UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF RHODE ISLAND

UNITED STATES OF AMERICA

v.

WILLIAM M. DAVIS, et al. C.A. No. 90-484

v.

AMERICAN CYANAMID, et al.

MEMORANDUM OF DECISION

ERNEST C. TORRES, United States District Judge.

The history of this litigation is described in United States v. Davis, C.A. No. 90-484, 1998 WL 682980 (D.R.I. Sept. 28, 1998), and United States v. Davis, 11 F. Supp. 2d 183, 186-87 (D.R.I. 1998). For present purposes it is sufficient to state that the United States commenced this action against United Technologies Corp. ("UTC") and eight other parties, pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), 42 U.S.C. §§ 9601-75, in order to recover response costs associated with remediating a hazardous waste site. UTC, in turn, asserted claims for contribution and/or indemnity against several co-defendants and 138 third- and fourth-party defendants. In addition, UTC requested that the Court enter a judgment allocating responsibility among the parties for future response costs.

The government's claims against UTC have been settled, see Davis, 11 F. Supp. 2d at 194, and UTC's claims against all but fifteen of the contribution defendants either have been settled[1] or dismissed or have resulted in summary judgments in favor of the contribution defendants. Davis, 1998 WL 682890, at *1. What remains for resolution is UTC's request for a declaratory judgment allocating responsibility for future cleanup costs among the fifteen remaining contribution defendants (the "defendants").[2]

After carefully considering the testimony of the numerous witnesses presented and the voluminous exhibits introduced into evidence during a twenty-six-day bench trial, the Court makes the following findings of fact and draws the following conclusions of law.

Findings of Fact

I. Activity at the Site

During 1976 and most of 1977, a variety of chemical wastes were deposited on land in Smithfield, Rhode Island, owned by

---

[1]Some of those settlements have been approved by the Court and others are awaiting Court approval.

[2]The remaining contribution defendants are: ACCO-Bristol Div. of Babcock Indust. ("ACCO-Bristol"); Ashland, Inc. ("Ashland"); Gar Electroforming, n/k/a Black & Decker ("Gar"); Instapak, n/k/a Sealed Air Corp. ("Instapak"); Morton International, Inc. f/k/a Thiokol Corp. ("Thiokol"); and Perkin-Elmer Corp. ("Perkin-Elmer") (collectively the "generator defendants"); Chemical Control Corp. ("CCC"); Chemical Waste Removal, Inc. ("CWR") and A. Capuano Bros., Inc./United Sanitation, Inc. ("Capuano"); William and Eleanor Davis; William Carracino; Emanuel Musillo; Michael Musillo and Drum Automation, Inc. ("Drum Automation").

William M. Davis and his wife, Eleanor Davis (the "Site" or "Davis Site"). According to William Davis, the dumping began “late in 1976" and continued until approximately September of 1977. During that period, at least 844,275 gallons of hazardous wastes were dumped at the Site.

Almost all of the waste was delivered to the Site by four companies: CCC, CWR, Macera Brothers Container Service, Inc. ("Macera"), and Capuano (collectively the "transporters" or “the transporter defendants”). Small quantities of sewage sludge, "bunker C oil" and machine oil also were delivered by two other companies. Most of the waste was in liquid form and was delivered in either 5,000-gallon tanker trucks, fifty-five-gallon drums that had been loaded on flatbed trailers, or smaller containers ranging from five-gallon cans to small ampules, vials and jars.

The transporters collected the waste from 170 customers, including the generator defendants.

CWR and Macera did little more than haul the waste to various sites for disposal. CCC, on the other hand, also burned some of the flammable waste that it collected in an incinerator and transported the residue to disposal sites. In addition, CCC sold some of the liquid waste to salvagers and temporarily stored other waste in ten 5,000-gallon storage tanks or in drums. In the fall of 1977, there were approximately 13,000 drums of liquid waste on

CCC's premises.[3]

Capuano operated its own waste disposal facility known as Sanitary Landfill. That facility was located in Cranston, Rhode Island, not far from the Davis Site. In the spring of 1977, Capuano received complaints about odors emanating from its facility. Consequently, it began diverting and transporting to the Davis Site some of the waste that otherwise would have been dumped at Sanitary Landfill.

William Davis oversaw all of the dumping. He determined what waste was accepted and where and how it was disposed of. Eleanor Davis performed bookkeeping services for the business; and the Davis's two children, who resided with their parents on the premises adjacent to the Site, occasionally helped their father.

When trucks arrived at the Site, William Davis prepared "receipts" on which he wrote the date, where the waste came from and the quantity of waste delivered. Usually, the driver making the delivery was required to sign the "receipt" and Davis directed him where to dump. Although Davis prepared "receipts" throughout the period that chemical wastes were dumped, he was unable to locate the receipts for deliveries made prior to January 10, 1977 or after July 7, 1977.

Tanker trucks arriving at the Site emptied their contents into

[3]There were about 20,000 drums filled with liquid but one-third of those were filled with water that was kept for fire prevention purposes.

large pits in the ground. Some of the drums and smaller containers were filled with liquids and some of the drums contained liquids floating on top of solid and/or semi-solid substances. All of the liquids were poured into the pits. Most of the empty drums and containers were sold, and the remaining ones, including small laboratory vials and bottles, were buried elsewhere on the Site. Drums containing residues of solid and/or semi-solid substances that could not be poured out were piled at various locations on the Site. Some of them were buried in the course of extinguishing a fire that occurred in July of 1977.

The liquid wastes dumped in the pits were allowed to percolate down into the soil. Many of them had distinctive physical characteristics. Some were red, blue or green, and some smelled like solvents. Occasionally, they caused suds to form in the small brook that ran through the Davis property.

All of the drums containing solid and semi-solid substances were delivered by Macera Disposal. Those substances consisted almost entirely of a brown, wax-like material that smelled like solvent.

II. The Environmental Damage and the Remediation Plan

Not surprisingly, the dumping at the Davis Site severely contaminated the soil, groundwater, and surface water and has caused the Site to be classified as a Superfund Site. The hazardous substances found at the Site may be grouped into three

categories: volatile organic compounds ("VOC's"), semi-volatile organic compounds ("SVOC's") and metals.[4]

A number of the VOC's, including benzene, methyl ethyl ketone (MEK), methylene chloride, perchloroetheylene, a/k/a tetrachloroethylene (PCE), 1,1,1 trichloroethane (1,1,1-TCA), trichlorethylene (TCE), toluene, and xylene, have been detected in the soil, groundwater, and/or surface water at concentrations greater than two parts per million (ppm). Several metals, including cadmium, copper, cyanide, and nickel, also are present in the groundwater and surface water in concentrations well in excess of normal background levels. One or more of those hazardous substances was contained in the waste produced by each of the generator defendants during 1976 and 1977.

Given the concentrations of those hazardous substances and the soil and subsurface conditions at the Site, action was required in order to mitigate the damage already done and to prevent further harm to the environment and to the health of nearby residents. Accordingly, the Environmental Protection Agency (the "EPA") devised a remediation plan (the "Plan") designed to do three things: (1) clean up the soil by reducing the concentration of hazardous wastes to acceptable levels; (2) clean up the groundwater at the Site; and (3) extend water supply pipelines to nearby residents whose wells

[4]A list of substances considered "hazardous" for CERCLA purposes is set forth in 40 C.F.R. § 302.4.

were contaminated. The Plan was published and circulated for public comment pursuant to § 117 of CERCLA, 42 U.S.C. § 9617. Later, it was modified by an Explanation of Significant Differences ("ESD") and was issued in final form as a Record of Decision ("ROD").

The estimated cost of implementing the Plan is $49 million. In addition, the United States has incurred enforcement costs of $6 million that, apparently, consist primarily of the expenses involved in litigating its claim against UTC. Thus, the total response costs are approximately $55 million. Under the terms of its settlement agreement with the government, UTC is obliged to pay $2.8 million in cash[5] and has assumed responsibility for the soil remediation, which has an estimated cost of $14 million. See Davis, 11 F. Supp. 2d at 191.

Cleanup efforts began in July of 1997. Prior to that time, thirty-five drums labeled “Ferric Chloride” were removed from the Site. Since July of 1997, more than 1,000 drums and 10,000 jars, vials, and other small containers have been removed from the Site. Most of the drums were badly rusted, corroded and/or crushed.

