would be held liable for millions of dollars in damages to contain the pollution or abate the nuisance. I join Judge Kentz in rejecting that theory.

While the specific acts which may be actionable are not as limited as defendants insist, there is a clear requirement of some human activity or knowledgeable inactivity which results in hazardous substances finding their way into the waters of this State.

As for the 1937 Act, plaintiff argues appropriately that the statute creates strict liability. The Legislature can designate the mere doing of an act as a crime, even in the absence of mens rea. State v. Kinsky, 103 N.J. Super. 190 (Cty. Ct. 1968). It is the acts of the defendants that create strict statutory liability under the 1937 Act. Plaintiff, in order to prevail under the Act in its original form, must show

that the discharge was in quantities which disturbed the habits of or destroyed the lives of the fish. As stated hereinafter, plaintiff has established that by the preponderence of the evidence. During this period of time (1960-1974) the dangers of mercury were becoming more and more apparent, although the ultimate degree of harm may not have been and still may not be known. The enormity of the problem may not be known for years to come. Nevertheless, mercury was "known" to be dangerous even before the time of the enactment of the 1968 amendment. Thus, for post 1968 violations, plaintiff need not demonstrate actual death of any organism. Furthermore, the 1971 amendment eliminates the requirement of proving death of organisms, regardless of whether the substances were know to be injurious.

A. WOLF AND ROVIC

Have defendants Wolf and/or Rovic "discharged" within the meaning of the 1971 statute? The Court thinks not. While the demolition-construction may have "moved" some of the pollutants around the Wolf site, there is no adequate proof that any such action added to the pollution in Berrys Creek--a *sine qua non* to liability under the State's case.

A technical violation of the statute which might justify a fine is not here considered. Even if one could read the statute in such a technical manner as to find that Wolf "discharged"--the resulting pollution in the waterway of the State have not been shown. If there was any, it was less than

"de minimus." Even if the leaching theory of Dr. Joselow has merit, one must find that Wolf and Rovic added no pollutants to the property. They created no problem which did not exist prior to its acquisition of the land.

The State urges this Court to ignore State v. Exxon, supra. It urges this Court of equal standing to rule differently from Judge Kentz. This Court would not hesitate to do so on any distinguishable issue of fact, but equally, this Court will not hesitate to rely on the rationale of Exxon where, on the issue under discussion, that rationale is sound and logical.

In the Exxon case, defendant ICI America,Inc. (hereinafter ICI) did not in any way change the situation that existed at the time of the acquisition of the property. ICI did not act. It was a mere owner of property. Here Wolf and Rovic acted, but they did not act improperly. They did not change the situation that existed when they acquired the property. They did no act which would establish liability under the 1971 Act.

Judge Kentz rejected the State's argument that simple ownership of land without any affirmative act would be sufficient to impose liability. State v. Exxon, 151 N.J. Super 464 (Ch.Div. 1977) at 473. This Court adopts his reasoning and finds that no liability may be imposed upon Wolf.

The Supreme Court in State v. Jersey Central Power & Light Co., 69 N.J. 102 (1976) held that under N.J.S.A. 23:5-28 a finding of cause-in-fact was essential to a finding of liability.

Drawing upon that decision, Judge Kent in his opinion in Exxon stated:

> "The philosophy, purpose and prohibitions of N.J.S.A. 23:5-28 are identical to those of N.J.S.A. 58:10-23.1 et. seq., since the two statutes were enacted at the same time as part of the Water Quality Improvement Act. The two statutes must therefore be read and construed in pari materia. Accordingly, the court's determination in Jersey Central Power and Light Co. that causation is a necessary element to a finding of liability under N.J.S.A. 23:5-28 is equally applicable to a finding of liability under N.J.S.A. 58:10-23.1, et.seq. State v. Exxon, 151 N.J. Super at 475."

The rationale is sound. The question, therefore, is whether the result would have happened just as it did whether or not Wolf had acted as he did. This Court must answer that question in the affirmative.

But more importantly, the Court can and does find as a matter of logic and statutory interpretation, that the Legislature, in enacting the 1971 Act did not intend to impose liability upon one in Wolf or Rovic's position, one who may technically have discharged but who did so as a result of good faith efforts to prevent the pollution using the techniques available in 1974.

Wolf retained experts to determine the extent of the mercury pollution and devised and implemented an extensive containment system. Wolf and Rovic took steps to ensure that any residual mercury in the rafters or in containers was kept out of the environment. Demolition water was captured, pumped into storage tanks and carried away from the premises. Wolf

and Rovic, at the direction of the regulatory agencies, investigated subsoil conditions. As a result, the State, Wolf and Rovic became aware of the huge quantity of mercury in the soil and of the resultant ground water contamination. Wolf, Rovic, their experts, the DEP and the EPA investigated the possibility of a containment system and a containment system was installed within which the major mercury pollution on the Wolf tract is now held.

The evidence is conflicting as to whether the system is completely effective or whether mercury is leaking. Even if mercury is leaking, there is no adequate proof that the pollutants will reach Berrys Creek via ground waters over the Velsicol 33 acres. Monitoring in the future will be necessary to make that determination. Even if there is leakage and even if some contaminent is reaching Berrys Creek, Wolf and Rovic are not liable. They purchased in good faith from Ventron. They did not pollute.

The containment system installed by Wolf and Rovic was substantially the one approved by the State. (That the approval was originally coupled with requirements for a deed restriction and monitoring in the future at Wolf's expense, which Wolf rejected, is not important.) It was Wolf, who with money and time invested, had to act under pressure by the State, despite the lack of statutory obligation to do so. The primary obligation was that of the land pollutors, Berk and WRCC.

The subsequent enactment of N.J.S.A. 58:10-23.11 (f) lends support to the holding that Wolf and/or Rovic are not liable. That section states in pertinent part:

> Nothing in this section is intended to preclude removal and cleanup operations by any person threatened by such discharges, provided such persons coordinate and obtain approval for such actions with ongoing State or Federal operations. No action taken by any person to contain or remove a discharge shall be construed as an admission of liability for said discharge. No person who renders assistance in containing or removing a discharge shall be liable for any civil damages to third parties resulting solely from acts or omissions of such persons in rendering such assistance except for acts of omissions of gross negligence or wilful misconduct. (Emphasis supplied).

Ventron argues that Wolf should be held liable to the State as a result of flooding, from the smashing of pipes during demolition process. The site was flooded with water for four days. Ventron argues that the water was laden with years of dust and contaminents which as a result poured off the site into Berrys Creek. The allegation has not been proven. Rather, if some contaminents escaped the result would have been de minimus in comparison to the total pollution.

The above analysis applies equally to liability under the 1937 Act and its amendments. Wolf and Rovic did no acts proscribed by that Act. They were not polluters. Wolf and Rovic acted in good faith and without negligence to prevent soil contamination and to contain the existing contamination. These good efforts cannot serve as the basis for liability.

B. WRCC AND BERK

WRCC discharged hazardous substances and thus violated the 1937 Act in its original form and as amended as well as the 1971 Act. It continued the operation of the processing plant and thereby added to the mercurial contamination of Berrys Creek through the discharge of the plant effluent into that waterway. Berk is liable under the 1937 Act in its original form. The 1971 Act while not a criminal statute is penal in nature and may not be retroactively applied to defendant Berk.

Until 1968, the 1937 Act required a showing that a discharge to be actionable be "in quantities destructive of life or disturbing the habits of the fish..." N.J.S.A. 23:5-8. The State has made such a showing, if not by producing a pre-1968 fish, then by the preponderance of logical evidence. Both Berk and WRCC sent highly polluted effluent into Berrys Creek from 1929 until 1974. The toxic-hazardous pollutant was mercury in one form or another. Berrys Creek, is, in fact, highly polluted as a result of these discharges. The Court is convinced by the expert testimony that during those years these discharges were, "destructive of life or disturbing the habits of fish..." As to those operating companies no other conclusion is possible under the staggering statistical data before the Court.

WRCC (and before it, Berk) dumped waste material on the Velsicol tract. WRCC thus committed an expressly prohibited act of discharge, N.J.S.A. 58:10-23.3 (c).

That statute, effective June 1, 1971, prohibits acts of discharge "in a manner which allows flow or runoff into or upon the waters of the State." N.J.S.A. 58:10-23.4. The State has demonstrated that WRCC dumped polluted waste material on the Velsicol tract allowing surface (and perhaps ground) water to carry pollutants into Berrys Creek. It has also demonstrated that the effluent system discharged pollutants into and on the Velsicol land on the way to Berrys Creek. The substance was "hazardous" within the contemplation of N.J.S.A. 58:10-23.3 (b). WRCC actively polluted and discharged hazardous sbustances in violation of the 1971 Act.

C. VELSICOL

Veliscol is "liable" for several reasons:

It was a corporate owner of WRCC and an entity which the legislature intended to include within the statutory control scheme. The indicia of control necessary where strict liability is imposed by statute need not be as extensive as in the usual case where one attempts to "pierce the corporate veil." One must, in a public interest case, examine the nature of the business, the ability to control and the morality or immorality of a failure on the part of the parent company to act.

Velsicol formed WRCC to purchase the Berk operation in 1960. Berk was polluting. WRCC continued to pollute, Velsicol may not have known the consequences of the actions of WRCC but it did know, or should have known that chemical mercurial wastes were being discharged. Even if Velsicol had not, in fact, dominated the affairs of WRCC (and it did), it had the ability through its 100% stock ownership to control those acts of WRCC

which might affect the public and the environment.

WRCC was created for the sole purpose of acquiring the assets of Berk and continuing the business. Velsicol was in a related and compatable business. Velsicol personnel, directors, and officers were constantly involved in the day-to-day operation of the business of WRCC. Quality control of WRCC was handled by Velsicol. In general, WRCC was treated as a division of Velsicol.

Velsicol's goal was economic gain. It used WRCC for that purpose. It must take the responsibility for the risks that accompany a business venture with environmental damage potential.

Control plus ownership

Aside from the derivative liability emanating from the WRCC operation, liability falls upon Velsicol by virtue of its ownership of the 33 acres received from WRCC as a land dividend. It was a landowner with knowledge of the dumping pollution and problems both before and after it acquired the acreage and it accepted dumping of polluted waste material on its acreage without objection and without attempting to protect the environment. Thus, Veliscol is derivately liable, where WRCC is liable, for the period of its stock ownership 1960-1968, and directly liable as an owner, with knowledge under the 1971 Act, from 1971 until the dumping ceased in 1974.

the object [illegible] [illegible]

D. VENTRON

Ventron's liability may be held to be direct or derivative. It is direct by virtue of the merger of the WRCC into Ventron in June 1974, shortly after Ventron sold the facility at Wood-Ridge. The "Certificate of Ownership and Merger" which was filed with the Secretary of State of Nevada, expressly

provided that Ventron would assume the liabilities and obligations of WRCC. Furthermore, the merger would have resulted in the assumption by Ventron of all of WRCC's liabilities, as a matter of law. N.J.S.A. 14A:10-6 (e).

Although not essential to the determination of Ventron's liability, the Court finds that Ventron so dominated the affairs of WRCC as its sole shareholder from 1968 to 1974 that there was not such a separate entity as would allow avoidance of responsibility to the public.

Ventron was, therefore, through WRCC, a violater of the Acts. Ventron management executives took over the positions that had been held by Velsicol executives. The new president of WRCC, Joseph Bernstein, who was also Operations Manager of the Metals Chemical Division of Ventron stated that he regarded Ventron and WRCC to be "different pockets of the same pair of pants."

