UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF WISCONSIN

APPLETON PAPERS INC. and NCR CORP.,

Plaintiffs,

v. Case No. 08-C-16

GEORGE A. WHITING PAPER CO., et al.,

Defendants.

DECISION AND ORDER DISMISSING PLAINTIFFS' CLAIMS FOR CONTRIBUTION

In 1954 the National Cash Register Corporation introduced "No Carbon Required" copy paper, the name being a play on NCR's corporate name. A key component of NCR paper was an emulsion (a mixture of liquids that do not mix) containing Aroclor 1242, a solvent manufactured by the Monsanto Corporation. Aroclor 1242 is a type of polychlorinated biphenyl ("PCB"), a stable compound that does not easily degrade.[1] PCBs have been linked to illness and death in fish, birds and other wildlife, and studies suggest that their persistence in the environment has caused numerous health problems, including cancer, in humans who have consumed fish or had other contact with PCBs.

Although NCR developed and sold its carbonless paper product and created the PCB-containing emulsion, the paper was actually manufactured by the Appleton Coated Paper Company, which coated

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[1]The "12" stands for the number of carbon atoms, while the "42" represents the percentage of chlorine.

sheets of paper with NCR's emulsion. This manufacturing process resulted in significant discharges of PCBs into the Fox River. PCBs also escaped into the river when Appleton Coated sold its paper waste to paper mills for recycling, also a water intensive process.

After years of working closely together, NCR purchased the Appleton Coated Paper Company in 1970, and Appleton Coated merged with another company and formed Appleton Papers, Inc. the next year. As a result of their ownership interests in Appleton Coated, Plaintiffs Appleton Papers, Inc. and NCR Corp. have been named by the United States Environmental Protection Agency as potentially responsible parties ("PRPs") for the environmental damage done to the Lower Fox River, which stretches 39 miles from Lake Winnebago to Green Bay and into Lake Michigan.[2] Pursuant to a number of government orders and consent decrees, these two companies have begun paying several million dollars to fund the ongoing cleanup of PCBs from the Lower Fox River. The cleanup project, which is thought to be the largest of its kind ever undertaken anywhere in the world, involves a combination of dredging and capping (covering the PCB-laden river sediment with sand and gravel), aided by technology such as a GPS-guided barge that allows dredge operators to be accurate within a few centimeters.[3] The dredging operation continues 24 hours a day, five days a week (excepting winter), and it is expected to take nine years to complete. The slurry of PCB-laden river sediment is sent to a custom quarter-million square foot processing plant, where it is filtered, separated, dried, and pressed into "cakes" that are then transported

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[2]Not to be confused with the Upper Fox River, which stretches from central Wisconsin into Lake Winnebago.

[3] The technical aspects of the cleanup process are explained in an online article. "World's Largest PCB Cleanup Takes Fresh Approach," *GreenSource,* Sept. 1, 2009, http://greensource.construction.com/news/2009/090901Fox-river-cleanup.asp.

to a landfill. Recent estimates have suggested that the total price for the cleanup could approach one billion dollars.[4]

The Lower Fox River area boasts the largest concentration of paper mills in the world, and prior to 1972 many of these mills recycled NCR-brand carbonless copy paper and thereby unwittingly released PCBs into the river. Other entities, such as cities, utilities and sewerage districts, treated and/or released wastewater containing NCR's PCBs into the river. These entities, along with the paper mills, are the Defendants in this action. Plaintiffs NCR and Appleton Papers seek contribution from these Defendants for the costs Plaintiffs have incurred in cleaning up sections of the Lower Fox River. Plaintiffs assert that because the entities named above – paper mills, utilities, and others – also released PCBs into the river, they should share in the cost of cleanup.

At the suggestion of several Defendants, this case was bifurcated into separate phases. The Defendants argued that one issue – the knowledge of the parties about the dangers of PCBs – could play a key, or even dispositive, role in the equitable analysis that must be made under CERCLA § 113. And because I agreed that a ruling on that issue could potentially resolve the case entirely or facilitate a settlement, the case has focused, in the first phase, on evidence probative of what each party knew, and when, about the dangers of PCBs and their release into waterways. In a case governed by principles of

[4] "Prognosis Appears Good for Fox River," *Milwaukee Journal-Sentinel,* Sept. 29, 2009, http://www.jsonline.com/news/wisconsin/62485172.html.

equity, my premise was that parties who knew, or should have known, about the dangers of PCBs should bear the brunt, or even the entirety, of any cleanup costs resulting from PCB contamination. Relatedly, in Phase I the parties were also to explore the question of how each party reacted upon learning of the risks of environmental harm that were linked to PCBs. These issues comprise "Phase I" of this action, and the parties have thus focused their substantial efforts to date on these questions.