Approximately 800 of the drums were found in close proximity to one another in an area called "Drum Removal Area 1.” Four

[5]The agreement requires UTC and the settling third- and fourth-party defendants, jointly, to pay $13.5 million, but $10.7 million will be paid by the other settlors. Three other settlement agreements between UTC and twenty-nine third- and fourth-party defendants would reduce the joint obligation of UTC and the original settling third- and fourth-party defendants to $11 million and would provide them with a total of $3,946,750 in contribution. These settlements have not yet been approved by the Court.

hundred and three of them were fifty-five-gallon drums containing a black or brown waxy substance. Analysis of representative samples of those drums revealed the presence of PCE, 1,1,1-TCA, TCE, various hydrocarbon petroleum distillates (e.g., xylene, toluene, ethylbenzene), and alaphatic and paraffinic hydrocarbons, which are constituents of wax. Two of the drums bore a "Pratt & Whitney" label, two were labeled "Magnaflux" or "Zyglo Magnaflux," one was labeled "Perm-a-chlor, Detrex Chemical," one was labeled "Exxon," and one was labeled "Chlorothene NU Dow Superior Solvent."

Twenty of the drums in Drum Removal Area 1 were green thirty-five-gallon drums labeled either "Kolene" or "Kolene Tufftride." They contained cyanide and high concentrations of potassium and sodium. One fifty-five-gallon drum labeled "Ashland Chemical Co.," "Danger," and "Tetrahydrafuran" contained a mixture of solvents, including acetone, methylene chloride, toluene, and xylene, and phenolic compounds such as methylphenol and dimethylphenol. Several other drums bore the names of some of the settling contribution defendants (e.g., Olin, DuPont and Ferro) and contained substances such as "sticky white paste" or "clear watery liquid." Still other drums were unlabeled and contained substances described as a "yellow-green gel" or "granular white chunks."

Two hundred of the drums removed as well as a large quantity of vials and jars were found either in an area known as "Drum Removal Area 2" or scattered throughout the Site. Many of them had

labels bearing the names of some of the settling defendants (e.g., “Olin,” "National Starch," "Fisher Scientific" and "DuPont") and contained a "clear watery liquid.”

III. The Activities of the Transporters

A. CWR

CWR was located in Bridgeport, Connecticut and was owned and operated by Emanuel Musillo. It was the successor to Drum Automation, a Danbury, Connecticut company owned by Emanuel’s brother, Michael. In April of 1977, CWR purchased Drum Automation's assets and moved the company, first to Stratford, Connecticut, and later to Bridgeport.

CWR and Drum Automation collected chemical waste from 47 different companies in New Jersey and Connecticut, including ACCO-Bristol, Ashland, Gar, Instapak, and Perkin-Elmer. A small portion of the waste that CWR collected consisted of waste oil. After CWR moved to Bridgeport, it began selling some of that waste oil to salvagers. Most of the waste that CWR collected was transported to other locations for disposal.

CWR’s method of collecting waste varied. Sometimes, its two drivers, Wilbert Jones and Johnny Granfield, loaded drums of liquid waste onto thirty- or forty-foot flatbed trucks. On other occasions, the waste was collected in a tanker truck.

The forty-foot flatbed accommodated seventy-nine fifty-five-gallon drums and was the only flatbed used to haul drums to Rhode

Island. If a full load was collected early in the day, the drums, sometimes, would be taken directly to Sanitary Landfill. Usually, however, the truck would return to CWR, and the load of drums would be taken to Sanitary Landfill on the following day. If less than a full load was collected, the drums would be kept at CWR until seventy-nine drums had accumulated. Those drums then would be loaded onto the flatbed and driven to Sanitary Landfill.

Drums were collected with such regularity that they never remained on CWR's premises for more than three days. On eight to ten occasions, CWR drivers picked up flatbed trailers containing the full complement of seventy-nine drums from a parking lot in the Meadowlands of New Jersey and transported them directly to Sanitary Landfill. The source of those drums is unknown. Tanker pickups were less frequent and consisted primarily of loads of acid collected from Ashland.

During 1976 and 1977, all of CWR's waste was taken, initially, to Sanitary Landfill. Sometime after April of 1977, Anthony and Jack Capuano, the owners of Sanitary Landfill, began diverting some of that waste to other sites in Rhode Island. During the period for which Davis has “receipts,” the Capuanos directed CWR drivers to the Davis Site on fifteen separate occasions. The “receipts” for those deliveries bear the name “Capuano” but are signed by CWR’s drivers. Those deliveries involved 1,185 drums containing 65,175 gallons of waste.

There is no evidence that CWR made any deliveries to the Davis Site after July 7. Nor do the Davis "receipts" make any reference to any tanker truck deliveries made by CWR drivers.

B. CCC

CCC was located in Elizabeth, New Jersey, and was owned and operated by William Carracino. One of its more than 130 customers was Thiokol Corp. Like CWR, CCC sold some of the liquid waste that it collected to salvagers. Unlike CWR, it burned flammable liquids such as chlorinated solvents in an incinerator located on its premises. Non-flammable liquids, solids, sludges, and the residue from the incinerator were transported in fifty-five-gallon drums and five-gallon pails to offsite disposal facilities.

Incineration reduced the volume of the waste collected, but because the process was very inefficient, it did not entirely eliminate the hazardous substances. Complete combustion required that the correct combination of temperature, time and turbulence be maintained for the volume of each hazardous substance injected into the incinerator. However, holes in the breaching section of the incinerator prevented enough air from being introduced to reach the temperatures required to incinerate some substances, and other substances often were introduced before the incinerator had been operating long enough to reach the required temperature. The incinerator also lacked a control needed to prevent the introduction of liquid waste from lowering the temperature below optimum levels.

Furthermore, the waste was being burned at a rate of 900 to 1,000 gallons per hour even though the incinerator had a design capacity of only 300 gallons per hour. As a result, some of the hazardous substances were not destroyed and remained in the residue of sludge transported to disposal sites.

Until July of 1976, CCC disposed of waste at the Kin-Buc landfill in New Jersey. In July, Kin-Buc was closed and CCC began stockpiling waste in 5,000 gallon storage tanks and fifty-five-gallon drums while it searched for other disposal sites. Early in 1977, approximately 10,000 drums were on CCC's premises. By the fall of 1977, that number had grown to 20,000, but one-third of those drums were filled with water that was kept for fire prevention purposes.

In the spring of 1977, CCC began sending its waste to disposal sites in Ohio and Rhode Island. Some of the waste also was hauled away by two individuals identified only as “Barry” and Marvin Jonas. CCC trucks taking the waste to Rhode Island were driven by John Mayo, Arnold Pritchett and Bill Cuff.

At first, the waste that was sent to Rhode Island was deposited at Sanitary Landfill; but, starting in May of 1977, the Capuanos diverted all of it to the Davis Site. Davis’s testimony and CCC’s business records establish that CCC continued transporting waste to the Davis Site until early September when Davis refused to accept any more deliveries because CCC was delinquent in making payments.

From May until the first week of July of 1977, CCC drivers made forty-seven trips to the Davis Site. On twenty-nine of those trips, a total of 2,125 fifty-five-gallon drums and 974 small five- and one-gallon pails were delivered. On the remaining eighteen trips, tanker trucks carrying 5,500 gallons of waste apiece were emptied. Thus, the total volume of waste delivered by CCC during that period was 220,725 gallons. Since those deliveries averaged 110,362 gallons per month, it is reasonable to infer that similar quantities were delivered in July and August, bringing the total amount delivered by CCC to 441,450 gallons.

C. Capuano

The Capuanos delivered liquid waste to the Davis Site throughout the entire period that Davis was accepting that kind of waste. Davis's "receipts" show that between January and July of 1977 those deliveries consisted of 59 tanker loads and 1,218 drums totaling 177,060 gallons of liquid waste. It is reasonable to infer that the deliveries they made during the last three months of 1976 and July and August of 1977 also averaged 29,510 gallons per month. Thus, the total amount of liquid waste delivered by the Capuanos was 324,610 gallons.

D. Macera

There is no evidence regarding the period of time over which Macera Brothers transported waste to the Davis Site. Nor are there any records establishing the quantity of waste that it delivered.

However, Davis described the waste brought by Macera as a dark brown or black waxy substance that smelled like solvent and was contained in fifty-five-gallon drums. Moreover, Davis testified that Macera was the only transporter that delivered waste fitting that description.