There is legal and factual justification for the liability of Velsicol and Ventron to the extent it arises because the corporate veil is pierced. The Court recognizes that the corporate form is a mode by which the stockholders of a corporation may avoid personal liability. Properly handled, the protection may be complete. The Court does not, however, conceive the governing standard to be the same for stockholders seeking to avoid the usual contract or tort liability as for a 100% stockholder, who, with knowledge, allows the operating corporation to violate environmental standards, create or continue a public nuisance, or in such a manner allow that subsidiary to act in the

face of the policy of the State. Both Velsicol and Ventron had the ability through its 100% stock ownership to control its subsidiary. Liability is justified where the parent, with knowledge, fails to act. The corporate shell may not be used as a means to evade the thrust of an environmental control statute.

It is one thing to avoid, through a corporate entity, liability for private torts or contract breaches of a subsidiary. If these were the sole problems before this Court, the determination of dominance, control and whether the corporate veil should be pierced might be more difficult and the many pages of testimony and the lengthy legal memoranda would have to be analyzed in depth. The memoranda of both Ventron and Velsicol attempt such an analysis, and each item of alleged control is discussed in an effort to convince the Court that there was such dominance by the other as would justify holding the other parent liable for the actions of its subsidiary. But each vehemently denies its own control. While the Court might agree that any given item of proof alone would not justify the imposition of liability on these parent corporations, the number and nature of the acts involved lead to the inescapable conclusion that the parent corporations ran the operations during their respective periods of stock ownership.

The public policy of this State demands that with respect to the public need for environmental pro tection, the usual standards cannot and should not apply. Whether or not the subsidiary is or is not solvent, is not the question. If one,

with knowledge of the acts and with the ability to control the activities of a subsidiary by failure to act permits the subsidiary to endanger the environment, then as a matter of public policy, the parent must face the responsibility of its permissive inaction.

In the instant case, not only was there inaction with knowledge and the ability to control, there was in fact such interation and actual control exercised over WRCC by Velsicol from 1960 to 1968, and by Ventron from 1968 to 1974, that a finding of liability is inescapable.

VII. STATUTORY LIABILITY OF DEFENDANT STATE FUND - 1977 ACT

The "Spill Compensation and Control Act", which became effective on April 1, 1977 repealed the 1971 Act. The major difference between the two statutes in this Court's view was the increased burden placed upon the State by the express requirement that the State act and by the creation of the Spill Fund.

The 1971 Act mandated that any person responsible for the discharge immediately remove same. If the responsible party failed to do so, the Department was authorized to contract to have it done and to seek reimbursement. N.J.S.A. 58:10-23.5.

The 1977 Act, however, requires more:

> "Whenever any hazardous substance is discharged, the department shall act to remove or arrange for the removal of such discharge, unless it determines such removal will be done properly and expeditiously by the owner or operator of the major facility or any other source from which the discharge occurs. N.J.S.A. 58:10-23.11 (f). (Emphasis added).

Whether this change may be applied to the State under the circumstances of this case is dealt with later in this section. However, the Court mentions this change at this point to emphasize that this change, the creation of a new remedy, is the change of significance to the present case.

While the 1977 Act creates this new remedy, it also signals a change in substantive law. However, the Act creates new bases of liability, and thus, may not be applied retroactively to any of the defendants in this case.

Several substantive differences appear on the face of the 1971 and 1977 Acts. First, the legislators redefined the meaning of the term "discharge." In so doing, they both expanded and limited the meaning of the term, and perhaps created liability where none existed before.

Discharge is defined in the 1977 Act as:

> ...any intentional or unintentional action or omission resulting in the releasing, spilling, leaking, pumping, pouring, emitting, emptying or dumping of hazardous substances into the waters of the State or onto the lands from which it might flow or drain into said waters, or into waters outside the jurisdiction of the State when damage may result to the lands, waters or natural resources within the jurisdiction of the State. N.J.S.A. 58:10-23.11 (b) (h).

The State has argued that there has been a release under its time bomb theory; thus, perhaps an act or result not covered prior to the enactment of the 1977 Act.

On the other hand, certain words were omitted from the 1977 Act. The phrase "but is not limited to" has disappeared. The Court could well state that this deletion was intended to limit the meaning of the term "discharge" strictly to those verbs expressly stated. Obviously, however, that in itself would not create new liability.

Yet it remains quite possible that the 1977 Act may give rise to liability for acts or omissions which would not have been actionable under the prior Acts. Furthermore, the Act has imposed greater peanlties. To impose liability for acts which prior to April 1, 1977 may not have been actionable is impermissible. The Court is reluctant to apply this statute retroactively as to any of the defendants. As the Supreme Court stated in Rothman v. Rothman, 65 N.J. 219, 224 (1974):

> (I)n construing a statute its terms will not be given retroactive effect "unless they are so clear, strong and imperative that no other meaning can be annexed to them, or unless the intent of the legislature cannot otherwise be satisfied." Kopczynski v. County of Camden, 2 N.J. 419, 424 (1949). See also La Parre v. Y.M.C.A. of the Oranges, 30 N.J. 225, 229 (1959): In re Glen Rock, 25 N.J. 241, 249 (1957); Nichols v. Bd. of Education, Jersey City, 9 N.J. 241, 248 (1952). (emphasis added)

The language in N.J.S.A. 58:10-23.11 et. seq. does not convince the Court that the legislature intended that the statute be applied retroactively to these defendants. Furthermore, the intent of the Legislature will be satisfied without the retroactive application of the 1977 Act to the defendants here held liable.

The result, however, is different as to the State. The State could, should and still may draw upon the Spill Fund by virtue of N.J.S.A. 58:10-23 (f), for the necessary funds to remedy the situation. It is clear that the Legislature intended by enacting the 1977 Act to provide an immediate and effective method to correct pollution problems in this State, even if that required retroactive application.

Furthermore, the purpose of the Legislation would not be satisfied in this case without such a retroactive application of those remedial provisions.

The various acts must be read in pari materia. The 1937 Act, and its amendments, the 1971 Act and the 1977 Act contain enough ambiguities to have justified hundreds of pages of argument on legislative intent; on the meaning of terms and on the retroactive effect of those acts. Many of the proofs create conflicts. The rules of statutory construction are called into play time and time again to give meaning to the legislative scheme.

Some aspects of that legislative scheme nevertheless come through "loud and clear." They are:

1. Pollution must be corrected.

2. The polluters are primarily responsible.

3. The correction of pollution is the responsibility of those engaged in those economic industries or enterprises that result in pollution.

4. When those responsible do not act or where there is a delay in acting, the state must proceed with the remedy, using Fund money if necessary.

Thus, once actionable pollution is found, the Legislature contemplated that liability would fall upon the operators, landowners, and corporate owners, who directly or indirectly profited (or contemplated profit) from the process that caused the problems. Those who acted or allowed others to act to cause the pollution must bear the economic burden of correcting the problem. However, the Legislative scheme also recognized the responsibility of the State.

The defendants have argued that the State failed to take the prompt remedial action required of it by the Spill Act. The Court recognizes that, to some degree, the State's actions were less than forceful, less than prompt, and perhaps somewhat misleading. These defendants, however, cannot avail themselves of a remedy by way of damages against the State.

The defendants heretofore held liable are primarily responsible for the cleanup. That the State should have and could have acted does not relieve the liable defendants of the primary responsibility. The Spill Act was enacted for the protection of the public and the environment, not as a crutch to violators of the very Act for which the Fund serves as a remedy. That the 1977 statute requires the State (DEP) to act affirmatively and gives it a source of money to clean up a spill or

discharge of hazardous material does not relieve any of the defendants herein of their responsibility. Rights to the Fund are in the public. It is for the benefit of the public and the environment that the 1977 Act mandated action and provided funds.

Nor may defendants Wolf and Rovic, not held here liable, recover any damages on their counterclaim against the State. None of the defendants are such "other persons damages by such discharge" within the meaning of N.J.S.A. 58:10-23 (a).

While the Court finds that the State, through the Fund or otherwise, is not liable to the defendants, the Fund is strictly liable for cleanup costs. The State had an obligation to act where those responsible did not act to remove the pollution.

The Spill Fund provisions may be applied to spills whenever they occur. There is no constitutional impediment to the retroactive application of this remedy.

The Court, therefore, declares that the Spill Fund provisions of the Spill Compensation and Control Act were intended by the Legislature to apply to spills of hazardous substance, regardless of when they occurred, that is, prior to or subsequent to the passage of the Act. It is not necessary that the spill have occurred after 1977. Thus, the fact that there is no conclusive proof of discharges subsequent to the Act's effective date, does not absolve the State from its obligation to remedy the serious pollution problem where no one else does so. In any event, no harm has resulted from the present law suit instituted by the State since the proofs do not show any present danger.

The language of the statute is mandatory. The State must act if the responsible party does not. The legislative intent in its creation of the Spill Fund was to require the State to act promptly to clean up the pollution and to finance initially, though subject to reimbursement, the cost of such cleanup by calling upon the Spill Compensation Fund.

The Fund and the oil companies argue that it is simply not possible that the Legislature could have intended to cover all spills, because the imposition of such a heavy tax upon the oil companies might force them out of New Jersey, a result which would be disastrous to the economy of the State. Perhaps the oil companies would leave. The Court doubts this. However, the Act clearly provides for that increase in tax and the Court believes there was a reason for it. It is apparent that the Legislature had in mind other great assets of our State: the resorts and beaches. Foremost perhaps was the concern with the health and safety of the people of this State. The Legislature was concerned with preserving the beauty of our State and protecting the welfare of its citizens. Perhaps the resultant legislation may weigh heavily upon the industries taxed, but surely the Legislature balanced all the interests involved before it created the Spill Fund.

The Court may and will direct the State to act. Such mandatory injunction may require the use of fund monies if other sources are not available. What the 1977 Act provides

is a means to an end. No longer will the Legislature allow a hazardous environmental situation to continue while alleged pollutors litigate with the State. The DEP shall act. The public is to be protected. Dollars are available from the Fund. To the extend that the cost of cleaning up the situation exceeds the amount which can be recouped from thos liable--so be it.

Of course, logic dictates that the other remedies available to the State/DEP such as injunctive relief and/or damages may still be properly utilized in the appropriate case. It is in the emergent situation, the unusual situation, the situation where liability cannot be established or where those liable do not have sufficient assets or refuse to act that the 1977 Act requires State action and utilization of Fund money.

The Court finds no impediment to its applying the 1977 Act provisions to the State while denying recovery to the State against these defendants under the same Act. The Fund provision creates a remedy. However, no new substantive liability can be created against the defendants. If the legislature intended retroactive liability it could have so stated.

On the other hand, if it did not intend the State to be responsible for cleanup, its policy statements would mean little. A remedy has been fashioned, and the State is given a right of indemnification. The purpose of the Act is clearly stated.

The Act specifically provides that it shall be liberally construed so as to foster the general health, safety and welfare of the people of New Jersey. N.J.S.A. Sec.58:10-23.11. This policy requires the State to act where necessary. Since there is a liability under other Acts and for nuisance the State may obtain relief against those liable by way of damages and indemnification.

VIII NUISANCE LIABILITY

As an alternative basis for liability, the State alleges that the defendants are liable as a matter of law, for creating or maintaining a public nuisance on the subject property by violating the 1937, 1971 and 1977 Acts. Since the court has heretofore determined that no defendant is liable under the 1977 Act, the question arises whether the 1937 or 1971 Acts define a public nuisance as a matter of law by which those defendants who have violated those Acts will be liable. The 1937 and 1971 Acts are strict liability statutes which do in fact define a public nuisance. Thus the State must prevail on its statutory nuisance theory.