Five motions for summary judgment have now been filed, supported by roughly nine hundred exhibits, including expert reports, government reports, corporate records (some of which date back to the 1950s), correspondence, laboratory notebooks, and deposition testimony of employees who had recollections of the events and decisions of the 1960s when the dangers of PCBs became more widely appreciated. In their motions, the Defendants assert that there is no equitable basis for allowing the Plaintiffs to receive contribution from any of them because the Defendants are essentially innocent parties who had no knowledge that recycling NCR paper or processing wastewater could lead to environmental damage. The Plaintiffs disagree and argue that further proceedings are necessary before any such determination may be made. The Plaintiffs additionally argue, in their own motion for summary judgment, that any inquiry into the central question of knowledge should be sharply curtailed.

Following my conclusion that Plaintiffs may not proceed with a claim under CERCLA § 107, *see* Dkt. # 751, the parties' motions on the § 113 contribution claim are now ripe. For the reasons given below, I conclude that Plaintiffs are not entitled to contribution. Accordingly, the Defendants' motions will be granted and the Plaintiffs' denied.

I. Background and Factual Findings

A. PCB Discharges into the Fox River

The discharge of PCBs into the Fox River has been well-documented, and the history of such discharges is not materially contested.[5] As noted above, the National Cash Register Company invented its brand of carbonless copy paper ("CCP") in 1953 and began selling it in 1954. Its CCP used an emulsion in-between two sheets of paper. The emulsion contained microscopic dye capsules that burst when pressure was applied (by a pen or typewriter, for instance), thus creating a copy of the top sheet of paper without the need to use an intervening carbon sheet.[6] This result was made possible through NCR's novel process of micro-encapsulation. "By encapsulating one of two colorless components which react to form & color, the components may be separately carried by one or more pieces of paper in colorless form." (Ferguson Decl., Ex. 18 at 436.)[7] This proved to be a very useful product in the business world, where forms and other documents were routinely made in duplicate, and NCR paper became a very profitable line for the company.

Unfortunately, the microcapsules were dissolved in a solvent called Aroclor 1242, which was a polychlorinated biphenyl now known to be toxic and persistent in nature. Countless references in the

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[5]I note that in related proceedings in Case No. 09-C-692, Plaintiffs allege that something like one-fifth of the PCBs found in the river did not result from NCR paper but came from other kinds of Aroclor used in other industrial applications. The basis for this assertion is highly questionable, however, and I am in agreement with the United States' general conclusion that there is no basis to parse the PCBs in the river in such a fashion.

[6]A more detailed description of the product can be found, for example, in the expert report of Joseph Rodericks, Ph.D. (Ferguson Decl., Ex. 60 at 24.)

[7]The Ferguson Declaration is found beginning at Dkt. # 575, and its exhibits stretch into Dkts. # 582 and 583.

record suggest that Aroclor 1242 was an ideal solvent for the carbonless paper application, and in fact it was so useful that despite years of effort an adequate substitute was not adopted by NCR until 1971. Although the emulsion was produced by NCR, it was applied by the Appleton Coated Paper Company, who created the carbonless copy paper and then sold the paper back to NCR. NCR then marketed and sold the carbonless copy paper to its customers.[8] (Dkt. # 656, PPFOF ¶¶ 10-11.)

The CCP using Aroclor 1242 was manufactured by the Plaintiffs between 1954 and 1971, a span the parties have called the "production period." During that time, according to the Wisconsin Department of Natural Resources, roughly 30 million pounds of the PCB-laden emulsion were used. (2002 Record of Decision at 4.)[9] Given the concentration of PCBs in the emulsion, the DNR calculated that some 690,000 pounds of PCBs were released into the river during this time.[10] It further calculated that by the time NCR stopped using Aroclor 1242 in 1971, some 98 percent of the total PCBs had been released into the river. (*Id.*)

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[8]NCR acquired ACPC in 1970 and then merged it with another paper company in 1971 to form Appleton Papers, Inc. After a series of mergers and transfers of ownership, Appleton Papers, Inc. is now owned by its employees. Herein I use the term "Plaintiffs" to denote both NCR and Appleton Papers, although in some instances only one of the two companies might be involved. In my view, any distinctions that might exist in the knowledge of the two Plaintiffs are not material in these proceedings because the question is whether it is equitable to require any of the *Defendants* to contribute. Although Plaintiffs' own motion for summary judgment argues that only the knowledge of Appleton Coated should be material to this action, the two Plaintiffs have not made any other distinctions between their own knowledge and have not suggested that either of their abilities to recover from the Defendants might differ as between themselves. Accordingly, to the extent there is any material difference in the culpability of the two Plaintiffs, that is an issue for other proceedings.