Most of the drums containing the waxy substance had a layer of liquid at the top. As already noted, the liquid was poured into pits and the drums containing the residue of solids and semi-solids were stockpiled at the Site. Four hundred and thirty-eight of those drums were found at the Site.

It seems clear that the waste transported by Macera was generated by UTC. See Davis, 1998 WL 682980, at *2. See also United States v. Davis, 882 F. Supp. 1217, 1224 (D.R.I. 1995). Some of the drums bore labels with the name of Pratt & Whitney, a division of UTC. Other drums bore labels with the names of companies that were on Pratt & Whitney's list of approved vendors. That fact is significant because Pratt & Whitney often put its waste in empty drums that it had on hand. In addition, the waxy substance found in the drums at the Site matched the description of waste generated by UTC, and chemical analysis revealed that it contained the same hazardous chemicals found in UTC's waste stream.

Thirty-five of the 438 drums containing the waxy substance were removed by EPA in 1985. The drum logs maintained by environmental consultants show that the other 403 drums still contained 10,164

gallons of waxy material, indicating that 12,000 gallons (i.e., approximately 54% of the original contents) either had been poured out at the time of delivery or had leaked out while the drums were stockpiled at the Site. It is reasonable to infer that 54% of the 35 drums previously removed by EPA also escaped, and, therefore, that a total of 13,040 gallons of waxy waste attributable to UTC found its way into the soil.

There is evidence that Macera also may have delivered twenty drums labeled "Kolene" or "Kolene Tufftride" that contained cyanide, potassium and sodium. However, although UTC bought products from Kolene Corp. and generated a waste stream that contained cyanide, it treated its cyanide waste at its facility and did not send it off the premises for disposal.

IV. The Activities of the Generators/"Arrangers"

A. Thiokol (Morton)

Thiokol was one of approximately 130 companies from which CCC collected waste during 1976 and 1977. Morton is Thiokol's successor.

The waste collected from Thiokol came from three plants located in Trenton, New Jersey that manufactured various urethanes, polysulfide rubbers and elastomers. Most of the waste consisted of spent solvents used in cleaning machinery and laboratory equipment. The spent solvents used in cleaning the machinery were collected in drums. The solvent waste from the laboratories was stored in

"gallon sized safety cans" that had spring-loaded tops. The cans were red, rectangular in shape, and made of metal. Usually, when a can was filled, the spent solvents were poured into fifty-five-gallon drums for disposal, but on some occasions, the safety cans, themselves, were picked up by CCC. Thiokol was not the only company that used cans of that type.

The solvent waste generated both in the laboratories and in the manufacturing portions of the plants contained, among other things, methylene chloride, methyl ethyl ketone ("MEK"), and Chlorothene NU, which apparently is a trade name for a form of 1,1,1-TCA purchased by Thiokol from Dow Chemical. All of those chemicals are VOC's that were found at the Davis Site. Occasional batches of urethane, "filter cakes" used in manufacturing plasticizers, and small quantities of lubricating oil also were placed in drums for disposal. The urethane contained toluene diosocyanate ("TDI"), a/k/a benzene, see 40 C.F.R. § 302.4, and the filter cakes consisted primarily of diatomaceous earth and calcium sulfate.

CCC began collecting Thiokol’s waste in 1971 and collections averaged slightly more than 22,000 gallons per year. Some of the waste consisted of flammable solvents that probably were incinerated. The remainder most likely was transported offsite for disposal or stockpiled at the CCC facility for future disposal.

There is no direct evidence establishing that Thiokol waste was deposited at the Davis Site. However, as already noted, CCC

regularly had been collecting liquid waste from Thiokol since 1971 and it delivered 441,450 gallons to the Davis Site. Since there is no reason to believe that CCC handled Thiokol's waste any differently than the waste of its other 130 customers, it is reasonable to infer that some Thiokol waste was included in the waste transported by CCC to the Davis Site. That inference finds some support in the fact that CCC's bills of lading reflect receipt of drums of Chlorothene NU during 1977 and its chemical equivalent, 1,1,1-TCA, was found at the Site. Unfortunately for UTC, there is no way to determine the amount of Thiokol waste that was transported because, among other things, the volume of waste that CCC received from its other customers is unknown.

B. ACCO-Bristol

ACCO-Bristol was a customer of CWR. It manufactured controls for oil and gasoline lines. Its manufacturing process involved electroplating, welding, and soldering. The electroplating operation required that metal parts be de-greased with chlorinated solvents, a process that produced a waste sludge containing 1,1,1-TCA. The de-greased parts were plated by being immersed in liquid baths through which an electric charge was sent. For cadmium plating, the bath was a solution containing a cadmium compound and cyanide. The baths used for copper and nickel plating contained copper and nickel compounds dissolved in hydrochloric or sulfuric acid. The soldering and welding operations produced a spent

solution of soap and cyanide that was used to clean the parts after they were soldered or welded. The wastes generated by all three operations were placed in fifty-five-gallon drums for disposal.

During the time that CWR was delivering waste to the Davis Site, it made only two pickups from ACCO-Bristol. On April 6 it picked up 50 fifty-five-gallon drums, and on June 28 it picked up 24 fifty-five-gallon drums.

On the day following the June 28 pickup, CWR deposited seventy-nine drums at the Davis Site. Given CWR's consistent practice of transporting drums to Rhode Island the morning after a full truckload had been accumulated, and given the fact that this invariably occurred within one to three days after pickup, it is reasonable to infer that ACCO-Bristol's twenty-four drums containing 1,320 gallons of liquid waste were among the drums dumped on June 29. Conversely, since there are no “receipts” showing deliveries to the Davis Site within three days of the April 6 pickup, it must be inferred that the drums picked up on that day were deposited elsewhere.

C. Ashland

Ashland also was one of CWR's customers. Ashland operated a chemical manufacturing plant in Great Meadows, New Jersey. Most of its waste consisted of spent nitrating acid -- a mixture of 85% sulfuric acid, 4% nitric acid, and 11% water -- that was hauled away in tanker trucks. The remaining waste consisted primarily of spent

solvents and contained some used coveralls and gloves. The solvents most commonly used were isopropyl alcohol, methyl alcohol, toluene, benzene, and xylene, and the waste water contained trace amounts of various unspecified chemicals.

During May and June of 1977, CWR picked up thirteen tanker truckloads of spent nitrating acid and four flatbed truckloads containing 79 fifty-five-gallon drums. The drums were picked up on May 20, June 1, June 16 and June 30.

It is reasonable to infer that the drums collected on June 1 and June 30 were deposited at the Davis Site. Davis’s receipts show that Willie Jones, one of CWR’s drivers, delivered seventy-nine drums on June 2. Because CWR had an established practice of bringing full loads back to its facility and transporting them to Rhode Island on the following day, it is likely that those drums were the seventy-nine drums collected from Ashland on June 1.

Davis's "receipts" also show that CWR delivered seventy-nine drums on Tuesday, July 5. Although that delivery was made four days after the June 30 pickup, the intervening Monday was a holiday on which CWR's drivers presumably did not work. Consequently, it is likely that the drums delivered on July 5 were the same ones collected from Ashland on June 30.

In contrast, there is no evidence linking the waste collected from Ashland on May 20 or June 16 to the Davis Site. Davis’s “receipts” do not reflect any deliveries by CWR within 3-4 days

after those pickups. Nor are there any records indicating that CWR drivers made any tanker truck deliveries to the Site. On the contrary, all of the CWR "receipts" made out by Davis contain the notation "drums" or "barrels."

Accordingly, I find that 158 drums or 8,690 gallons of Ashland's waste was deposited at the Davis Site.

D. Gar

Gar was another CWR customer. It was in the electroplating business and generated wastes containing nitric acid, copper, nickel and cyanide.

During the time in 1977 that CWR was taking waste to the Davis Site, it picked up fifty-five-gallon drums of Gar's waste on the following occasions:

May 6 - 13 drums

June 20 - 5 drums

June 27 - 2 drums

September 2 - 7 drums

September 30 - 11 drums

On June 21, the day following the five-drum pickup, CWR deposited sixty drums of waste at the Davis Site. There is no indication that CWR made any other trips to the Davis Site within 3-4 days after collecting drums from Gar.