The State, through its legislative process, and in the exercise of its police power has the authority to declare what shall be deemed nuisances. The Legislature may provide for suppression and abatement of nuisance. The Legislature may declare an act to be a nuisance which was not such at common law once it determines that the conduct is detrimental to the health, welfare or morals of the people of the State; Mayor and Council of Alpine Borough v. Brewster, 7 N.J. 42, 50 (1951).

While the Legislature did not formally declare in the various statutes that the prohibited actions constitute a nuisance, such a formal declaration is not necessary in order to constitute such acts as a nuisance, 58 Am.Jur. 2d,

§7, at 577 (1970). Where the Legislature has treated the prohibited acts as a nuisance, it is sufficient. The intention of the Legislature must be determined by the Court. An examination of the 1937 and 1971 Acts and the statements of intent contained therein dictate the conclusion that the act defines a public nuisance as a matter of law.

The State also urges that the defendants have created or maintained a common law nuisance. Thus plaintiff must establish "an unreasonable, unwarranted or unlawful use by a person of his real property which results in a material annoyance, inconvenience or harm to others." Tp. of Cherry Hill v. N.J. Racing Commission, 131 N.J.Super. 125 (Law Div. 1974), aff'd 131 N.J.Super. 482 (App. Div. 1974), certif. den. 78 N.J. 135 (1975).

Liability for common law nuisance must be premised upon (1) intentional conduct, (2) negligent conduct, or (3) upon conduct which is so abnormal or out of place as to warrant the imposition of strict liability. 58 Am. Jur. 2d, Nuisances, §1, at 19 (1971).

Intentional conduct as a basis for nuisance liability merits little discussion. Intent, as the term is used in the law of torts, generally does not refer to the fact that the act itself is intentionally or volitionally done. 74 Am. Jur. 2d, Torts §6 (1971). What is meant is that the actor acts for the purpose of causing the invasion of another's

interest or knows that such an invasion is resulting or is substantially likely to result from those acts. Surely Berk and WRCC intended to and volitionally did manufacture mercury compounds and dumped waste on the Velsicol property. However, the court cannot find that the acts were done with the intent to pollute the waters of the State or with the knowledge that such an invasion was substantially certain to occur. No such knowledge or intent may be imputed to defendants under an intentional tort theory.

Nor may liability be premised upon negligence. The State alleges a failure to take necessary precautions as would have been taken by reasonable persons under the same or similar circumstances. The State claims that there was negligence in failing to prevent the pollution, and in failing to correct the situation.

While the discharge of mercury might be considered unreasonable, unwarranted, or unlawful, by today's standards, the actions of the defendants must be measured as of the date they occurred. The standards as to the effluent treatment, even as late as 1974 and 1975 at the time of demolition, did not require any higher degree of care or caution than was taken by them.

The DEP and the EPA had been watching WRCC since the mid 1960's. The effluent being discharged was tested by plaintiff and plaintiff never formally cited WRCC for violations

of any statute nor did it seek judicial relief on the ground that WRCC's conduct violated any standard of reasonable action.

In the late sixties the State requested defendant Ventron and its experts to provide standards to measure mercury discharge to determine acceptable levels. The State cannot now turn and say that the defendants violated their own standards, which defendant in fact made their best efforts to meet.

Thus, the court cannot find that Berk, WRCC, Velsicol or Ventron acted negligently. The conduct of those defendants was reasonable in light of the state of knowledge as it then existed.

Nor can Wolf or Rovic's conduct be considered negligent. Wolf and Rovic, at the insistence of the DEP and EPA, took all reasonable steps to abate the pollution problem. They worked with the Department of Labor, the DEP and the EPA to prepare for demolition. Any escape of water occurred in the presence of government agents who did not complain about what was happening. Their acts were reasonable under the circumstance. Any escape of water was by accident, not by a negligent action.

This determination applies equally to any allegations by plaintiff that it was unreasonable for the defendants Berk, WRCC, Velsicol and Ventron to fail to rectify the discharge and contamination that occurred, regardless of their role in

creating such conditions. Plaintiff argues that those defendants knew or should have known about the problems and that they were negligent in failing to take steps to rectify them. Negligence as a basis for nuisance liability has not been demonstrated. However, strict liability will be imposed upon those defendants.

The diversity of opinion of the experts with respect to the question of whether ground water pollution will ever reach Berrys Creek amazes this court. The State's experts have polluted water flowing freely through voids or leaching. The defendants' experts say no pollution will reach Berrys Creek through groundwater because of the physical and chemical characteristics of the ground and the nature of the mercury.

It is apparent that the overall effect of waste effluent from the plant, surface water runoff and ground water did in fact pollute Berrys Creek. The plant is no longer in operation. Surface water runoff is to be controlled. The question remains, as noted heretofore, whether ground water is now leaching into Berrys Creek containing sufficient mercury as to violate present standards governing Berrys Creek. I need not decide if any mercury has, in the past, reached Berrys Creek via ground water. I choose to do so however, frustrated by the inability to quantify the amount. Obviously, the proofs do not justify a finding that at the present time mercury from ground water alone would pollute a non-polluted Berrys Creek.

I have considered all of the testimony, the statistics and reports, and the information on the effects of the tides, and must come to the conclusion that mercury has reached and may continue to reach Berrys Creek via ground waters. One aspect of the problem was solved, in whole or in part, by the Wolf containment system, but the polluted areas outside that containment system still provide a potential source for further pollution via ground water.

I reject as a matter of law, any contention that pollution in Berrys Creek and the hazards therefrom cannot be charged against those defendants as a public nuisance. One who creates such a nuisance cannot avoid the responsibility therefor by saying that it is not on his land or that the land is no longer his.

Strict liability had its origins in the famous case of Rylands v. Fletcher, L.R., 3. H.L.330(1868). Justice Blackburn, speaking for the Exchequer Chamber stated:

> "We think that the true rule of law is that the person who for his own purposes brings on his lands and collects and keeps there anything likely to do mischief if it escapes, must keep it at his peril and if he does not do so is prima facie answerable for all the damages which is the natural consequence of its escape."

The courts of New Jersey, while adopting Rylands in principle, appear to have established a standard beyond that required of a reasonable person but short of absolute liability in cases other than blasting operation, storage of explosives and the like, City of Bridgeton v. PB. Oil, Inc., 146 N.J. Super. 169 (Law Div.1976).

It is time to expand strict liability beyond those limited situations and beyond the realm of products liability. As stated in a recent New Jersey case:

> The possessor of a pollutant keeps it on his premises at his peril. If it escapes, he is answerable to one who suffers a provable loss thereby. The policy of the law in this state and of society in general makes this a case of strict liability rather than of negligence, City of Bridgeton v. B.P.O.L., Inc., 146 N.J.Super. 169, 179 (Law Div. 1976).

All of the defendants who "operated" the facility will thus be charged with knowledge of the unusual hazards of mercury. Furthermore, during WRCC's operation, WRCC, Ventron and Velsicol became acutely aware of those potential dangers.

The regulations enacted pursuant to N.J.S.A. 58.10-23.11 subsequent to the initiation of this litigation strengthen the Court's determination that the manufacturor of products utilizing chemicals or other pollutants which may cause harm if they escape into the environment should subject the producer to strict liability, irrespective of reasonable care, if in fact environmental pollution occurs. While this determination does not alter the holding that there is no retroactive liability under the 1977 Act, the Court believes that due regard to statutes and regulations justifies the imposition of nuisance liability.

Velsicol and Ventron may not divest themselves of liability by the respective conveyances of the Wolf tract. The creator of the pollution remains liable even after alienating title to the property. State v. Exxon Corp., 151 N.J. Super. 464, 376 A.2d 1339 (Ch. 1977)); Garvey v. Public Service Co., 115 N.J.L. 280,

284; 178 A.33 (E&A. 1935).

Velsicol argues that it was never involved in any hazardous activity or any activity at all on any of the subject property. It envisions itself as the innocent victim of the pollution.

Velsicol points to the defenses to liability in the 1971 and 1977 Acts to support its position that it cannot be liable. Under those Acts, one is not liable for the discharge caused solely by a third person, act of God or gross negligence.

> Ordinarily, a person is not civily liable for a nuisance caused or promoted by others over whom he has no control, nor is one bound to go to the expense of litigation to abate such a nuisance. Thus, a person is not liable where his property is, by the act of independent third parties, made the instrumentality of a nuisance since their act is the proximate cause. 58 Am.Jur.2d, Nuisances, Sec. 24 at 586-87. (Emphasis supplied) See also 66 CJS Nuisances, Sec. 8(b), p. 743.

Velsicol here not only was in "control" of WRCC from 1960-1968, it was itself a landowner with knowledge. The defendant Velsicol is not an innocent landowner whose property has been victimized by others.

As we become more sensitive to our environment and more aware of the impact of pollution upon the environment, we must demand that the unchecked development of products which release pollutants into our environment be controlled. It does not offend this Court's sensitivities nor infringe upon a manufacturing defendant's constitutional rights to impose strict liability upon a defendant who, during the course of a profit making venture,

discharges into the environment a dangerous or hazardous pollutant, which results in damage or harm to the public, notwithstanding an absence of intent or negligence on the part of the defendant.

In this case it was known by the liable defendants that mercury had dangerous potentialities. It was Berk and WRCC who, as part of this business, sent murcury laden waste effluent into the waters of this State. It is Berk and WRCC who should have to right the wrong and correct the environmental ills. It was Velsicol and Ventron who, for profit were engaged through their subsidiary in this enterprise. They must accept the consequences attendant upon the operation of an enterprise which involved unusual hazards.

The overall situation on the subject properties and in Berrys Creek thus, constitutes a public nuisance. It is logical and just that those liable be prepared to pay for the abatement or containment of that nuisance.

X. CROSS CLAIMS

A close examination what transpired between Ventron and Wolf demonstrates that Ventron knew more than it claims to have known and Ventron must compensate Wolf by way of damages as a result of its failure to disclose those material facts. Nevertheless, Wolf's recovery will be limited by his failure to mitigate damages by recission or otherwise at that point in time (early May) when his knowledge of the facts was as extensive as, or almost as extensive as Ventron's.

Wolf has demonstrated "fraudulent concealment" by clear and convincing evidence. He has shown (1) the existence of a material fact not readily observable to the purchaser; (2) the seller's knowledge of that fact; (3) the seller's intentional failure to disclose that fact; and (4) the buyer's reliance, to his detriment, Weintraub v. Krobatsch, 64 N.J. 445 (1974).

The soil and the waters adjacent to the WRCC plant were contaminated in 1974. This contamination existed in 1968 when Ventron acquired the property from Velsicol. This material fact of gross soil pollution was not readily observable to the purchaser. Even Wolf's soil engineers did not discover the soil pollution. True, they were not looking for soil pollution, but if the pollution had been obvious, surely the Joseph Ward and Co. engineers, would have discovered it in the course of their test borings, (which were taken only to determine bearing capacity, moisture and construction feasibility).

Long prior to Wolf's involvement, WRCC/Ventron had commissioned experts to devise a plan for the safe disposition of the waste in order to minimize environment contamination. In 1970, Ventron undertook to make accurate measurements of the discharge of mercury. The results of this measurement showed that the total discharge greatly exceeded the unrecovered mercury whose discharge was a by-product of the production process. A substantial quantity of "residual Mercury" was finding its way into the water runoff. What was happening was that the underground piping system was picking up mercury from the contaminated soil and discharging it at the outfall; i.e., the final point of measurement.

In 1972, Ventron commissioned Metcalf and Eddy to analyze samples of soil and ground water. The analysis showed severe contamination in the wastewater decreased, but the mercury remained in the soil. The seller had "knowledge".