[9](Ferguson Decl., Ex. 1.)

[10]This figure is given with a broad range, but the EPA suggests it is a "conservative" estimate.

During that time, PCBs found their way into the Fox River in a number of ways.[11] Plaintiffs' own manufacturing process resulted in some discharges into the river, an amount the DNR has estimated at some 39% of the total.[12] Second, Appleton Coated Paper Company sold CCP "broke" to brokers, who sold it to recycling mills, including some of the Defendants. "Broke" is a term encompassing the waste paper and trimmings that inevitably resulted from the CCP manufacturing process. Paper is made of wood fibers, which come from wood pulp. Turning trees into paper can be an expensive process, and thus recycling of the fibers from used paper is a common way to save costs. (Ferguson Decl., Ex. 60 at 26.) Recyclers took the broke from Plaintiffs in order to recover the wood fibers from the product and reuse them in other paper products, and in the process they released some of the PCB-laden emulsion into the river. In addition, printers and paper converters sold their scrap from manufacturing forms to the recyclers. Recycling of this "trim" also resulted in PCBs being released into the river through wastewater. The DNR has estimated that some 56% of the PCBs discharged into the river resulted from the recycling process during the production period.

Finally, even after NCR stopped using Aroclor 1242 in its carbonless paper in 1971, stocks of the pre-1971 paper still lingered in offices for years. As this paper was used up, it was sent for recycling along with other paper, and the recycling process resulted in small quantities of PCBs releasing into the river throughout the 1970s and possibly later. As noted above, however, government estimates put the

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[11]I recognize that the volume of discharge was not encompassed within the scope of Phase I. I use the following figures for informational and general background purposes. Moreover, I recognize that Plaintiffs have not conceded that the government's discharge estimates are accurate.

[12]Compilation and Estimation of Historical Discharges of Total Suspended Solids and Polychlorinated Biphenyls from Lower Fox River Point Sources, Technical Memorandum 2d, at 1, 34. (http://dnr.wi.gov/org/water/wm/foxriver/documents/modeldocs/tm2d.pdf).

post-1971 releases of PCBs at only 2 percent of the entire total.

B. Knowledge of the Parties

As already noted, the parties' knowledge about the dangers of PCB discharges into waterways was the principal subject of Phase I of this case. What distinguishes this case from many CERCLA contribution actions is that the toxic nature of the discharged product was not appreciated by most of the dischargers until almost all of the environmental damage had already occurred.

Prior to 1971, when PCBs were removed from NCR's emulsion (after Monsanto stopped producing Aroclor 1242 for use in carbonless paper), there is not a definitive moment or document from which one could indisputably conclude that a given party knew about a specific, quantifiable risk of injury. This is perhaps typical of many products that are only later revealed to be harmful. Instead, knowledge is a product of bits of information that trickle in over time through studies, memoranda, meetings, government inquiries, and other reports. At first, perhaps, someone notices a correlation between a product and a certain effect (e.g., after dead seals are found with high concentrations of PCBs in their fat), and that prompts further investigation. Tests are conducted, and meetings are held, and at some point (possibly years later) a party may suspect that the relationship is something more than pure chance. The data give rise to a cause and effect relationship, or at least a reasonable suspicion that the product is the cause of a given effect.

Most of the underlying facts in this case are undisputed, as they are based on documents – mostly business records – whose authenticity is not questioned. But questions of knowledge also involve reasonable inferences drawn from the record, and even if the documentary evidence is not disputed, reasonable inferences at the summary judgment stage must be drawn in favor of the non-moving party.