Since CWR almost always disposed of drums within three days after picking them up, it is reasonable to infer that the five

drums received on June 20 were among the drums deposited at the Davis Site on June 21. On the other hand, the fact that there are no receipts evidencing CWR deliveries to the Davis Site within three days of the other pickups makes it unlikely that the remaining drums were deposited there.

Accordingly, I find that 275 gallons of Gar's waste were deposited at the Davis Site.

E. Instapak

Instapak, another CWR customer, was located in Danbury, Connecticut and manufactured polyurethane foam packaging. The foam was made by mixing two components referred to as Component A and Component B. Component A was a polymeric isocyanate that Instapak purchased from another company. Component B was a mixture of ten chemicals, including trichlorofluromethane that Instapak blended, itself. Instapak also manufactured the equipment used to blend the components. Customers who purchased or leased the equipment from Instapak could purchase the components in order to make their own foam.

Instapak's waste came from several sources. Some consisted of Components A and/or B that were returned by customers. Some consisted of a sludge called "stillbottoms" that contained methylene chloride, a chemical used to clean refurbished dispensers. Both kinds of waste were placed in fifty-five-gallon drums for disposal.

CWR picked up forty-five drums on May 17, 1977, and twenty-nine drums on June 10, 1977. Davis's "receipts" show that the CWR deliveries that most closely follow those dates are May 27, ten days after the May 17 pickup, and June 21, eleven days after the June 10 pickup.

UTC contends that, although those deliveries were well beyond CWR's "three-day window," it may be inferred that Instapak waste was deposited at the Davis Site because both Davis and Emanuel Musillo observed a "big doughboy" or "Styrofoam ball" being created when two liquids that they received were mixed together. However, under these circumstances, those observations do not support such an inference.

Even if it is assumed, arguendo, that the phenomenon observed was caused by components A and B, there is no evidence to support the further inference that those components came from Instapak's waste stream. As previously stated, Instapak sold Component A and Component B to its customers. Since those customers have not been identified, there is no way to determine whether they may have included any of the approximately twenty settling third- and fourth-party defendants who were CWR customers or any other customers of CWR whose wastes may have been deposited at the Site.

Nor is there any evidence regarding the quantity of Instapak waste that might have found its way to the Davis Site. Thus, even if the Instapak waste was dumped there, it would be impossible to

calculate Instapak's share of liability.

In light of the aforementioned ten- to eleven-day gaps between collection of Instapak waste and deliveries to the Davis Site by CWR as well as the very real possibility that the observed reaction was attributable to chemicals from other sources, the inference urged by UTC would amount to sheer speculation. Accordingly, I find that UTC has failed to prove that any hazardous waste attributable to Instapak was deposited at the Davis Site.

F. Perkin-Elmer

Perkin-Elmer also was a CWR customer. It manufactured scientific instruments at a plant in Norwalk, Connecticut, and had two research and development facilities at 50 Danbury Road and 77 Danbury Road in Wilton, Connecticut. Perkin-Elmer also owns Qualitron, a manufacturer of printed circuit boards, located in Danbury, Connecticut.

Perkin-Elmer's Norwalk plant produced waste that contained cutting oil, spent solvents (including 1,1,1-TCA and toluene), stillbottoms containing toluene, paint sludge, hydrochloric acid, sulfuric acid, muriatic acid, and methylene chloride. The Wilton facilities generated acid wastes, and Qualitron's waste contained ferric chloride, potassium ferrocyanide, and unspecified industrial solvents. All of those wastes were collected in a variety of containers ranging from fifty-five-gallon drums to five-gallon pails.

During the time that CWR was taking wastes to the Davis Site, it made forty pickups from Perkin-Elmer. The only pickups that were made within three days before CWR delivered waste to the Davis Site were on the following dates in 1987:

Date	Location	Quantity	Gallons
May 26	Perkin-Elmer (Norwalk)	19 fifty-five gallon drums 1 fifteen gallon drum	1,060
June 20	Qualitron	13 fifty-five gallon drums	715
June 22	Perkin-Elmer (Norwalk)	14 fifty-five gallon drums	770
June 22	Perkin-Elmer (50 Danbury Rd., Wilton)	5 fifty-five gallon drums 1 thirty-gallon drum 4 fifteen-gallon drums 1 five-gallon container	370
June 22	Perkin-Elmer (77 Danbury Rd., Wilton)	8 fifty-five gallon drums 3 fifteen-gallon drums 4 five-gallon containers	505
June 27	Qualitron	12 fifty-five gallon drums	660
July 1	Qualitron	13 fifty-five gallon drums	715[6]
		TOTAL GALLONS:	4,795

Once again, based upon CWR's established practice, it is reasonable to infer that those 4,795 gallons of waste were included in CWR's deposits at the Davis Site on May 27 (seventy-nine drums), June 21 (sixty drums), June 23 (eighty drums), June 29 (seventy-nine drums) and July 5-7 (235 drums), respectively, but that the remaining wastes collected from Perkin-Elmer did not find their way to the Davis Site.

Conclusions of Law

[6]CWR's business records indicate that CWR charged $14 per fifty-five gallon drum and that it received $183 for the pickup on June 20, $170 for the pickup on June 27 and $183 for the pickup on July 1.

I. Declaratory Judgment

A. Appropriateness of Declaratory Judgment

The premise underlying UTC's request for a judgment "determining . . . the equitable contribution share of liability for the site properly allocated to each [party]" is that, at some time in the future, it is likely that UTC will be required to pay more than its fair share of the alleged common liability; and, therefore, that it will be entitled to contribution from the defendants. Unless a likelihood of entitlement to contribution is established, any judgment apportioning liability would amount to nothing more than an advisory opinion and this litigation would be "a needless waste of the Court's time and the litigants' resources." Davis, 1998 WL 682980, at * 11.

Once such a likelihood is demonstrated, an allocation of liability serves several purposes. First, it facilitates settlement among the parties by establishing their proportionate shares of future response costs. Thus, it enhances the possibility that the parties will be able to avoid the expenditure of time and money required to re-litigate the issue each time that new response costs are incurred. See Kelley v. E.I. DuPont de Nemours & Co., 17 F.3d 836, 845 (8th Cir. 1994); Morrison Enter. v. McShares, Inc., 13 F. Supp. 2d 1095, 1123 (D. Kan. 1998); Boeing Co. v. Cascade Corp., 920 F. Supp. 1121, 1133 (D. Or. 1996). In addition, allocation helps to alleviate the hardship that would be visited

upon the potentially responsible party ("PRP") seeking contribution if that PRP was, in effect, required to finance the entire cleanup operation before getting a determination regarding the shares attributable to the other PRP's.

Of course, seeking allocation before the remediation process has progressed to a point that response costs and the relative responsibility of each party can be assessed accurately is not a practice that should be encouraged. Revelations that UTC had incurred no response costs prior to the close of discovery and that some relevant evidence was uncovered after that date bring this case perilously close to that situation. However, the evidence presented is sufficient to enable the Court to make a meaningful allocation based upon the facts presently available.

The defendants argue that a declaratory judgment allocating liability is inappropriate for two reasons. First, they contend that CERCLA authorizes declaratory relief only for cost recovery actions brought pursuant to 42 U.S.C. § 9607(a) and not for contribution actions brought pursuant to § 9613(f). They point out that the declaratory judgment provision is contained in § 9613(g)(2), which provides that:

> In any such action described in <u>this</u> <u>subsection</u>, the court <u>shall</u> enter a declaratory judgment on liability for response costs or damages that will be binding on any subsequent action or actions to recover further response costs or damages. (Emphasis added)

Since subsection (g)(2) establishes a statute of limitations for

"an initial action for recovery of the costs referred to in section 9607," the defendants argue that it has no application to "contribution" actions referred to in § 9613(f) and for which the governing statute of limitations is found in § 9613(g)(3).