Ventron, in failing to fully disclose these facts, intentionally concealed the presence of this latent danger from Wolf. The Court can draw only one inference from Ventron's decision to send Wolf the boring report of Craig Testing Laboratory while omitting the Metcalf and Eddy data. Perhaps if Wolf had seen the Metcalf and Eddy data, he might have discovered the contamination earlier and chosen to reject the contract. Ventron's alleged disclosure to the McCarter and English attorney who represented both Wolf and Ventron in the transaction has not been proven, particularly in the face of the attorney's unequivocal denial.

Ventron argues that Wolf did not rely on any non-disclosure. It is Ventron's position that Wolf undertook his own investigation of the property, using independent soil engineers. Ventron suggests that even if that Court finds reliance, it should find that such reliance is unreasonable. Ventron argues that Wolf knew he was buying property upon which mercury products had been manufactured, and, hence, his failure to make his own investigation into matters of soil contamination was unreasonable.

Ventron relies on the doctrine of caveat emptor, as stated in Levy v. C.Young Construction Co., Inc., 46 N.J.Super. 293 (App. Div. 1957, aff'd 26 N.J. 330 (1958). The Appellate Division there held that the "prevailing law throughout the country" negates the existence of any implied warranties connected with a sale of real estate, obligating the seller only insofar

as warranties are expressly stated in the deed. Levy, supra., 46 N.J.Super. at 296. The Appellate Division found no evidence of knowledge of the defect and held that there are no implied warranties, even in the sale of new housing (which was the state of the law in 1957). The Supreme Court, however, declined to rule upon the rule of no implied warranties. Levy, supra., 26 N.J. 334.

The point to be emphasized is the finding of an absence of full knowledge on the part of the seller. Where there is knowledge of latent defects, the caveat emptor doctrine generally will not be applied. Weintraub v. Krobatsch, 64 N.J. 445 (1974); Papon v. Hackensack Auto Sales, Inc., 63 N.J.Super. 446 (App.Div. 1960).

Ventron, however, claims that under the facts of this case, the doctrine is nonetheless applicable:

> "Courts do not aid a purchaser of real estate who is carelessly indifferent to the use of ordinary caution before entering into a contract, when he is left free and uninfluenced to make examination of the property and to exercise his own judgment in determining whehter or not to buy.
>
> The doctrine of caveat emptor is applicable . . . "Freedman v. Kensico Realty Co., 99 N.J. Eq. 113, 118 (Ch.1926).

Ventron charges Wolf with careless indifference. The facts do not justify that conclusion. While greater caution may have been required of Wolf that the average layman because of his special knowledge of real estate matters, he acted with all due caution that was required. See National Premium Budget Plan Corp. v. National Fire Insurance Company, 97 N.J. Super. 149,211 (Law Div. 1969).

Ventron could have, and should have at least advised Wolf of the governmental "red-tape" it was encountering and what might be in store as Wolf tried to develop the property. Velsicol advised Ventron at least through its warranty disclaimer. Ventron knew of Wolf's goals. Under these facts, Ventron cannot escape liability by arguing caveat emptor.

Wolf's statement is significant:

> "contemporary standards of fair business dealings particularly with respect to environmental problems impose a duty on a chemical company with particular knowledge of the contamination of its soil and the relationship between itself and environmental authorities to disclose to potential purchasers the full ramifications of the conditions it created and maintained. To require less is to license deception. (Wolf's Trial Brief at p.13).

Under the circumstances, it was not unreasonable for Wolf to rely on Ventron to the extent that he did, even though the fact of pollution was of record. An extensive search of EPA files was not required of Wolf. He will not in this case be penalized for his expectation of fair dealing.

Of greater significance is the policy statement set forth by the New Jersey Supreme Court in Schipper v. Levitt & Sons, 44 N.J. 70 (1965). Although the Court there limited its discussion of implied warranty in realty law to the sale of new homes, a search of the cases indicates that the Supreme Court has never precluded extension of the doctrine to all sales of realty.

> The law should be based on current concepts of what is right and just and the judiciary should be alert to the never-ending need for keeping its common law principles abreast of the times. Ancient distinctions which make no sense in today's society and tend to discredit the law should be readily rejected . . . Schipper v. Levitt & Sons, Inc., 44 N.J. 70, 207 A.2d 314 (1965).

Perhaps warranties should be implied in all sales of realty. Perhaps the seller of land, even without knowledge, should be held to have impliedly warranted the fitness of the land for the purpose intended. Those states which have adopted the Uniform Land Transaction Act, are carrying out the sound policy statement of the New Jersey Supreme Court as express in Schipper. The Uniform Act, which parallels the Uniform Commercial Code creates express warranties of conformance from affirmations of fact which form the basis of the bargain. 77 Am.Jur. Vendor: Purchaser §329. (Supp. 1978).

This Court need not determine whether the law should imply warranties in all sales of realty. Yet, Wolf could have made a good argument. Logic, fairness, and the absence of justification for distinctions between personalty and realty would, at least under these facts, have justified an implied warranty of fitness, had Ventron been ignorant of the facts.

Nevertheless, Wolf's expertise and profit motivation will preclude any accrual of damages on the fraud claim after he knew, or should have known, the non-disclosed facts. At that point in time, Wolf could have rescinded. He may not, under the circumstances here choose not to rescind, and to thus burden Ventron with additional consequential damages. Wolf chose to retain the land. Damages must be limited to adjustment of the purchase price to provide Wolf with the land in the condition that he bargained for. This may be accomplished by the recovery of the actual costs of the containment system and other cost incurred in abating the

pollution to the satisfaction of the EPA, including the added costs of the containment system and other cost incurred by Rovic. These costs were actually incurred and the responsibility is Ventron's.

Wolf may not recover damages in the nature of potential loss of profits on resale based on the diminution in value or due to possible restrictions or liens on the land. Such damages were waived by his decision to proceed.

In addition, Ventron must bear some responsibility by virtue of the deed covenant which provided that it had not done any act:

> . . . by means whereof the premises conveyed here or any part thereof, now or at any time hereafter, will or may be charged or encumbered in any manner or way whatsoever.

One of the elements of such a covenant is that the purchaser does not contract for a title which will require him to defend a suit in order to protect his right to the use and enjoyment of his property. See 8A Thompson, Real Property 4482 (1963 Ed). Ventron is liable to Wolf for the costs of suit and for counsel fees.

Ventron, however, is correct in its argument that the covenant is not such a covenant as would create an express warranty as to quality. There was no such express warranty given by Ventron.

Rovic cannot recover directly except insofar as Rovic may recover for the added costs of work done on demolition and containment at the insistence of the DEP. Wolf/Rovic will be made whole. The unique circumstances of this case require that Ventron

be responsible at least to this extent for the damages its actions cause Rovic, but consequential damages may not be recovered on Rovic's fraud or covenant claims in the absence of privity of contract. Rovic has not demonstrated that any duty was owed it by Ventron, nor that Ventron intended that Rovic rely on any of its action or omissions. Neither has Rovic shown that it was a third party beneficiary of the Ventron-Wolf transaction contract or deed covenant.

Rovic argues that since Ventron knew of Wolf's plan to demolish the buildings and to build new structures and knew that Rovic would be the general contractor, it was foreseeable that Rovic might be harmed by the groundwater and subsoil mercury conditions. This argument also must fail.

Rovic's recovery is then to be vicarious. Wolf and Rovic are "one" and thus Wolf/Rovic must be made whole.

REMEDY

Much of the difficulty heretofore was the result of lack of assurance on the part of the State as to the steps to be taken. It is not sufficient (nor logical) for the State to order defendant to abate a nuisance or clean up a polluted area where the parties differ as to what must be done. The State apparently does not want to take the responsibility of living with its own choice. The State's position has been to say to defendants, in effect - you clean it up and when you're done you will be responsible to see that you've accomplished a result. In essence, the State seeks a judgment requiring the defendants to bear the burden of clean up as well as the responsibility for subsequent expenses should the measures taken prove inadequate.

This court will not permit the State to assert such a position. The State must take the lead. The Court will order the State to act. The clean up of Berrys Creek will proceed. The rational and logical approach is that the Berrys Creek clean up cost, be it by dredging or otherwise, be borne initially and equally by Velsicol and Ventron. They are severally liable. They acted separately and independently. In such case there is no joint liability. 74 Am Jur 2d § 63 (1971). The State is to prepare and present a plan for clean up within 60 days after judgment is entered. The liable defendants will have 30 days thereafter to serve and file reply papers as to the viability of that plan. Thereafter the Court will, after argument, finalize the plan. No plenary hearing will be required.

what about afterwards

Velsicol similarly will, within 60 days from judgment, present a plan for surfacing or blacktopping the Velsicol tract to

prevent surface water runoff. That responsibility must be Velsicol's. The plan may be, in whole or in part, part of a general development approach. It shall include a timetable and cost estimates. Here the State will have 30 days to comment on the efficacy of the proposed plan and here again the Court will rule after argument.

The Court will not now require entombment of the entire Velsicol tract. The preponderance of the evidence does not demonstrate that there is present leaching of ground water, nor is there proof that such leaching would create in a dredged Berrys Creek a hazardous condition.

This Court must eventually determine if the combination of the existing Wolf containment system, the dredged Berrys Creek and the surfacing of the Velsicol property suffice to control the situation in the future. Is there such ground water leaching into Berrys Creek as would violate the standards now existant and create a hazardous condition requiring further action at the expense of the liable defendants by way of entombment or otherwise?

When the surfacing of the Velsicol property and the clean up of Berrys Creek are completed, the monitoring may begin, to see if mercury is leaching into the creek and in what amounts. If leach- is taking place now, it has been taking place during all these years and one year of checking after the clean up of Berrys Creek and the surfacing of the Velsicol land will suffice to make the determinations required. The State may, during that year monitor as it deems appropriate to determine the efficiency of the surface cover and the amount of leaching then occurring and provide proof

of its claim that a further remedy by way of entombment of the entire tract is otherwise required.

The cost of monitoring, however, must be initially borne by the State. The State has heretofore failed to prove its case as to present leaching. If it seeks to prove such leaching, the burden is upon it: The State or the Fund will initially serve as the source of financing such monitoring.

N.J.S.A. 58:10-23.11 o (3) provides that monies in the Spill Compensation Fund be disbursed

> "...as may be necessary for research on the prevention and effects of spills of hazardous substances on the Marine environment and the development of improved cleanup and removal operations as may be appropriate by the Legislature; provided, however, that such sum shall not exceed the amount of interest which is credited to the fund."

The oil companies argue that monitoring may not be paid for from Fund monies as monitoring is (1) not "research" and (2) there has been no appropriation. They also argue that any sums could not exceed the amount of interest which is credited to the Fund which would undoubtedly not cover monitoring costs.

However, the Court views monitoring costs as being separate and apart from N.J.S.A. 58:10-23.11 o (3). Monitoring in the situation before the Court is part and parcel of the abatement of spills and discharges as to which the State must act and for which the Fund is strictly liable. The State and/or the Fund must initially bear this burden.

money

If, in fact, the Court determines that there is leaching which will create a violation of the standards now existant, the liable defendants may be charged with all or part of the monitoring costs.

But there must be limit to ultimate liability and the Court intends to now set that limit within the framework of all of the proof before it.

Ventron is liable to Wolf/Rovic. Velsicol must surface its land; the liable defendants must cover the costs of cleaning up Berrys Creek. These amounts may be determined with some specificity now, and judgments will serve as the remedy afforded. How then, to provide security if the necessity of further action, is shown? - i.e., the costs of entombment and/or monitoring?

As security for entombment and/or monitoring costs, and as a condition to release from further liability and as a condition to release of the Velsicol land from any liens or restrictions on transfer, Ventron and Velsicol will be required to post security to assure payment for any procedures which may prove to be necessary should the monitoring system indicate that there is present actionable leaching or leakage which is reaching or may reach Berrys Creek.