Morton Intern., Inc. v. A.E. Staley Mfg. Co., 343 F.3d 669, 682-83 (3d Cir. 2003). Accordingly, I will not draw any inferences from the record except for those I conclude are not reasonably disputable. For example, the Defendants have cited an extensive history of events leading back to the 1950's, including the publication of Rachel Carson's *Silent Spring* in 1962, which they suggest should have placed the Plaintiffs on notice about the potential harms of using PCBs in their product. Although an inference *could* be made to that effect – PCBs were often compared to DDT, and they produced similar effects in the environment – it would not be an inference made in the light most favorable to the Plaintiffs.[13] With that in mind, I will set forth the basis of my conclusion that the Plaintiffs knew, or should have known, about the relevant dangers of using PCBs in their product by the late 1960s.

Many of the documents involve a company called Wiggins Teape, which was NCR's exclusive licensee for CCP production in Europe.[14] Wiggins Teape began investigating the PCBs in its NCR paper in 1964. A letter from G. Mawdsley of Wiggins Teape to Dr. C. W. Ayers of British-American Tobacco (a part-owner of Wiggins Teape) confirms a telephone conversation between the two in which they discuss the presence of Aroclor in CCP and the fact that the Aroclor "comes from the NCR emulsion which has been coated on to the waste paper used in preparing these particular sheets." (Ferguson Decl., Ex. 70.) A November 5, 1964 memo from Dr. Ayers indicates that a meeting was held on the subject:

> Mr. Gough explained the reason for their interest in Arochlor [sic]; it is present in the emulsion used to coat NCR paper. In the production of NCR paper there is a very large amount of waste which is repulped and used to make other types of papers. Arochlor,

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[13]This is not to say that such information is wholly irrelevant at the summary judgment stage. The entire historical background provides the context for the actions of the parties.

[14]Records from NCR, Appleton Papers and Appleton Coated Paper Company have evidently not survived.

> a chlorinated diphenyl, is toxic and so it is necessary to know how much is removed during the repulping process especially if the paper is to be used for food wrapping.

(*Id.*, Ex. 68.)

Thus, as of 1964 British scientists had clearly appreciated not only the toxic nature of Aroclor but also the possible dangers of recycling NCR paper and the fact that some Aroclor could be removed during the repulping process. A 1965 document reiterates the concern about recycling NCR broke, citing the "special problem posed by the arochlor [sic] (which, being toxic, must be removed if the broke is to be reused in papers likely to come into contact with food, and which is virtually impossible to destroy chemically)." (Hogan Decl., Ex. 754, Ex. 12 at BCFOX00064050.)[15] Even so, knowledge about the PCB problem was still in its infancy, and in 1965 at Wiggins Teape they were still determining how best to measure the presence of Aroclor in their product. (Ferguson Decl., Ex. 69.)

Scientists at NCR were also discussing the toxicity of Aroclor 1242 in 1965. A letter from an

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[15]Plaintiffs argue that although they knew NCR broke was being recycled, there is no evidence that either of them knew that PCBs from NCR broke would end up being discharged into the river as a result of recycling. Given the lack of any contemporary records from either of the Plaintiffs, however, the absence of evidence to that effect is not surprising. Even so, it does not require a stretch to conclude that the Plaintiffs, two sophisticated corporations with exposure to the paper industry in the Fox Valley, knew that recycling and production of paper using recycled materials was a water-intensive process and that paper plants released significant quantities of wastewater, water that would find its way into the river. And it was long known that the Aroclor capsules would not all cling to the recycled paper and that a significant percentage of the Aroclor could be released through recycling. (*See,* e.g., Dkt. # 727, Ex. 3 (discussing, in 1950s, process of "beating" and using various procedures to get the capsules to disperse prior to reuse, so as to avoid the blue color that they would produce in higher quantities); Dkt. # 727, Ex. 8 at 47489 (discussing recycling of NCR broke and possible method for "floating off" the Aroclor)).

More importantly, and as described more fully below, Plaintiffs are denied contribution herein largely because they were the *mobilizers* of the toxin at issue here, not because they directed its disposal, and because of their passive approach to dealing with the problem once it became an appreciable risk.

NCR toxicologist to a Dr. Thomas summarizes toxicology tests performed on rats and rabbits. (*Id.*, Ex. 74.) In addition to the animal studies, the toxicologist pointed out that "the Aroclors, when in contact with human skin, have a defatting effect similar to that of many organic solvents. Therefore, care should be exercised to avoid skin contact." (*Id.*) During 1965, NCR records indicate it was searching for a replacement to Aroclor 1242, a persistent theme throughout the decade. (*Id.*, Ex. 73 at 13.) A March 2, 1965 NCR manager's report indicates limited progress on that front:

> The possibility of replacing aroclor in our standard CB coating with a new solvent is being studied presently in Fundamental Research. The new solvents under consideration . . . both have the advantages of being able to offer significant cost reductions and of being less odorous and irritating. However, they are slightly more volatile and have toxicities roughly equivalent to aroclor. Further studies of these solvents is now being undertaken.