However, there is a split of authority on this question. Some courts have held that the declaratory judgment provision applies only to cost recovery actions. See, e.g., Reichhold Chems., Inc. v. Textron, Inc., 888 F. Supp. 1116, 1124 (N.D. Fla. 1995)("by its explicit language, [§ 9613(g)(2)] applies only to cost recovery actions" under § 9607). See also Sun Co. v. Browning-Ferris, Inc., 919 F. Supp. 1523, 1532 (N.D. Okla. 1996), rev'd in part on other grounds 124 F.3d 1187 (10th Cir. 1997), cert. denied 118 S. Ct. 1045 (1998). Other courts have held that, although § 9613(f) establishes the mechanism for seeking contribution, the right to contribution arises under § 9607, and, therefore, a contribution action is an action "referred to in § 9607." See, e.g., Pinal Creek Group v. Newmont Mining Group, 118 F.3d 1298, 1302 (9th Cir. 1997); Morrison Enter., 13 F. Supp. 2d at 1123 ("[Section 9613(f)] did not create a new cause of action, nor did it create any new liabilities. It is no more than a mechanism for apportioning CERCLA-defined costs. Thus, of necessity, it must incorporate the liabilities set forth in [§ 9607(a)] and . . . a [§ 9613(f)] action for contribution is an action under [§ 9607]"). The First Circuit has not addressed this precise issue but it has described a cost

recovery action by an innocent party and a contribution action by a liable party as "separate and distinct." See, United Tech. Corp. v. Browning-Ferris Indus., Inc., 33 F.3d 96, 98 (1st Cir. 1994).

In this case, it does not matter whether the declaratory judgment provision contained in § 9613(g)(2) applies only to cost recovery actions. If that provision's use of the mandatory "shall" is construed to mean that a court is required to issue a declaratory judgment, limiting its application to cost recovery actions would not prohibit issuance of a declaratory judgment in a contribution action.

Similarly, if the provision is viewed, merely, as permissive, its failure to expressly authorize declaratory judgments allocating contribution liability would not preclude such a remedy. Sun Co., 919 F. Supp. at 1532 ("[A] Court retains inherent authority, absent an express statutory command to the contrary, to fashion appropriate remedies in civil suits over which it has jurisdiction."). Indeed, it is well established that a party seeking contribution under CERCLA may obtain declaratory relief under 28 U.S.C. § 2201, the Declaratory Judgment Act. See Boeing, 920 F. Supp. at 1133 (citing Wickland Oil Terminals v. Asarco, Inc., 792 F.2d 887, 893 (9th Cir. 1986)); Sun Co., 919 F. Supp. at 1533. In this case, there is no question that the apportionment of liability among the litigants presents a real and substantial controversy between parties having adverse interests that satisfies

the requirements of the Declaratory Judgment Act.

The defendants also argue that, even if the Court has authority to issue a declaratory judgment, it should not do so here, because declaratory relief was not demanded in UTC's pleadings. However, that argument rests on a faulty premise. As already noted, UTC's complaint asks the Court to enter a judgment "determin[ing] . . . the equitable contribution share of liability . . . properly allocated to each [party]." Notice pleading does not require any magic words to describe the relief sought. It is sufficient that the complaint fairly apprises the defendants of the claim being made. Although UTC's complaint could have been more explicit, it clearly conveys a demand for a judicial determination regarding each party's "share of liability." In addition, the Court's case management order dated February 13, 1998, specifically identifies determination of the "equitable contribution share of liability for past and future response costs at the Site" as one of the matters to be determined at trial.

B. Declaratory Judgment - Elements

In order to obtain a declaratory judgment allocating liability for future response costs, UTC must establish:

1. That the defendants and UTC share a common liability for the future response costs (i.e., that they are jointly and severally liable for those costs);

2. The percentage or pro rata share of the common liability that

is attributable to each defendant; and

3. A reasonable likelihood that UTC will be required to pay more than its pro rata or fair share of the common liability.

Davis, 1998 WL 682980, at *4-5 (citations omitted). See also Boeing, 920 F. Supp. at 1140.

II. The Defendants' Common Liability

In order to establish that a defendant shares liability for future response costs, UTC must prove that:

1. The Davis Site is a "facility;"

2. There was an actual or threatened "release" of a "hazardous substance" from the Site;

3. The release or threatened release resulted in or will result in "response costs" being incurred; and

4. The defendant is within one of the four categories of liable parties described in 42 U.S.C. § 9607(a)(1)-(4).

Davis, 1998 WL 682890, at *5 (citing In re Hemingway Transport, Inc., 993 F.2d 915, 931 (1st Cir. 1993); Dedham Water Co. v. Cumberland Farms Dairy, Inc., 889 F.2d 1146, 1150 (1st Cir. 1989); Davis, 882 F. Supp. at 1220.).

In this case, there is no question that the first three elements have been proven. CERCLA defines a "facility" as "any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located . . . ."

42 U.S.C. § 9601(9)(B). As already noted, a number of hazardous substances were found in containers, the soil and/or the groundwater at the Davis Site.

Nor is there any question that those hazardous substances were "released" within the meaning of 42 U.S.C. § 9601(22). That subsection defines a "release" as "any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant)." Here, large volumes of liquid wastes containing hazardous substances were poured or leaked onto the ground and leached into the soil and barrels and other containers containing solid and semi-solid hazardous substances were abandoned and/or buried at the Site.

Finally, it is clear that the release and threatened release of those hazardous substances has required and will continue to require response costs to be incurred. "Response costs" include both "removal" activity and "remedial" activity. 42 U.S.C. § 9601(23). Davis, 882 F. Supp. at 1220 n.5. Removal activity encompasses "the cleanup or removal of released hazardous substances from the environment," and "remedial" activity extends to actions that "prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to present or

future public health or welfare or the environment." Id. Here, EPA's three-pronged cleanup plan includes both kinds of activity.

The only issue is whether the defendants are liable for those response costs on the grounds that they either operated the facility, transported the hazardous substances to the site, or arranged for the hazardous substances to be disposed of at the Site.

A. Owner/Operator Liability

CERCLA imposes liability on "the owner and operator of . . . a facility" and on "any person who at the time of disposal of any hazardous substance owned or operated any facility at which such hazardous substances were disposed of . . . ." 42 U.S.C. §§ 9607(a)(1) & (2).

In this case, it is undisputed that William Davis operated the Site. He determined who was allowed to dump waste, what could be dumped, and the manner in which it was dumped. Although Eleanor Davis provided bookkeeping services and the Davis children occasionally assisted their father, none of them participated to the extent or exercised the degree of control that would justify classifying them as operators. However, Eleanor Davis as a co-owner of the property is deemed an owner of the facility. Id. Accordingly, William Davis is liable as an operator, and he and Eleanor Davis share liability as owners.

B. Transporter Liability

CERCLA imposes transporter liability on "any person who accepts

or accepted any hazardous substances for transport to disposal treatment facilities, incinerations vessels or sites selected by such person . . . ." 42 U.S.C. § 9607(a)(4).

In this case, there is no question that CCC, CWR, and the Capuano defendants transported hazardous waste to the Davis Site. Since UTC has asserted transporter liability claims against them and against William Carracino and Emanuel Musillo, the respective principals of CCC and CWR, and since all of them have been defaulted, they all are liable as transporters.[7]

On the other hand, the claims against Drum Automation and Michael Musillo, its owner, should be dismissed because there is no evidence that Drum Automation transported any waste to the Davis Site. Furthermore, Macera previously was found not liable as a transporter. Davis, 1998 WL 682980 at *7 (granting Macera's motion for summary judgment).

C. Arranger or Generator Liability

CERCLA imposes arranger liability on "any person who by contract, agreement, or otherwise arranged for disposal or treatment, or arranged with a transporter for transport for disposal or treatment, of hazardous substances owned or possessed by such person, by any other party or entity, at any facility or incineration vessel owned or operated by another party or entity

[7]It is not clear whether the claims against Carracino and Musillo are based on their individual actions or on a "piercing the corporate veil" theory.

and containing such hazardous substances." 42 U.S.C. § 9607(a)(3).

In order to establish that a defendant was an "arranger," UTC must prove that:

> 1. The defendant arranged for a hazardous substance to be transported to or disposed of at the Davis Site;
> 2. There was a release or threatened release of that kind of hazardous substance; and
> 3. The release or threatened release triggered response costs (i.e., caused response costs to be incurred).

Davis, 1998 WL 682980, at *9 (citations omitted). In the context of this case, proof that a defendant generator's hazardous waste "can be located and identified at the Davis Site" is a sine qua non in establishing arranger liability. United States v. Davis, 882 F. Supp. 1217, 1221 (D.R.I. 1995).

UTC asserts that, when a generator's waste is shipped to a third party and loses its identity by being co-mingled with other wastes and the co-mingled waste then is deposited at a CERCLA site where wastes similar to the wastes produced by the generator are found, the burden shifts to the generator to show that its wastes were not among those deposited. In the case of Thiokol, it may be reasonable to infer that some of its waste ended up at the Davis Site because Thiokol waste was collected by CCC and apparently was

co-mingled with other waste, CCC delivered wastes to the Davis Site, and wastes similar to those generated by Thiokol were found at the Davis Site.