The bond or cash security required from Ventron and Velsicol will be determined within the next few weeks after the Court re-examines the initial damage claim of the State, and adjusts that sum considering (a) this opinion, (B) the Wolf containment system cost, (c) the fact that Berrys Creek will be dredged at the expense of defendants, (d) the fact that the Wolf land is now surfaced (or will be surfaced), (e) the fact that Velsicol will, at its own expense, surface (or develop so as to prevent polluted surface water reaching Berrys Creek) its 33 acres and (f) any suggestions by the attorneys for the State, Velsicol and Ventron based upon proof before me. As the Court views the present posture of the

Timetable?

not in clean accordance Exhs 63 + 64

case, the maximum liability, if any, that might be imposed on Velsicol and Ventron could be $1,000,000. each.

The limits of liability of the liable defendants having thus been determined, this is now principally a matter of the protection of the public by the State.

The State is not merely an innocent party. The DEP could have and should have closed down the plant as early as 1968. Its inaction in the years subsequent to 1968 must relieve the liable defendants of some of the burden and responsibility. Yet, in so doing, the public must be protected.

The clean up of Berrys Creek, the surfacing of the Velsicol tract, the monitoring and possible, future entombment, together with the escrowed monies will provide the necessary protection. Beyond that, the Legislative Scheme mandates that the Spill Compensation Fund be utilized to protect the environment and the public. Source of money

If at the end of the year of monitoring, no present leaching is reaching Berrys Creek in such amounts as would violate present standards and create a dangerous situation, Velsicol and Ventron will be entitled unconditionally to the return of the escrow monies and/or the release of sureties.

In the final analysis, the State is getting more in terms of dollars than it proposed initially. The costs of the clean up and surfacing together with the monies in escrow undoubtedly exceed $4,000,000. The State's estimated costs of all actual procedures was less than this - approximately $3,000,000. This result is not unfair.

How is escrow established?

The public must be protected. The State is meeting its obligation to provide for the health, safety and welfare of the people of this State. It will take the corrective steps required at the expense of the liable defendants. It will monitor at the initial expense of the Spill Fund. It will correct such hazards as the monitoring exposes and correct them at the expense of the liable defendants.

The Court retains jurisdiction to effectuate the purposes and intent of this opinion. If Wolf/Rovic and Ventron cannot agree on the quantum of damages, the Court will set the ground rules for the determination of the same.

Submit an appropriate form of final judgment.

JOHN J. DEGNAN
ATTORNEY GENERAL OF NEW JERSEY
Attorney for Plaintiff
36 West State Street
Trenton, New Jersey 08625
By: RONALD P. HEKSCH
Deputy Attorney General
(609) 292-1557

SUPERIOR COURT OF NEW JERSEY
CHANCERY DIVISION, BERGEN COUNTY
DOCKET NO. C-2996-75

STATE OF NEW JERSEY, DEPARTMENT OF ENVIRONMENTAL PROTECTION, Plaintiff, v. VENTRON CORPORATION, etc., et al., Defendants.	Civil Action STATEMENT OF UNDISPUTED BASIC FACTS SUBMITTED BY PLAINTIFF, STATE OF NEW JERSEY, DEPARTMENT OF ENVIRONMENTAL PROTECTION

Pursuant to the Order and direction of the Court, the plaintiff, State of New Jersey, Department of Environmental Protection, submits this "Statement of Undisputed Basic Facts". Same is intended to supplement the "Statement of Undisputed Facts"

previously submitted by defendants Robert and Rita Wolf. It does not reiterate statements made by defendants Wolf which plaintiff concurs with. Instead, at the conclusion it specifically enumerates those statements made by defendants Wolf which it takes issue with. The remainder are incorporated herein by reference.

I. HISTORY OF THE PROPERTY INVOLVED HEREIN

A. F. W. Berk and Company, Inc., Wood Ridge Chemical Company, Velsicol Chemical Corporation, Ventron Corporation--Their Association With The Property Which Is The Subject Of The Within Litigation And The Business Conducted Thereon--1930 to 1974.

1. F. W. Berk and Company, Inc. (hereinafter "Berk") was an English company that manufactured mercury salts (Kirk deposition, p. 22).

2. In the 1930s it leased the property which is the subject of this litigation and constructed thereon a manufacturing facility for the production of mercury salts (Kirk deposition, p. 22).

3. From 1943 to 1960 Berk owned the entire property which is the subject of the within litigation, to wit: Block 229, Lots 8 and 10, Borough of Wood-Ridge, New Jersey, and Block 146, Lot 3, Borough of Carlstadt, New Jersey.

4. George Taylor was the general manager of Berk and subsequently Wood Ridge Chemical Company (hereinafter "WRCC") from 1943 to 1964 (Kirk deposition, p. 22).

5. In the late 1950s George Taylor acquired Berk and was granted the right to use its name as long as he had a controlling interest in the business (Kirk deposition, p. 23).

6. In 1960 he sold the assets of Berk to the Velsicol Chemical Corporation (hereinafter "Velsicol"), an Illinois corporation which formed the Wood Ridge Chemical Company, a Nevada corporation, as a wholly owned subsidiary, for the sole purpose of acquiring the assets of Berk and operating the chemical plant on the property which is the subject of this litigation (Kirk deposition, pp. 15 through 18, 25; Exhibit Kirk-1).

7. The assets of Berk acquired by WRCC in 1960 included the entire property which is the subject of the within litigation, namely, Block 229, Lots 8 and 10, Borough of Wood-Ridge, and Block 146, Lot 3, Borough of Carlstadt.

8. From June 1960 to February 1, 1968 WRCC was a wholly owned subsidiary of Velsicol (Velsicol's answers to State Interrogatory #3; Bernstein deposition Sept. 14, 1976, pp. 43 through 44).

9. From 1951 to 1974 Berk and WRCC produced purified mercury, phenylmecuric compounds, inorganic mercury compounds,

organic mercury compounds and nonmercurial fungicides. The items produced by Berk and WRCC remained the same during the period 1951 through 1974. In addition, there was no noticeable change in production methods employed by Berk and WRCC during the period 1957 through 1971 (Hoffman deposition, pp. 10, 11; Cadmus deposition, p. 62; Bernstein deposition Sept. 14, 1976, pp. 33-34; Kirk deposition, p. 27).

10. While WRCC was a wholly owned subsidiary of Velsicol, quality control at the Wood-Ridge plant (1960-1968) was under the direct control of Velsicol (Cadmus deposition, p. 72).

11. During the period 1960 to February 1, 1968, the Board of Directors of WRCC were all Velsicol employees (Kirk deposition, p. 18).

12. When WRCC acquired the assets of Berk there were no changes made in management level employees at the Wood-Ridge facility. The staff that operated the Wood-Ridge facility under Berk stayed with the company and continued the operation while WRCC was owned by Velsicol (Kirk deposition, pp. 16, 27).

13. The products produced by WRCC during the period 1960 to 1968 at the Wood-Ridge facility stayed the same as those produced by Berk in the 1950s (Kirk deposition, p. 27).

14. During the period 1960 to 1968 the customers of WRCC remained substantially the same as those of its predecessor Berk (Kirk deposition, p. 27).

15. The Board of Directors of WRCC met monthly in the Velsicol offices in Chicago, Illinois (Kirk deposition, p. 41).

16. In the Summer of 1967 the Ventron Corporation (hereinafter "Ventron") commenced negotiations with Velsicol for the acquisition of the stock of WRCC (Kirk deposition, pp. 70-71).

17. By the stock purchase agreement dated February 1, 1968 Ventron acquired the stock of WRCC from Velsicol (D-Vel-5d).

18. At the time Ventron acquired the stock of WRCC the company owned Block 229, Lot 10, Borough of Wood-Ridge. Title to Block 229, Lot 8, Borough of Wood-Ridge and Block 146, Lot 3, Borough of Carlstadt had been transferred to Velsicol, which continues to hold title to this land.

19. WRCC under Ventron's ownership was the largest processor of mercury chemicals in the country (Bernstein deposition Feb. 29, 1977, p. 288).

20. Many management level personnel who operated the facility in question under the ownership of Berk continued to be employed by WRCC under its ownership by Velsicol and Ventron, to wit: Cadmus, Hoffman, Bratt, Clark, Sievers and Pfeiffer (Bernstein deposition July 27, 1977, p. 50; Kirk deposition, p. 16).

Eugene Cadmus

1951 - 1956	Research Chemist at Berk
1956 - 1971	Chief Chemist, Technical Director

(Cadmus deposition, pp. 5, 6)

John G. Hoffman

1951 - 1957-58	Assistant Production Manager
1957-58 - 1969	Production Manager
1969 - 1973	Plant Manager

(Hoffman deposition pp. 6, 7)

Charley Sievers

General Foreman for WRCC under both Velsicol and Ventron ownership
(Bernstein deposition, July 27, 1977, p. 50)

Harry Pfeiffer

Maintenance Foreman for WRCC under both Velsicol and Ventron ownership
(Bernstein deposition, July 27, 1977, p. 50)

John Bratt

1948 - 1950	Research Chemist
1950 - 1951	Production Manager
1951 - 1968	Plant Manager
1956 - 1968	Vice President

(Bratt deposition, p. 47; Bernstein deposition, July 27, 1977, p. 51)

21. Several management level employees of Ventron held similar positions with WRCC during the period 1968 to 1974, to wit: William Lauenstein, William Boyer, S. K. Dederian, William Zolner, John Durrell, Forest Griffin and Joseph Bernstein (Bernstein deposition July 27, 1977, p. 58).

22. By formal resolution of the Board of Directors of WRCC dated June 15, 1974, WRCC was merged into Ventron.

B. Environmental Problems Associated With The Property Involved Herein And Business Conducted Thereon-- 1930 - 1974

1. The Berk mercury processing facility and pollution problems associated with it first came to the attention of the State of New Jersey in 1956. At that time the Department of Health became aware that the wastewater effluent discharged by the plant into Berrys Creek was unacceptable and polluting Berrys Creek. In attempting to rectify the pollution problems it had, Berk and later WRCC were undecided whether to install a complete treatment facility of its own or to discharge wastes to the Borough of Wood-Ridge municipal sewerage system. In 1959 the company was advised by the Township of Wood-Ridge that its request to discharge industrial waste into the municipal sewerage system had been denied. Industrial wastes discharged by the company into Berrys Creek went untreated. During 1960 under normal plant production the industrial waste volume generated and discharged into Berrys Creek was between 30,000 and 40,000 gallons per day (DV-171, DV-167).

2. Since 1956 the Department of Environmental Protection (hereinafter "DEP") and its predecessor the Department of Health

has attempted to get Berk and WRCC to treat its effluent so as not to pollute Berrys Creek (DV-66 through and including DV-178).

3. By letter dated February 13, 1968 the Department of Health advised WRCC that it would have to design a sewage treatment plant to remove toxic metals from its effluent being discharged into Berrys Creek (DV-129). The effluent being discharged by WRCC was objectionable because of toxicity due to the presence of mercury compounds (DV-110).

4. A report prepared for WRCC by Metcalf & Eddy dealing with wastewater treatment disposal at the Wood Ridge site on December 6, 1968 notes that "at present, the wastes are conducted about one-quarter of a mile and discharged untreated to Berrys Creek, a tributary of the Hackensack River." Previous efforts to upgrade the quality of the effluent discharged were noted to have been unsuccessful.

5. On June 9, 1971 the effluent from WRCC was sampled by the DEP and found to be unsatisfactory because of high pH (11.1), suspended solids 63 mg/1) and mercury (5800 ppb) (DV-92, DV-93).