(*Id.*, Ex. 72 at 5.)

Although the Defendants believe the documents described thus far demonstrate that Plaintiffs knew, by 1965, about the dangers of PCBs and the corresponding danger of recycling NCR broke, the Defendants place a particular focus on a 1966 article written by Soren Jensen, a Swedish scientist. A December 15, 1966 article in *New Scientist* described Jensen's findings as follows:

> A Swedish research worker has expressed concern over the increased amounts of polychlorinated biphenyl (PCB) entering the air, presumably from industrial smoke and rubbish-dump smoke, and being absorbed by water and taken up by fish and later humans. PCB which is related to and as poisonous as DDT was detected by Mr. Sören Jensen . . . in some 200 pike taken from different parts of Sweden, fish and fish-spawn throughout the country, an eagle which was found dead in the Stockholm Archipelago, and in his own, his wife's and baby daughter's hair.
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> . . .
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> [PCB] is particularly harmful to the liver, and also the skin; this has been demonstrated by experiments on mice. PCB is much harder to break down than DDT and there is every reason to suppose that it is much more difficult to get it out of the system. The substance has also been detected in the air over London and Hamburg and also in seals caught off Scotland. It can therefore be presumed to be widespread throughout the world.

(Ferguson Decl., Ex. 21)

Around this time, it is apparent that Monsanto, the manufacturer of Aroclor, was beginning to become concerned about PCBs. What appears to be an internal Monsanto memorandum from Dr. R. Emmet Kelly notes that they held a "rather extensive meeting" about Aroclor being found in the air and in fish. (*Id.*, Ex. 23.)[16]

> We are very worried about what is liable to happen in the states when the various technical and lay news media pick up the subject. . . . We have been receiving quite a few communications from our customers, but the most critical one is NCR, who are very much involved with their carbonless carbon [sic] paper.

(*Id.*)

Monsanto's own chemist, E. Scott Tucker, Ph.D. reviewed the Jensen report and confirmed that its information was "valid" and "real." (*Id.*, Ex. 39 at 14: 4-7.) The original of the Jensen report, or a copy of a speech based on the report, was sent by Monsanto's Dr. Kelly to NCR's Dr. M. J. Thomas in February 1967, roughly two weeks after the Kelly memorandum described above was distributed at Monsanto. (*Id.*, Ex. 24.) The parties have disputed whether the report was sent at NCR's request or not, but the cover letter suggests that the report had been discussed already, or at least that the report did not arrive at NCR out of the blue. (*Id.*) In any event, the Jensen report, which described PCBs as "related to and as poisonous as DDT," was in the hands of NCR scientists as of February 1967. (*Id.*, Ex. 21.)

Other Monsanto documents describe the industry's approach to increasing publicity about PCBs, which Monsanto believed could "have little impact or it may be very damaging." (*Id.*, Ex. 26.) For

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[16]The Defendants suggest this memorandum was sent to D. Wood, an NCR employee, but that does not appear to be the case.

instance, a March 12, 1969 Monsanto memo set forth that company's process for dealing with customer inquiries and possible new regulation.[17] (*Id.*) Monsanto noted that some of its customers were large chemical companies who "are bound to have had experience of publicity of this nature before and are less likely to panic." (*Id.* at 9.) The primary purpose of the memo was to make it known that Monsanto did not want to be in the position of routinely fielding PCB questions from jittery customers or to voluntarily share information with such customers. Even so, the memo makes clear that such an approach would not apply to NCR, who bought some 6 million pounds of Aroclor 1242 in the previous year (1968), roughly 40% of the total Monsanto sold. The memo proposed to gauge NCR's reaction to the PCB publicity and then to set a course based on that reaction. In a section of the memo titled "Communications on Aroclor Publicity," the author recommended that "with the exception of NCR, we do not bring this publicity to the attention of our Aroclor customers. With the exception of NCR and distributors, we have only eight customers who buy over 140 M pounds of chlorinated biphenyl per year." (*Id.* at 9.)