However, there is no evidence that wastes produced by any of the other generator defendants were commingled with other wastes and, then, deposited at the Davis Site. On the contrary, the uncontradicted evidence is that the generator defendants' wastes never lost their identities because they were transported to the Davis Site in the same containers in which they were collected by CWR and the sources of those containers can be identified by comparing the records of CWR's pickups with Davis's receipts. Nevertheless, as previously stated, the evidence does establish hazardous substances produced by ACCO-Bristol, Ashland, Gar, and Perkin-Elmer as well as Morton were deposited at the Davis Site, that each of them contracted for the disposal and that the release and threatened release of those kinds of substances triggered response costs. Accordingly, those generator defendants are "arrangers" under CERCLA. By contrast, the evidence does not support a finding that Instapak's waste was deposited at the Davis Site. Consequently, UTC has failed to prove that Instapak is an "arranger."

III. The Fair or Pro Rata Share of Each Party

A. Right to Contribution

The alleged right to contribution upon which UTC's

entitlement to a judgment allocating liability rests is governed by § 9613(f) which permits contribution from any party that may be liable under § 9607(a) and provides that:

> In resolving contribution claims, the court may allocate response costs among liable parties using such equitable factors as the court determines are appropriate.

In providing for "contribution," Congress "fully intended courts to give the words their customary meaning." United Tech., 33 F.3d at 101. It is well established that, for purposes of § 9613(f), "contribution" refers to the right of "a responsible party to recover from another responsible party that portion of its costs that are in excess of its pro rata share of the aggregate response costs." Id. at 103.

It is equally well established that a defendant's liability for contribution is "several" rather than "joint and several." Pinal Creek, 118 F.3d at 1303. Thus, each defendant is responsible only for its equitable share of the response costs. Centerior Serv. Co. v. ACME Scrap Iron & Metal Corp., 153 F.3d 344, 348 (6th Cir. 1998); United States v. Kramer, 953 F. Supp. 592, 600 (D.N.J. 1997). In this respect, contribution liability under § 9613(f) differs from the liability imposed in a cost recovery action under § 9607, where one liable defendant may be required to pay the entire cost. See Centerior, 153 F.3d at 348.

However, that does not mean that recovery under § 9613(f) is strictly limited to a proportionate share of the cost that

precisely corresponds to the pro rata share of harm directly caused by each defendant. In calculating a defendant's equitable share of response costs, a court "enjoys broad discretion to consider and apply such equitable factors as it deems appropriate to achieve a just and fair allocation among liable parties." Browning-Ferris v. TerMaat, 13 F. Supp. 2d 756, 773 (N.D. Ill. 1998); Kramer, 953 F. Supp. at 597; 42 U.S.C. § 9613(f)(1). Moreover, the fair share allocated to a defendant may include a portion of the liability attributed to "orphan shares," which refer to harm attributable to insolvent or unknown PRP's. Kramer, 953 F. Supp. at 598 ("[N]othing in the statute precludes a court from finding that equity demands that response costs refer to an 'orphan share' be borne by 'liable parties' that are third party defendants"); Pinal Creek, 118 F.3d at 1303.

In any event, since contribution liability is several, the party seeking contribution has the burden of proving both that a defendant shares in the common liability and what that share is.

B. Allocating Liability

1. The Equitable Factors

Courts have considered a potpourri of factors in equitably allocating CERCLA response costs among liable parties. Many courts have applied the so-called "Gore factors" that were enumerated in a bill sponsored by then-Congressman Albert Gore but never enacted. Those factors are: the ability of the parties to demonstrate that

their contribution to the site can be distinguished; the amount of hazardous waste involved; the degree of toxicity of the hazardous waste involved; the degree of involvement by the parties in the generation, transportation, treatment, storage or disposal of the hazardous waste; the degree of care exercised by the parties with respect to the hazardous waste concerned, taking into account the characteristic of such waste; and the degree of cooperation by the parties with federal, state or local officials to prevent any harm to the public health or the environment. H.R. 7020, 126 Cong. Rec. 26,779, 26,781 (1980). See, e.g., Ekotek Site PRP Comm. v. Self, 1 F. Supp. 2d 1282, 1293 (D. Utah 1998); Boeing, 920 F. Supp. at 1132; Akzo Coatings, Inc. v. Aigner Corp., 909 F. Supp. 1154, 1162 n.3 (N.D. Ind. 1995); Central Me. Power Co. v. F.J. O'Connor Co., 838 F. Supp. 641, 645 (D. Me. 1993).

That list is not exhaustive. Other factors commonly taken into account are: the financial resources of the liable parties; the extent of the benefit that the parties received from the hazardous waste disposal practices; the extent of the parties' knowledge and awareness of the environmental contamination of the site; the efforts made, if any, to prevent environmental harm and the efforts made to settle the case. See id; United States v. Atlas Minerals & Chem., Inc., C.A. No. 91-5118, 1995 WL 510304, at *86 (E.D. Pa. Aug. 22, 1995).

Because the factors to be considered are both numerous and

difficult to quantify, allocation cannot be made with mathematical precision. One court has compared the allocation process to "Kentucky windage." TerMaat, 13 F. Supp. 2d at 781. As the TerMaat court aptly put it, a court is required to "[u]nravel a 20-year process involving millions of cubic yards of waste and complex ecological, biological and geological forces" and to assess fault on a 'sliding scale' that makes unacceptable methods that may have been acceptable when they were employed. TerMaat, 13 F. Supp. 2d at 777.

In a nutshell, allocation is a highly fact-intensive process that depends upon the particular circumstances of each case. See Environmental Trans. Sys., Inc. v. ENSCO, Inc., 969 F.2d 503, 509 (7th Cir. 1992) ("[I]n any given case, a court may consider several factors, a few factors, or only one determining factor . . . depending on the totality of the circumstances presented to the court."). The critical factors may be grouped into four categories:

1. The extent to which cleanup costs are attributable to wastes for which a party is responsible.
2. The party's level of culpability.
3. The degree to which the party benefitted from disposal of the waste.
4. The party's ability to pay its share of the cost.

2. Per Capita Approach

UTC argues that liability should be allocated per capita among all defendants that are responsible for any hazardous wastes found at the Davis Site unless there is evidence indicating that a different allocation is appropriate. This Court rejects that argument for a variety of reasons.

First, a per capita approach might have some merit in cases where the quantity of waste attributable to each PRP is roughly the same and all of the PRP's are parties. However, in this case, neither of those conditions is satisfied. Here, the amount of hazardous waste attributable to each party varies greatly, and allocating liability on a per capita basis would result in shares that are grossly disproportionate to the defendants' relative degrees of responsibility.

The suggestion that disproportionate liability can be avoided by permitting the defendants to establish that adjustments should be made to per capita liability unjustifiably shifts the burden of proof from the plaintiff, as the party seeking contribution, to the defendants. Such burden-shifting may be appropriate where the pertinent evidence is solely in the possession of the defendant. However, this is not one of those cases, at least insofar as the generator defendants are concerned. There is no indication that the generator defendants had any greater access than did UTC to evidence regarding the waste deposited

at the Davis Site. That evidence was almost entirely in the possession of Davis and the transporters.

Moreover, the inequity of a per capita allocation would be compounded by the fact that the remaining defendants appear to be only a few of the companies responsible for hazardous waste found at the Davis Site. Equitable allocation calls for liability to be apportioned among all responsible parties. Here, neither the four original defendants that settled with the United States nor the 49 third- and fourth-party defendants that have settled with UTC are parties to the allocation phase of the case. UTC urges that the shares of the absent PRP's should be treated as orphan shares and allocated among these defendants. That would result in these contribution defendants being held liable for the harm caused by, at least, 54 other PRP's who are both solvent and known. It also would result in the kind of double recovery expressly prohibited by § 9614(b) by allowing UTC to recover a portion of the costs for which it already has been or will be compensated under the terms of the settlement agreements.[8] There is nothing "equitable" about that kind of an allocation.