6. By letter dated November 24, 1971 the DEP advised WRCC that its effluent was unacceptable and noted that it contained 120 ppb mercury. WRCC was advised by the DEP that the quality of its effluent must be improved immediately (DV-481).

7. An internal memo captioned "Occupational Safety and Health, Long-Range Plan" prepared by Ventron in 1972 for the WRCC facility indicates that exposure of workers to toxic vapors and dust was a serious problem at the plant. It further noted that WRCC could not meet mercury exposure limits. Despite cleanup and housekeeping improvements implemented, vapors and dust on the floors and walls of the buildings on the site continued to be a problem. Another problem noted was exposure of workers at WRCC to chemical burns.

8. An internal memo captioned "Long-Range Environmental Protection Plan" prepared by Frank H. Wilson of Ventron on September 12, 1972 for the Wood-Ridge facility noted that Ventron/WRCC was aware of problems associated with airborne mercury at its plant. The airborne mercury they were concerned with was particulate matter and vapors. Solid wastes, wastes generated by recovery stills and scrap containers that once contained mercurials were also mentioned as a problem.

9. An internal memo captioned "Ventron Chemical Division Long-Range Facilities Plan in 1972-1977" prepared by Joseph Bernstein, Operations Manager, and Frank Wilson, III, Chief Engineer, WRCC, first issued in June 1972, noted that the facility at WRCC was old and in disrepair. It further noted that the plant's

safety record was poor. The major environmental problems at that time from their point of view appeared to be ambient mercury vapor levels in manufacturing areas. Cleanup and housekeeping apparently were unable to solve these problems. It was noted that ". . . the plant is a veritable Aegean stable of residual mercury." It was also noted that current residual mercury deposits will produce high vapor levels. The conclusions drawn from this report were that WRCC should be sold because of United States Environmental Protection Agency (hereinafter "EPA") and Occupational Safety and Health Administration (hereinafter "OSHA") problems related to pollution and workers' safety.

10. By letter dated January 14, 1972 to EPA, WRCC discussed the problems it was having regarding the "apparent anomaly" between the mercury content of the total plant discharge and that of the effluent immediately after treatment. In its letter WRCC cited five possible sources of mercury contamination: (1) infiltration of groundwater contaminated with mercury leached from deposits in the soil into the underground waste line; (2) surface runoff into storm sewers of rain water contamined with mercury from surface deposits; (3) surface runoff of contaminated overflow from collecting pits and basins; (4) leaching of residual mercury in the waste lines; and (5) discharge of contaminated "nonmercurial" streams into the waste system. The document in question states

that mercury in surface soil surrounding a storm basin on the property in question was in the range of 10-500 ppm. It noted that the cause of mercury in the soil was the result of spills onto the plant grounds. It also noted that one of the sludge pits on the property (Pit "J") tends to overflow during heavy rains. In addition, it was noted that residue from the retorting operation (retort sludge) had previously been disposed of by dumping same on the adjoining property which Velsicol retained title to (DW-11, DV-245).

11. Internal memo dated February 1, 1973 indicates that a worker at WRCC, hired on October 14, 1971, showed high levels of mercury in his blood and kidneys, causing illness which required hospitalization (memo dated February 1, 1973 from Durrell to Bernstein re Leon Brudnicki).

12. The record indicates that Berk and WRCC until 1968 were using that portion of the property involved in this litigation presently owned by Velsicol as a landfill site.

13. Portions of the material deposited on the present site of Velsicol was the retort sludge generated by the recovery still operated in proximity to Building #20. This sludge contained mercury in the range 0-800 ppm and the still operation generated material containing approximately .03 pounds of mercury per day (Dw-11, DV-245, Bernstein deposition February 9, 1977, p. 32; Hoffman deposition pp. 22, 72).

14. Soil in the area of the retort still both on the present Velsicol property and present Wolf property was and is contaminated with mercury (Hoffman deposition, p. 19; Cadmus deposition, p. 68; see also M-2).

15. Officials of Ventron/WRCC were aware of the dumping of retort sludge on the Velsicol property and were also aware of the mercury contamination in the area of the retort still (Cadmus deposition, p. 68; Bernstein deposition, February 9, 1977, p. 32; Hoffman deposition pp. 22, 72, 19).

16. Officials of Ventron/WRCC prior to May 1974 were aware of mercury in the soil and groundwater on the property of WRCC. EPA had advised Ventron that mercury in the soil was higher than they would like it to be (Hoffman deposition, p. 16; Faye deposition, pp. 107, 214; Bernstein deposition, February 9, 1977, p. 31).

17. Similarly, prior to May 1974 officials of Ventron/WRCC were aware of contaminated sediment in Berrys Creek adjacent to the present Velsicol site.

18. A sludge pit (Pit "J") at the Wood Ridge facility, used as a settling tank for liquid wastes, containing mercury, overflowed during heavy rains. Soil samples in the area of this pit showed significant concentrations of mercury (Faye deposition, p. 53; Hoffman deposition, p. 84; Bernstein deposition, July 27, 1977, pp. 76-77).

19. An inspector from New Jersey Manufacturers Insurance Company, the workmens' compensation carrier for WRCC during Ventron's ownership of the company (1968-1974), noted during inspections of the plant facilities that there was mercury dust on the floor and the walls; he observed mercury on the ground on more than one occasion; he also saw mercury on clothing of workers; and also saw mercury slag or sludge piles on the property (John Bratt deposition, pp. 72-80).

II. CONDITIONS ON AND ALTERATIONS TO THE VENTRON/ VELSICOL SITE -- MAY 1974 TO APRIL 1976

1. Demolition of buildings on the Ventron (Wolf) site began during the latter part of May 1974. On June 7, 1974 governmental entities became aware of the discharge of chemicals and oil from the site. Personnel from the Hackensack Meadowlands Development Commission (HMDC), EPA and DEP arrived on the site on June 7, 1974 and collected various samples of water, sediment, liquids and solid materials from the site (present Wolf and U. S. Life property) and surrounding area. (Chronology prepared by Uwe Frank, Chemist, EPA, dated May 2, 1977; undated memo to the file prepared by William Librizzi, Chief, Emergency Response Branch, EPA, re chemical spill, Ventron Corporation, Wood-Ridge, N. J.; memo dated June 19, 1974 re laboratory analysis--Ventron Corp.--June 7, 1974, prepared by Francis T. Brezenski, Chief,

Technical Support Branch, EPA; memo from Henry J. Jeleniewski to William Librizzi re chronological statements re Ventron.)

2. Concentrations of mercury in the water collected on the site (Ventron property) range from 15.0 to 285.0 ppm. Water samples collected upstream and downstream from the Ventron site contained 0.22 and 14.0 ppm of mercury, respectively. Samples of solid materials collected on the site range from 11.5 to 9,500 ppm mercury with one sample containing virtually pure mercury. Samples of sediment collected on the site and upstream from the site in Berrys Creek contained 17,700 and 9.9 ppm mercury, respectively (memo dated June 19, 1974 from Francis T. Brezenski, EPA to Chief, Emergency Response Branch, EPA, re laboratory analysis--Ventron Corporation--June 7, 1974).

3. On June 10, 1974 a telegram order (EV-629) was sent to Rovic Construction (hereinafter "Rovic") ordering the discharge of hazardous chemicals and petroleum products from the demolition site to cease. The telegram order states in pertinent part that: "Investigation by this Department has found that on or about June 7, 1974 your company was responsible for the discharge of hazardous chemicals and petroleum products into Berrys Creek, a tributary of the Hackensack River, from your property in Wood-Ridge Borough, Bergen County, formerly occupied by Wood Ridge Chemical

Company. This discharge is caused by wetting the area during demolition of buildings on this site. Such discharge from your property should be prevented at all times. This discharge is in violation of statutes of the State of New Jersey, including N.J.S.A. 58:10-23.4 and N.J.S.A. 23:5-28."

4. On June 12, 1974, there was an on-site meeting between representatives of Rovic, the DEP, EPA, Ventron, Otillio Demolition Company and Gaess Environmental Services, Inc. After discussions regarding problems associated with the presence of chemicals and the demolition operation it was agreed that:

(a) All drainage from the site during the operation will be diverted to an appropriately lined catch basin. The liquids and solids collected will be analyzed and properly disposed of. Analysis procedures by a contractor, hired by the owner, and disposal procedures will be approved by EPA/NJDEP.

(b) Parameters to be analyzed in the above materials will be at the very least, mercury, cadmium, zinc, asbestos and oil.

(c) The owner will remove all drums, containers, flasks, asbestos in bulk, and other similar materials prior to restart of operations. The State will make inspection.

(d) The owner will determine chemical infusion in the soil after demolition prior to construction of the proposed

parking lot warehouse facility. Of particular concern here is the concentrations of mercury and mercury compounds in the soil.

(e) Based upon the determinations in (d) above, the owner may be required to remove contaminated soils." (DV-467)

5. By letter dated June 17, 1974, David Longstreet of the DEP summarized the agreements reached at the June 12, 1974 meeting.

6. On June 19, 1974 DEP personnel inspected the site and found that demolition was continuing and, further, that water was flowing from the site into a ditch which led into Berrys Creek without the DEP and/or EPA being notified and without first analyzing said waters for contaminants (DV-608).

7. On June 20, 1974 a joint inspection of the property was conducted by EPA and DEP personnel. No demolition was occurring on that date (DV-607).

8. Water samples collected from the plant sewer system and from Berrys Creek upstream and downstream of the Ventron site on June 21, 1974 contained 0.140, 0.011 and 0.0039 ppm of mercury respectively (DV-625).

9. An inspection conducted by DEP personnel on June 27, 1974 found no demolition in progress; however, a sample of the effluent leaving the site and entering Berrys Creek was taken and analyzed and contained 28.0 ppm of mercury (DV-607; DV-624).

10. On July 1, 1974 a meeting was held at the demolition site. Attendees were representatives of EPA, DEP, Rovic, and U. S. Testing Company, Inc. The meeting was called by DEP and EPA personnel to ascertain what was being done with contaminated water on site and the saturated ground, in the way of collection and disposal. No demolition was taking place during the meeting (DV-619).

11. On July 2, 1974 DEP personnel inspected the demolition site and observed water overflowing the drainage pit and exiting the property into a ditch adjoining the property which leads into Berrys Creek (DV-367).

12. On July 8, 1974 the DEP received a letter from U. S. Testing Company, Inc. advising that it had been retained by Rovic to perform chemical analyses of runoff water which had been collected and stored in tanks on the premises (DV-627).

13. On July 8, 1974 Mike Polito of EPA visited the Ventron site, accompanied by Mr. Jeleniewski and Dr. Lafornari, also of EPA. Demolition at the site was in progress. Mike Polito observed that the building being demolished was being sprayed with a fire hose (DV-621).

14. On July 9, 1974 Ed Faille of DEP visited the site and observed ". . . a small drip discharge from the old treatment

site" leaving the property and flowing in the direction of Berrys Creek (DV-607).

15. On July 11, 1974 DEP and EPA personnel again visited the site and obtained soil core borings from the property. Elemental mercury on the ground surface was observed at several locations. In addition, droplets of mercury were found in the core soil samples taken. Concentrations up to 200,000 ppm of mercury were observed in samples taken. Additionally, high concentrations of cadmium, lead, zinc, chromium, nickel and arsenic were found in the samples (DV-621, DV-609, DV-601).