Two weeks later, Monsanto sent three people to NCR's headquarters in Dayton, Ohio. The purpose of the meeting was "to discuss (i) recent publicity on Aroclors as pollutants and (ii) research efforts to find an Aroclor 1242 replacement." (*Id.*, Ex. 28 at 1.) Recent publicity included a *San Francisco Chronicle* article about PCBs found in the San Francisco Bay. According to the notes of the meeting, NCR continued to be interested in learning about developments, but it was not going to take any action unless "a second article appeared specifically naming their paper as a source of pollution." (*Id.* at 1-2.) "Such an article," the memo stated, "could play into the hands of 3M's Action Paper," NCR's chief

[17]For whatever reason, there is a dearth of records between 1967 and 1969.

competitor in the carbonless copy paper market.[18] (*Id.* at 2.)

One of NCR's employees, Gordon Taylor, was not available for the March 1969 meeting with Monsanto, and in April he called Monsanto "to find out what action was being taken as a result of the article on Aroclors in the SFO Chronicle. He said he regarded this as just another in the series of articles on the toxicity of PCBs and viewed them with patience." (*Id.*, Ex. 29.) The memorandum documenting the conversation indicated that Monsanto told Taylor that it was working on alternatives for Aroclor 1242, but this was "not being undertaken in any degree of panic but because we would rather be 'safe than sorry' if the worst happened." The effort was described as an "insurance policy," but NCR's Taylor acknowledged that "[i]n light of Nader's effect on the auto industry, however, there was always the possibility that the second shoe would drop."[19] (*Id.*)

An October 30, 1969 Monsanto memo picked up on the publicity theme, a motif that runs through many of the historical documents in the record. "The recent publicity on PCB content in dead birds in the Irish Sea accentuates the importance in the U.K. and continental Europe of this problem." (*Id.*, Ex. 35.) The memo stated that an H. A. Vodden would become the point man for coordination of information regarding PCBs. Vodden testified in his deposition that during late 1969 he met with NCR representatives from NCR's Borehamwood plant as well as representatives from Wiggins-Teape. (*Id.*, Ex. 36 at 26-30.)

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[18]The Defendants portray NCR as being in fierce competition with 3M during this period and suggest that NCR's other lines of business were foundering. Such a scenario would explain its stubborn reluctance to meddle with its profitable NCR paper and move away from use of Aroclor 1242. Although that is one possible explanation, I cannot draw such a conclusion at the summary judgment stage based on the record alone.

[19]By 1969 Ralph Nader had helped force the Corvair off the market. *See, e.g.,* "The U.S.'s Toughest Customer," *Time,* (December 12, 1969), available at http://www.time.com/time/magazine/article/0,9171,840502-2,00.html.

At that meeting, he informed NCR and Wiggins Teape employees about continued environmental problems he expected from the use of Aroclor 1242. He further testified that he told NCR's Martin Kelly about Monsanto's impending decision to end sales of Aroclor 1242 for NCR paper applications.

A December 3, 1969 Monsanto report from E. Scott Tucker details test results Monsanto performed on NCR water samples that NCR had sent. (*Id.*, Ex. 37.) The samples ranged from 1.7 parts per million (ppm) to 1063 ppm of Aroclor 1242. A January 23, 1970 report written by Monsanto's H. A. Vodden stated that "[a]nalyses of samples from effluent at the N.C.R. emulsion plant at Boreham Wood have shown quite high levels of Aroclor 1242. The mud in the stream taking surface water drainage contains 150 p.p.m." (*Id.*, Ex. 38 at 2.)

On January 5, 1970, D. E. Hatton of Wiggins Teape wrote to C. C. Zimmerman of NCR and copied the letter to numerous NCR and Wiggins Teape employees. (Hogan Decl., Dkt. # 754, Ex. 18.) The letter contains a sort of bibliography of 49 studies that had been done on the effects of PCBs and DDT, and it notes that both substances are accumulated in body fat rather than broken down.

> They may affect fertility, cause liver damage and also fatalities in some vertebrates, such as birds and fish. No evidence yet exists of any long term toxic effects of these materials in man. Although there is no such evidence, various countries are not prepared at present to take the chance and are banning DDT . . .

(*Id.* at 5.)

Wiggins Teape voiced two concerns. First, it noted that bad publicity would result from any effort to show that PCBs were harmful. Second, it was concerned that "as more and more action is taken against DDT, the close relationship between this and our material may lead to pressure being brought on manufacturers to stop producing PCB's or at least to refrain from installing new plant [sic]." (*Id.* at 6.)