UTC's reliance upon Acushnet Co. v. Coaters, Inc., 972 F. Supp. 41 (D. Mass. 1997), as authority for making a per

[8]Section 9614(b) provides: "Any person who receives compensation for removal costs or damages or claims pursuant to this chapter shall be precluded from recovering compensation for the same removal costs or damages or claims pursuant to any other State or Federal law."

capita allocation is misplaced. In Acushnet, Judge Keeton merely noted that "one way" of allocating shares in a hazardous waste case when the parties are unable to prove exact or approximate fair shares "is to start with a presumption that, once a party is found to be liable, that party is to be assigned an equal share," a presumption that is "rebuttable by credible evidence sufficient" to adjust that party's share up or down. Id. at 63 (emphasis added). However, Judge Keeton, himself, eschewed this approach and instead allocated each defendant's fair share of cleanup costs by simply "weighing all the relevant factors." Id. at 71-72 ("I find that I am able to make findings reasoned from all this evidence that are far more likely to be consistent with the truth about the nature and extent of each contributor's actions and resulting needs for remediation at the . . . sites than would be shares of responsibility determined on a per capita basis or on an all-or-none basis.").

3. Application of Equitable Factors

(a) Waste Attributable to Each Party

In this case, the dominant factor in determining each party's equitable share of liability is the extent to which the response costs are attributable to waste for which that party is directly responsible. Since the hazardous waste deposited at the Davis Site has been commingled into an

essentially homogeneous "witches' brew," it is impossible to allocate discrete portions of the cleanup cost to any particular type of waste or any particular party. Consequently, the fairest, and most practical, measure of relative responsibility is the quantity or volume of hazardous waste attributable to each party.

In the case of Thiokol (i.e., Morton), there is no way to calculate the volume of its waste that may have been deposited at the Davis Site. As previously stated, the conclusion that Thiokol's waste found its way to the Davis Site rests on the premise that, because Thiokol was one of CCC's customers, some of its waste probably was included in the waste delivered by CCC. However, there is no evidence establishing the percentage of waste collected by CCC that was deposited at the Davis Site. Nor is there any evidence establishing the percentage of waste collected by CCC that came from Thiokol rather than from CCC's approximately 130 other customers. Without that information, any attempt to calculate the percentage of waste deposited by CCC that is attributable to Thiokol would be sheer speculation. Therefore, no allocation of responsibility can be made to Morton.[9]

---

[9]Four additional generator defendants, AM International, Inc., Bates Manufacturing Co., Hexagon Laboratories, and Quality Rolling & Deburring Co., have been defaulted, and, consequently, must be viewed as responsible for some of the hazardous waste at the Site. However, there is no evidence regarding the amount of their waste that may have been deposited at the Davis Site. Therefore, there is no basis for allocating a specific share of liability for

Allocating responsibility among the remaining defendants on the basis of volume is a two-step process. First, since a contribution defendant ordinarily is liable only for the portion of the harm that it caused, a determination must be made regarding the volume of waste attributable to each defendant.

Next, to the extent that responsibility for a particular quantity of waste is shared by more than one party, the shared responsibility must be apportioned among them in accordance with the remaining equitable factors. The Davises, for example, are responsible for the total volume of waste dumped at the Site. By the same token, each of the transporters is responsible for that portion of the total volume that the transporter brought to the Site and each generator defendant is responsible for that portion of the total volume that the generator produced. In order to determine how the shared responsibility should be apportioned and to allocate liability among the parties, consideration must be given to the remaining equitable factors.

(b) Level of culpability

There are a variety of considerations that bear upon a responsible party's level of culpability under CERCLA. They include the extent of that party's responsibility for proper

---

response costs to them, either.

disposition of the waste, its awareness of the potential harm, the degree of care it exercised in order to avert the harm and its willingness to accept responsibility for remediating the harm.

In this case, the generators bear primary responsibility for proper disposition of the hazardous wastes that they produced. That responsibility cannot be delegated to others. A significant portion of that responsibility also is borne by William Davis, as the Site operator, and the person overseeing the disposal.

The generators and Davis also were most aware of the harm that could result from improper disposition. The generators knew that the wastes that they produced contained hazardous substances. While Davis may not have known the exact composition of those wastes, he clearly was on notice that there were noxious chemicals that were percolating down into the groundwater table and migrating into a nearby stream.

Although the generators may be faulted for not sufficiently inquiring about the method of disposition, it appears that they exercised some degree of care in handling the wastes and arranging to have them disposed of by companies that were duly licensed. Davis, on the other hand, failed to exercise even a modicum of care to prevent or to minimize the obvious potential harm to human health and/or the environment.

The Court finds it difficult to accept Davis’s testimony that the methods employed were approved by the EPA and by the Rhode Island Department of Environmental Management. Indeed, he continued accepting those wastes even after they caused a chemical fire at the Site.

The transporters also are culpable, although to a lesser degree. Clearly, they knew the nature of the wastes being transported and the method of disposition. CWR, in particular, transported waste of unknown origin from a parking lot in the Meadowlands under circumstances placing it on notice that the waste was extremely hazardous and perhaps illegal.

Insofar as acceptance of responsibility is concerned, the only parties that can even claim to have displayed any willingness to voluntarily participate in remediation of the Site are Davis and UTC. Davis's “cooperation” consisted of providing information, access to the Site, "security," and some of the equipment used in the cleanup. However, he was paid for his services and apparently was promised that his liability would be limited to the proceeds from any sale of his property. Until then, it appears that his “cooperation” was minimal and that he actually prevented the EPA from gaining access to the Site. UTC, on the other hand, did settle with the government and agreed to be responsible for

the soil remediation. However, any credit that UTC deserves is greatly diminished by the fact that the settlement did not come until eleven years after a demand was made by EPA and after UTC had been adjudged liable in Phase I of this litigation.

(c) Degree of benefit

Fairness suggests that parties deriving greater benefit from disposal of hazardous waste should bear a greater portion of the responsibility for mitigating its adverse effects.

In this case, all of the parties benefitted from disposition of the hazardous waste. William Davis, as the operator, profited directly by receiving fees, although rather modest ones, from the transporters. The transporters also received fees from the generators and the generators benefitted, albeit less directly, by ridding themselves of wastes that were the by-products of their businesses.

(d) Ability to pay

Although ability to pay is one of the factors to be considered in equitably allocating CERCLA liability among contribution defendants, a defendant's share of liability is not increased or decreased simply because that defendant's net worth is more or less than the net worth of other defendants. Rather, the principal reason for considering ability to pay is to ensure that the party seeking contribution will not bear

sole responsibility for any portion of the joint liability otherwise attributable to defendants from whom recovery is unlikely. The right to contribution would be a hollow one if the party seeking contribution could recover only that portion of the joint and several liability attributable to defendants capable of paying their respective shares. Taking ability to pay into account recognizes that a PRP's share of liability should not be established at a level that exceeds its resources and that the portion of liability that, otherwise, would be allocated to that PRP should be equitably apportioned among all of the responsible PRP's rather than being borne entirely by the party seeking contribution.

In this case, there is a dearth of evidence regarding the financial condition of the defendants. There were passing references indicating that CCC "ceased operating" sometime after a fire in April 1980 and that CWR was closed down by the State of Connecticut in March 1978. In addition, Davis testified that the EPA has placed a lien on his property in North Smithfield and that, if and when the property is sold, the EPA will receive the proceeds. It also appears that the generator defendants and UTC still are actively engaged in their respective businesses and that some of them are large, nationally-known corporations. No further evidence was presented regarding the financial condition of those

defendants and no evidence at all was presented with respect to the other defendants' solvency.

From this rather sparse record, the most that can be inferred is that UTC and the generator defendants have a much greater ability to pay response costs than do the other defendants.

IV. Calculation of Equitable Shares

ACCO-Bristol, Ashland, Gar, and Perkin-Elmer, as the four liable generator defendants, share responsibility for the hazardous wastes that they produced with CWR, the transporter of those wastes, and with the Davises. Because the generators and William Davis are more culpable than CWR, they bear the lion's share of that shared responsibility. In addition, the Davises and CWR also are responsible for much greater volumes of hazardous wastes not produced by the generator defendants.

Because it is doubtful that the Davises and/or CWR will be able to pay in full that portion of the response costs attributable to all of the hazardous wastes for which they are accountable; and, because the generator defendants are in a far better position to absorb the response costs attributable to the hazardous wastes that they produced, the Court allocates all of those costs to the generator defendants. Accordingly, each generator's equitable share of liability is equal to the percentage of the total volume of hazardous waste

deposited at the Davis Site that the particular generator produced.