16. During June 1974 United States Testing Company, Inc. took samples of drainage water flowing off the Ventron property into a ditch leading into Berrys Creek and analyzed same for mercury, cadmium, zinc and oil. The results of their sampling and analysis indicate that water leaving the site in question contained the following contaminants on the various dates noted:

Site #5 - Wier

	Results in ppm			
Date Collected	Mercury	Cadmium	Zinc	Oil
June 13, 1974	167	N.D.*	13.0	61,500
June 17, 1974	3.9	N.D.*	0.5	32
June 18, 1974	2.2	N.D.*	0.25	26
June 24, 1974	50	N.D.*	0.19	21

* N.D. = Not Detected. Detection limit is 0.02

In addition, water collected and retained on the site in a holding tank was sampled on June 21, 1974 and analyses showed it contained 80 ppm mercury, 0.21 ppm zinc and 172 ppm oil (U. S. Testing 1).

17. On August 16, 1974 a memorandum of understanding (P-48) was entered into between EPA, DEP and Rovic (Wolf) regarding steps to be taken prior to further site preparation and construction being conducted on Block 229, Lots 10A and 10B. Same is fully set forth on page 86 of Wolf's "Statement of Undisputed Basic Facts."

18. On September 19, 1974 Mike Polito of EPA and Ed Faille of DEP inspected the construction site. During the visit they observed a drainage canal, approximately one foot wide and thirty feet long, extending from the construction site into a drainage ditch running along the southern border of the property. The latter ditch leads into Berrys Creek. Both ditches were filled with water which was flowing in the direction of Berrys Creek. Samples were taken of the water in the ditches and revealed that the water contained 15,800, 1.1 and 940 ppb of mercury (DV-602; DV-466).

19. On December 5, 1974, at the request of Rovic, a meeting was held at EPA, Edison, New Jersey, to discuss a proposal presented by defendant Wolf for the treatment of mercury contaminated soil at the site. DEP and EPA personnel requested that the proposal be submitted in writing for their review (DV-404).

20. On December 9, 1974 Rovic sent a letter to the DEP outlining certain recommendations made by their consultant, Drs. Johnson and Ollis, for the recovery of mercury from the contaminated soil on site (DV-592).

21. On December 24, 1974 David Longstreet advised Rovic that it was rejecting the proposal of December 9, 1974 because the DEP felt that same did not provide sufficient safeguards to prevent the runoff of mercury and other contaminants into the State's waters (DV-591; P-51).

22. During the period August 1974 to September 1975 both Wolf and the governmental entities involved investigated the possibility of removing the contaminated soil from the property in question.

23. On January 10, 1975 a meeting was held at EPA's office in New York City to discuss the problems associated with mercury contamination at the site and what the governmental entities involved would expect prior to construction commencing

on the remainder of the property (Block 229, Lot 10B). At this time defendant Wolf made a presentation through his consultant (Thomas Schiel) to entomb the contaminated area in question. According to Schiel this could be done because of an organic silt layer underlying the property. It was represented that this layer was impervious. The top and sides of the entombment system would be sealed off by utilizing a special construction method for the foundation of the building. The entombment system would contain the contaminated soil scraped from Lot 10A. The entombment proposal included a monitoring program to be established to insure that no leachate containing mercury was leaving the site. If heavy metals were noticed in the leachate leaving the site the entombment system was to be extended around the entire property. The governmental entities involved continued to maintain that removal of the contaminated material was the best method for protecting the environment. Wolf, on the other hand, insisted that this was economically infeasible. The governmental entities concluded, in light of Wolf's obstinance on this point, that the entombment proposal seemed to be the best available alternative provided sufficient safeguards, such as monitoring and restrictions regarding future development of the property were agreed to. Prior to agreeing to the entombment proposal the governmental entities involved requested additional

information (DV-585, DV-306L, DV-451).

24. On January 29, 1975 Schiel submitted his final proposal for the entombment of contaminated soil on the site in question. Same recommended four alternative programs or stages to alleviate the pollution problem (DV-451).

25. In order to ascertain the effectiveness of the alternate proposals individually and/or in conjunction with one another, Schiel's proposal indicates that the ". . . stream along the southern property line should be monitored after construction. If more than 15 parts per billion of mercury contamination is recorded . . .", additional measures should be taken. "Similarly, alternate four is recommended if all other alternates fail." (DV-306L)

26. On February 28, 1975 Meyer Scolnick, Director, Enforcement and Regional Council Division, EPA, responded to Schiel proposal of January 28, 1975. In pertinent part the letter states:

> "The Environmental Protection Agency in reviewing options potentially available to you hereby submits the following proposal for your review. This proposal essentially implements the recommendations you proposed in your letter of January 30, 1975. After you have had time to consider and comment upon our proposal in writing to both the EPA and NJDEP, the final version will be written as a stipulation and final disposition for signature by the Regional Administrator, Region II, EPA,

and the Commissioner, New Jersey Department of Environmental Protection, along with Rovic Construction and Wolf Enterprises.

"(1) A continuous building perimeter footing shall be constructed as set forth in alternate 1 of your letter of January 30, 1975.

"(2) A wall shall be constructed around the perimeter of the southern and eastern property lines, as set forth in alternate 3 of your letter of January 30, 1975, to a depth of one foot below the lower surface of the organic silt layer, or to a depth of five feet from the surface of the topsoil, whichever is greater.

"(3) Complete impervious paving of the surface of the construction site shall be performed.

"(4) All drainage from the property shall be carried by drainage ditches constructed of a water-impervious material.

"(5) A monitoring program shall be conducted in a manner specified by the National Pollutant Discharge Elimination System permit which will be issued to the site.

"(6) A semi-annual inspection schedule shall be maintained of all above-ground structures constructed to mitigate mercury pollution. A file shall be kept on the property, available for inspection by EPA and NJDEP during normal business hours. All cracks in paving and drainage shall be repaired within 14 (FOURTEEN) days of their detection.

"(7) The conditions of any stipulation entered into by the above-mentioned parties shall appear in any deeds executed in transference of ownership or proprietorship of the property referred to above, and such stipulation shall become a covenant running with the land and shall be recorded in the records of the County Clerk's Office.

"If later survey or studies conducted by EPA or any other agency responsible for environmental quality determines that the above mitigating actions are not sufficient to meet the requirements of the final NPDES permit which will be issued to the site or the requirements of any laws or regulations relating to aquifers of the State of New Jersey, it is agreed that you will comply with any additional requirements which may be imposed.

"We will arrange a meeting of EPA, NJDEP, Rovic and Wolf after you have had time to consider and comment upon the above proposal. The final language for the stipulation will be decided upon at that meeting." (DV-411)

27. It is the DEP's position that no work was to commence on Block 229, Lot 10B until such time as a written agreement containing the conditions outlined in the Scolnick letter of February 28, 1975 (DV-411) was executed by the DEP, EPA and Wolf. Wolf was advised by the DEP that he would not be allowed to build on Block 229, Lot 10B without a written agreement as aforesaid (Wolf deposition, p. 782).

28. No written agreement between Wolf, the DEP and/or EPA with regard to the commencement of construction on Block 229, Lot 10B was ever entered into (Wolf deposition, p. 795).

29. Wolf took exception to points 5, 6 and 7 of DV-411 involving monitoring, the submission of reports and deed restrictions (Wolf deposition, pp. 782-783).

30. If alternates 1, 2 and/or 3 of the Schiel proposal (DV-451) did not effectively contain the contamination on site, Wolf agreed that he would implement alternate 4 (Wolf deposition, pp. 931, 935).

31. During 1974, 1975 and 1976 samples of water and sediments on and off the property in question were collected during various inspections of the site by personnel from DEP and EPA. A summary of the data collected during this period through 1976 is presented below.

DATE	SOURCE	MERCURY CONCENTRATIONS (ppm)
Sept. 19, 1974[1]	Water-runoff ditch	15.8
	Berrys Creek water, upstream	0.001
	Berrys Creek water, downstream	0.940
Sept. 13, 1974[2]	Sediment-abandoned lagoon on-site	1.2
Feb. 14, 1975[3]	Water, Ventron discharge	0.013
	Sediment, Ventron discharge	165.0
	Water, 150 ft. below discharge	0.300
	Sediment, 150 ft. below "	167.0
	Water-flood tide at tide gate, West Riser	0.0
	Sediment, flood tide at tide gate, West Riser	147.0
Nov. 5, 1975[4]	Sediment, 1.2 miles upstream from Ventron site (1)	25.0
	Sediment, West Riser tide gate (2)	35.0
	Sediment, 0.2 mile downstream from Ventron site (3)	0.3
	Water, (No. 1)	0.6 ppb
	Water, (No. 2)	0.4 ppb
	Water, (No. 3)	0.3 ppb

DATE	SOURCE	MERCURY CONCENTRATIONS (ppm)
Nov. 5, 1975 (cont.)	Cattail-tuber and top (No. 2)	0.3
	Phragmites - stem (No. 2)	1.2
	Phragmites - tuber and top (No. 3)	1.5
	Phragmites - stem (No. 3)	1.1
Aug. 24, 1976[5]	Sediment (No. 2)	577
	Sediment (No. 3)	4,480
	Sediment (No. 1)	5.5
	Water (No.1)	0.20 ppb
	Water (No. 2)	2.1 ppb
	Water (No. 3)	0.43 ppb
	Phragmites - tuber (No. 1)	*
	Phragmites - stem (No. 1)	*
	Whole killifish (No. 1)	*
	Cattail - tuber (No. 3)	51.0
	Cattail - stem (No. 3)	1.2
	Phragmites - tuber (No. 3)	170.0
	Phragmites - stem (No. 3)	3.5
May 12, 1976[6]	Soil - Ventron site, surface	3.3 to 5.6
	Soil - Ventron site, 7 inches below	4.2
	Soil - Ventron site, 10 " "	5.2
	Soil - Ventron site, 11 " "	4.3
	Soil - Ventron site, 12 inches "	4.2
	Soil - Ventron site, 17 " "	4.8 to 5.2

* Not available

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1. Memo dated Sept. 27, 1974, Francis T. Brezenski, Chief, Technical Support Branch, EPA, to Chief, Emergency Response Branch, re Mercury Results - Ventron Corp., Sept. 20, 1974.

2. Memo dated Sept. 13, 1974, Francis T. Brezenski, Chief, Technical Support Branch, EPA, to Chief, Emergency Response Branch, re Ventron Sediment Samples - Hg results.

32. In addition, on August 5, 1975 Mike Polito of EPA inspected the site and observed effluent leaving it in a manner which permitted it to flow into Berrys Creek. He sampled the effluent and the analysis showed that it contained 3.4 ppm mercury (DV-419). The inspection of August 5, 1975 also revealed that mercury contaminated soil was being stockpiled and removed from the property (DV-426, DV-568).

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3. Memo to the file dated February 14, 1975 by D. J. Jackangelo, New Jersey Fish and Game, re Special Investigation in co-operation with N. J. Office of Special Services Oil and Hazardous Materials Section.

4. Memo dated November 5, 1975, Francis T. Brezenski to M. V. Polito, Emergency Response Branch, re Analytical results for water, sediment, fragmites, cattail and killifish samples, N. J. Fish and Game Commission.

5. Letter dated September 20, 1976 from Francis T. Brezenski to Donald Jacangelo, New Jersey Fish and Game.

6. DV-304

See also sampling and analyses data collected on present Velsicol property set forth in section 44, paragraphs (e) (i), pp. 124-125, Wolf's "Statement of Undisputed Basic Facts."

33. A telegram order was sent to Rovic indicating that the Department's inspection revealed the stockpiling and removal of mercury contaminated soil from the property and, further, that this was in violation of the agreements previously reached. The telegram ordered Rovic (Wolf) to cease and desist from removal and stockpiling of the contaminated soil in question and to completely cover and seal all removed and stockpiled material to prevent any water from contacting it (DV-416).