Since Macera has been found not liable as a "transporter" of the waste produced by UTC, responsibility for that waste is shared only by UTC and the Davises. Once again, because of doubts regarding the Davises' ability to fully pay the response costs associated with all of the hazardous wastes for which they are responsible, and because UTC is in a far better position to pay the costs attributable to the waste that it produced, all of these costs are allocated to UTC. The appropriateness of holding UTC liable for the entire cost is underscored by the fact that the 13,040 gallons attributed to it does not include the solid and semi-solid waste still contained in drums from UTC that were found at the Site. While that waste may not add to the soil and groundwater remediation costs, some costs will be incurred in removing and disposing of that waste.

Thus, the equitable shares of liability allocated to UTC and each of the liable generator defendants are as follows:

Generator	Volume Deposited	Percent of Total Volume (844,275 gals.)	Equitable Share of Liability
ACCO-Bristol	1,320 gals.	0.16%	.16%
Ashland	8,690 gals.	1.03%	1.03%
Gar	275 gals.	.03%	.03%
Perkin-Elmer	4,795 gals.	.57%	.57%
UTC	13,040 gals.	1.54%	1.54%

Responsibility for the 816,155 gallons of hazardous wastes produced by arranger/generators other than UTC and the generator defendants must be allocated between the transporters of that waste and the Davises, as the parties who share responsibility for those wastes. Of that total, 50,095 gallons were transported by CWR, 441,450 gallons were transported by CCC, and 324,610 gallons were transported by Capuano. Because the lack of evidence makes it virtually impossible to compare the transporters' and the Davises' ability to pay, the allocation of liability among them will be based primarily on their levels of responsibility and culpability. Since William Davis exercised complete control over the manner of disposal and was most intimately familiar with its effects, 64% of the liability for the response costs attributable to those 816,155 gallons is allocated to him. One percent is allocated to Eleanor Davis who was an owner of the Site but played a minimal role in its operation. The remaining 35% is allocated to the transporter defendants in proportion to the quantities of waste that they transported.

Consequently, the equitable shares of liability allocated to the Davises and the transporters are as follows:

Defendant	Volume Deposited	Percentage of Responsibility	Volume Responsibility	Percentage of Total Vol. (844,275 gals.)	Equitable Share of Liability
William Davis	816,155 gals.	64%	522,339 gals.	61.87%	61.87%
Eleanor Davis	816,155 gals.	1%	8,162 gals.	.97%	.97%
CWR and Emanuel Musillo	50,095 gals.	35%	17,533 gals.	2.08%	2.08%
CCC and William Carracino	441,450 gals.	35%	154,508 gals.	18.30%	18.30%
Capuano Companies	324,610 gals.	35%	113,614 gals.	13.46%	13.46%

V. Orphan Shares

UTC argues that the shares of liability allocated to the Davises and the transporters should be treated as orphan shares and re-allocated among the generator defendants because the Davises and the transporters are insolvent. I find that argument unpersuasive for several reasons.

First, as previously stated, UTC has failed to sustain its burden of proving that the Davises and/or the transporters are insolvent. The failure to present the issue squarely before trial deprived the generator defendants of an opportunity to attempt to rebut the inference of insolvency and provides a further reason why such an inference should not be drawn lightly.

Furthermore, even assuming arguendo that the Davises and

the transporters are insolvent, UTC has failed to establish that the shares of liability allocated to them are "orphan shares." An "orphan share" is that portion of response cost liability for which no known and solvent party amenable to suit bears responsibility. See TerMaat, 13 F. Supp. 2d at 773; Ekotek v. Self, 1 F. Supp. 2d 1282, 1292 (D. Utah 1998); Kramer, 953 F. Supp. at 595; Charter Township of Oshtemo v. American Cyanamid Co., 898 F. Supp. 506, 508 (W.D. Mich. 1995). The mere fact that a party bearing responsibility is not before the Court does not make its share of liability an "orphan share." Id.

Here, responsibility for quantities of waste not attributable to the generator defendants is shared by the Davises, the transporters and the generator/arrangers of that waste. Thus, the response costs attributable to those quantities cannot be classified as orphan shares unless those generator/arrangers, also, are unknown and/or insolvent. However, UTC has presented no evidence that the generator/arrangers of that waste are either unknown or insolvent. On the contrary, in its pleadings, UTC has asserted contribution claims against many PRP's that allegedly generated hazardous wastes found at the Site. Furthermore, 53 of those generators have, at least tacitly, acknowledged responsibility and demonstrated their solvency by entering

into settlement agreements calling for them to pay substantial sums of money to UTC and the United States. Evidence presented at trial further supports the conclusion that at least part of the hazardous waste found at the Davis Site was produced by some of the settling parties.

In addition, under these circumstances, it would be inequitable to shift the burden of the costs associated with the quantities of hazardous waste, in question, from the transporters and owner/operators who disposed of it and the absent generators who produced it to these generator defendants who have no connection to it. The inequity would be compounded by the fact that many, if not all, of the absent generators are known to UTC and have been parties to this litigation. The inequity would be further compounded by the fact that, to the extent that the settlement agreements between the absent generators, UTC and the United States have been or will be approved, these generator defendants will be foreclosed from seeking contribution from them. See 42 U.S.C. § 9622(h)(4).

Finally, allocating to these generator defendants portions of liability attributable to wastes for which the settling parties are responsible could result in the kind of double recovery expressly prohibited by § 9614. See 42 U.S.C. § 9614(b). Allowing UTC to collect, from the generator

defendants, costs referable to wastes produced by other generators and for which UTC is being compensated by those generators would, in effect, allow UTC to recover twice for the same costs. At the very least, the net amounts received by UTC from the settling parties would have to be taken into account. See Atlas Minerals, 1995 WL 510304, at *7; Boeing, 920 F. Supp. at 1140 ("The prohibition of 42 U.S.C. § 9614 against double recovery requires that settlement funds be factored into the allocation of response costs.").

VI. Likelihood that UTC Will be Required to Pay More than its Fair Share

UTC will have no right to contribution for response costs unless and until it pays more than its equitable share of those costs. Davis, 1998 WL 682980, at *10 (citing United Tech., 33 F.3d at 100). Under the terms of its settlement agreement with the government, UTC has assumed responsibility for the soil remediation estimated to cost $14 million and it must make a cash payment of $2.8 million. However, UTC's total obligation for remediation costs could be reduced to as little as $10.35 million depending upon how many of the pending settlements are approved and how much is received from all of the settling third and fourth-party defendants.

As matters presently stand, the response costs consist of an estimated $49 million in remediation expenses and $6 million in enforcement costs. It appears that the enforcement

costs are attributable almost entirely to expenses incurred by the government in the Phase I litigation against UTC, and that, therefore, they should be borne entirely by UTC. However, that issue need not be decided in order to determine the likelihood that UTC will be required to pay more than its fair share. UTC's 1.54% share of liability translates into $754,600 in remediation costs. Thus, even if the $6 million in enforcement costs is viewed as an additional part of UTC's contribution threshold, the threshold clearly is exceeded by UTC's settlement obligation of at least $10.35 million. Consequently, UTC has established a likelihood that it will be entitled to future contribution.

Conclusion

For all of the foregoing reasons, the Court declares that liability for response costs incurred at the Davis Site should be allocated among the parties as follows:

Defendant	Percentage of Liability
ACCO-Bristol	0.16%
Ashland	1.03%
Gar	0.03%
Perkin-Elmer	0.57%
UTC	1.54%
CWR	2.08%
CCC	18.30%
Capuano	13.46%
William Davis	61.87%

Eleanor Davis	0.97%
TOTAL	100%

The facts hereby determined and the issues hereby decided will not be revisited. However, the Court retains jurisdiction for the purpose of revising this allocation if and when additional facts are discovered that were not reasonably available to the parties at the time of trial and that clearly demonstrate a change in circumstances so significant that the allocation would be rendered manifestly inequitable. In retaining jurisdiction for this purpose, the Court strongly discourages the parties from seeking to reopen this matter without a compelling reason. A clear showing of a material change in circumstances rendering the allocation palpably inequitable will be required.

IT IS SO ORDERED,

_____

Ernest C. Torres
United States District Judge

Date: , 1998

opinions\davistr.opn