34. A meeting was held at EPA, Edison, N.J., between EPA, DEP and Wolf to discuss the aforementioned telegram order. At the meeting on September 3, 1975 the DEP maintains that Wolf agreed to accept all of the provisions of the Scolnick letter of February 1975 so that he could continue construction on Building # 2. EPA and DEP agreed that construction could proceed in accordance with the Scolnick letter. This was to include the provisions that Wolf found objectionable.

35. Wolf had commenced site preparation for Building #2 in July and August of 1975.

36. Construction of Building # 2 continued during the latter part of 1975 and the early part of 1976.

37. Stockpiled material from Lot 10A was supposed to be placed under and within the entombment device under Building # 2 (Wolf deposition, p. 777). Only 80% of the contaminated material

from Lot 10A was in fact ever placed under Building # 2. The remainder was spread over the Lot 10B site (Wolf deposition, p. 941; D'Amore deposition, p. 109).

38. Since the completion of Building # 2 no testing sampling and/or analyses has been conducted by Wolf to ascertain the effectiveness of a containment system he allegedly constructed under the building in question (Wolf deposition, p. 936).

39. United States Life Insurance Co. (hereinafter "U. S. Life") has conducted no testing, sampling and/or analysis to ascertain whether or not any contaminants from its property or from any of the property involved in this litigation is flowing and/or being discharged into the waters of the State.

40. WRCC/Ventron has conducted no testing, sampling and/or analyses since January 1974 to ascertain whether or not any contaminants from the property involved herein are flowing and/or being discharged into the waters of the State.

41. Velsicol has conducted no testing, sampling and/or analyses to ascertain whether or not any contaminants from the property involved herein are flowing and/or being discharged into the waters of the State.

42. U. S. Life, Ventron, Velsicol have done nothing since January 1, 1974 to remedy the mercury contamination that

exists on the property which is the subject of the within litigation.

43. U. S. Life was informed prior to taking title to Block 229, Lot 10A of the mercury contamination that existed on Block 229, Lots 10A and 10B as of June 1974 and of Wolf's efforts, in conjunction with EPA and DEP, to resolve the problems associated therewith (Wolf deposition, p. 943).

44. At no time prior to April 1976 did U. S. Life or any of its employees and/or agents contact EPA and/or DEP to ascertain their position regarding the alleged contamination of Block 229, Lot 10A and the resulting water pollution.

III. UNDISPUTED FACTS AND OPINIONS OF EXPERT WITNESSES: REPORT OF JACK McCORMICK & ASSOCIATES, INC. CAPTIONED "INVESTIGATIONS OF AQUATIC AND TERRESTRIAL MERCURY CONTAMINATION IN THE VICINITY OF THE FORMER LOCATION OF THE WOOD RIDGE CHEMICAL CORPORATION PROCESSING PLANT BOROUGHS OF WOOD-RIDGE AND CARLSTADT, BERGEN COUNTY, NEW JERSEY," DATED AUGUST 1, 1977 (M-2)

1. The results of the analysis for mercury and other metals (arsenic, cadmium, lead, nickel and zinc) in samples of soil, groundwater, sediment and surface water collected on or near the subject property by the DEP and Jack McCormick & Associates are contained on pages 37 to 64, inclusive, of his report. The analytical results are compiled on Tables 5 through 13 on pages 38 through 42, 44 through 48, and 50 through 53.

To date the record is devoid of any data or expert opinion that would tend to refute the aforementioned analytical results. To date none of the parties have conducted any sampling or analysis which questions these findings. This being the case the plaintiff maintains that this data constitutes part of the undisputed facts in this case and same are therefore incorporated herein by reference.

2. Mercury contaminated sediments are flowing from the property of U. S. Life, Wolf and Velsicol into the waters of the State (p. 75).

3. Mercury contaminated sediments located on the property of U. S. Life, Wolf and Velsicol are in a position which permits them to flow into the waters of the State (p. 75).

4. Water flow from the property of U. S. Life, Wolf and Velsicol is contaminated with mercury and this contaminated water is flowing into Berrys Creek (p. 75).

5. The soil analysis surveys conducted by U. S. Testing and N. J. Testing on behalf of the defendant Wolf, the results of which are contained on Tables 15 and 16 on pages 68 and 69 through 70, respectively, document that mercury is present in extraordinarily high concentrations in the soil on Block 229, Lot 10B, Borough of Wood-Ridge.

6. Because of the high concentrations of mercury in the soil on the property presently owned by defendants Wolf and Velsicol, soil materials which are carried from the property into Berrys Creek will contaminate the aquatic environment in the area.

7. The levels of lead observed in the sediment at station 6 are hazardous to aquatic biota (p. 83).

8. Zinc from the U. S. Life, Wolf and Velsicol property is entering Berrys Creek by way of surface water drainage (p. 88).

9. Zinc is a hazard to aquatic biota and wildlife in concentrations greater than 100 ppb (p. 89).

10. The criteria, guidelines and regulations for the maximum concentrations of certain metals in various media are set forth in Table 14 on page 66 and are incorporated herein by reference.

IV. STATEMENTS CONTAINED IN THE "STATEMENT OF UNDISPUTED BASIC FACTS," SUBMITTED BY DEFENDANTS ROBERT M. AND RITA W. WOLF WHICH THE PLAINTIFF TAKES ISSUE WITH.

1. Section 1, para. (f), p. 2. Block 146, Lot 3 is in fact in the Hackensack Meadowlands District.

2. Section 4, para. (m), p. 7. It was not until sometime after Ventron acquired the stock of the Wood Ridge Chemical Company that the residue from the retorting stills were

allegedly placed in drums and stored. Prior to that time the sludge continued to be dumped on what is now the Velsicol property (Bernstein deposition, February 9, 1977, p. 32). Plaintiff proposes to present oral testimony to the effect that the dumping of sludge from the retorting still on the Velsicol property continued after Ventron acquired the stock of WRCC.

3. Section 9, paras. (e), (i) and (j), p. 19. These paragraphs deal with cleanup efforts by Ventron prior to abandonment of its facility at Wood-Ridge in March and April of 1974. DEP and EPA personnel who visited the site shortly after shutdown observed open containers of chemicals throughout several vacant buildings. They also observed sludge in certain tanks and on the ground. A sample taken from this sludge indicated it contained 17,700 ppb mercury (DV-680, DV-645, PL-4, DV-366). By reason of the aforementioned the extent and reasonableness of the cleanup effort engaged in by Ventron/WRCC prior to its abandonment of the facility in question is a contested issue of fact.

4. Section 35, para. (c), p. 75. The plaintiff disputes defendants' assertions that it was agreed that the lined ditch referred to in paragraph 1(a) of the DEP's June 17, 1974 letter need not be implemented.

5. Section 35, para. (e), p. 75. The plaintiff disputes defendants' allegation that a small earthen dam was created at the culvert to prevent water from leaving the property (Lepre deposition, pp. 27, 34).

6. Section 35, para. (f), p. 76. The numerous inspections conducted by personnel from the DEP and EPA indicate that not all runoff water used in demolition was pumped into on-site fuel storage tanks. In fact on numerous occasions water was observed leaving the site subsequent to June 12, 1974.

7. Section 35, para. (x), p. 79. During Mr. Pike's visit to the site on July 2, 1974 he observed water leaving the site and entering a ditch which leads into Berrys Creek.

8. Section 37, para. (k), p. 89. Not all of the topsoil scraped from Block 229, Lot 10A was in fact removed to Building # 2 area. Some of it was removed from the site without the prior knowledge and approval of the governmental entities involved. Furthermore, stockpiled material from Lot 10A was supposed to be placed under and within the entombment device under Building # 2 (Wolf deposition, p. 777). Only 80% of the contaminated material from Lot 10A was in fact placed under Building # 2. The remainder was spread over Lot 10B (Wolf deposition, p. 941; D'Amore deposition, p. 109).

9. Section 40.7, para. (o), p. 96. Statement contained in this paragraph should be qualified to indicate that Doctors Ollis and Johnson proposed a clay dike four (4) feet deep around the entire property in order to seal off the contaminated area (Ollis and Johnson Report dated March 4, 1975).

10. Section 41, para. (hh), p. 115. This paragraph is misleading. It states that Mike Polito, EPA, said that the impermeable layer "may have been penetrated." In fact he stated it was penetrated. His statement was based, in part, upon a New Jersey Testing Laboratory letter which describes the use of a backhoe to obtain samples from the property from depths greater than three (3) feet at which the alleged impermeable layer resides.

11. Section 41, paras (tt), (uu) and (vv) on pp. 117, 118. While EPA and the DEP tentatively approved the entombment proposals set forth by Wolf/Schiel, it was only under the condition that it be implemented in accordance with the provisions set forth in the Scolnick letter of February 28, 1975. At no time did either EPA or DEP agree to a modification of the Scholnick letter. In the memo of September 3, 1975, prepared by Mike Polito wherein he states that Rovic/Wolf had "basically accepted proposals of Meyer Scolnick", it was his understanding

that Wolf had agreed to commence construction in compliance with the Scolnick letter in its entirety. Mike Polito would have had no authority to agree to modifications to the Scolnick letter. (Oral testimony on the aforementioned will be submitted by the plaintiff at the time this matter comes to trial.)

12. Section 42, para. (j), p. 120. No plans or specifications for the paving of Lot 10B have ever been submitted to either the DEP or EPA. There is nothing in the record to indicate what type of material was used for the paving. Site inspections by DEP and EPA personnel have indicated that in fact the areas referred to in paragraph (j) have been paved; however, the impervious nature of this paving is in question by reason of cracking. (Plaintiff proposes to submit oral testimony on this issue.)

13. Section 42, para. (l), p. 120. There is a railroad spur along the southern boundary of the Wolf property. The drainage "along the southern boundary", which is immediately to the south of the railroad spur, is an open, unlined soil ditch. The drainage ditch here was not "replaced with underground concrete piping." This being the case, plaintiff takes issue with defendants' statement in paragraph (l). (Oral testimony will be submitted by plaintiff on this issue.)

14. Section 43, para. (i), p. 124. Plaintiff has no record of the November 4, 1975 letter referred to in paragraph (i) and no recollection of the contents thereof and therefore leaves defendant to its proofs on this particular factual point.

15. Section 45, para. (d), p. 126. The Berrys Creek tidal marsh is not a "part of the New Jersey Sports & Exposition Authority site." Rather it is adjacent to the Sports Complex.

16. Section 47, para. (o), p. 138. The words "similar to the foundation of the building on the Wolf property" is an editorialization supplied by the author of this statement. The McCormick report states that the cutoff wall could be "a bentonite-sand mixture (a slurry wall) with or without a cement additive." (McCormick Report, M-2, p. 92). Wolf never submitted any plans and specifications regarding the foundation of the building on the Wolf property and there is no way of knowing at this particular point in time what type of concret structure was used for the foundation of the building on their property.

17. Section 44, para. (i), pp. 125, 126. The mercury values contained in this schedule are too high by a factor of 100 (memo from Reed to Heksch dated August 5, 1977).

18. Section 46, para. (i), p. 135. In addition to the material enumerated as having been collected from the dump site

in question, also found in the vicinity of this dump site were: (1) earthen crock labeled "mercury"; (2) plastic chemical bottles in a shipping crate labeled "mercury, 10 pounds net, Wood Ridge Chemical Company" (these bottles were noted to have droplets of mercury in them); and (3) invoice forms with the heading "Wood Ridge Chemical Company--Ventron".

JOHN J. DEGNAN
ATTORNEY GENERAL OF NEW JERSEY
Attorney for Plaintiff

By _____
Ronald P. Heksch
Deputy Attorney General