"With the fast growth rate of NCR paper we feel that this could well be a very serious problem indeed and could jeopardise our future if we had to rely on Aroclor 1242 as our internal phase." (*Id.*)

Meetings between Monsanto and NCR increased during the winter of 1969-1970. A January 26, 1970 meeting among representatives of Monsanto, NCR and Wiggins Teape is evidenced in a report prepared by Monsanto's D. S. Cameron. (*Id.*, Ex. 41.) The memo summarized affairs as follows:

> Both N.C.R. and Wiggins Teape are very concerned about the developing PCB residue situation, even though it is the higher chlorinated compounds that are currently being found in nature. They asked that we did not identify NCR paper as a major outlet for Aroclor at our forthcoming meeting with the Ministry of Agriculture, although they realized this information would become public knowledge eventually and that we had our own interests and integrity to protect. A few weeks delay would give them time to check that their own housekeeping was as it should be.
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> If, in the long run, N.C.R. paper is considered a pollution source they foresee no effective method for controlling the disposal of used paper. For this reason they must find an alternative to Aroclor which would be introduced if the Aroclor system were deemed undesirable. They intend to complete this contingency plan as quickly as possible.

(*Id.* at 1-2.)

The memo concluded by noting that "Wiggins Teape and N.C.R. want to develop a story to support their position. We suggested the transcript of the BBC T.V. interview with a scientist from Monkswood Research Station illustrated a good factual statement when faced with an aggressive interviewer." (*Id.* at 2.)

Three weeks later several of the same individuals met in London:

> This meeting was called at the request of Wiggins Teape, who wish to exchange views on the PCB problem at a top management level. Hendry [of WT] had just returned from Dayton [NCR Headquarters] and explained that a decision had been taken, in principle, to move away from Aroclor in Europe. This decision was subject to certain qualifications such as the possible, but still unproven biodegradation of 1242, and demonstrative a satisfactory alternative to Aroclor.

(*Id.*, Ex. 42 at 1-2.)

The notes of that meeting further reflect the author's belief that "a move from Aroclor to another solvent seems inevitable," but progress was stalled because the proposed substitute, HB 40, still had some problems. These problems resulted in "Dayton's [i.e., NCR's] greater reluctance to consider HB.40 as a suitable replacement for Aroclor." (*Id.* at 2.)

A Wiggins Teape internal memo dated February 13, 1970 explains the quandary NCR's European producer was in. (Hogan Decl., Dkt. # 667, Ex. 17 at BCFOX00004097.) "Ever since Wiggins Teape started making NCR paper in Britain in 1955 they have known that one of its ingredients was potentially toxic. The ingredient is a chemical called Aroclor 1242." (*Id.*) The memo's author described the PCB problem as a "sleeping tiger," that was awoken by the 1966 Jensen report out of Sweden. "Wiggins Teape noted the Jensen report and began to build a dossier containing reports on PCB." (*Id.* at BCFOX00004099.) The memo noted that although the science at that point (February 1970) did not definitively establish any causal link between PCBs and health problems, the same could also be said for cigarettes – "but statistical evidence has led to wide public awareness [of cigarettes' adverse health effects] . . ." (*Id.* at BCFOX00004103.)

The Wiggins Teape memo notes the problem of Aroclor leaking into rivers through the effluent from recycling NCR broke. Its principal focus, however, is in assessing the potential for commercial harm to WT's business in the event the problem became public. Like other memos described herein, the primary consideration involves the impact of adverse publicity on the companies' bottom line – publicity could lead to less use of NCR paper, or (even worse) it could lead to an outright ban:

The public could become aware of the significance of Wiggins Teape's use of Aroclor

> before a ban was imposed or in prospect. Public reaction, stimulated by the communications media, could lead to such a ban being imposed. Even if it did not, the public relations aspect is serious . . .

(*Id.* at BCFOX00004108.)

The next month, a March 12, 1970 Wiggins Teape memo notes that NCR was continuing its insistence that NCR paper not be identified as a source of PCBs in the course of the British government's inquiries. (Hogan Decl., Dkt. # 754, Ex. 22 at 1.) NCR's people in Britain "completely disagreed" with that strategy, however, as they felt it was a "potential time bomb." (*Id.*) "One day the Ministry will discover that they have not discussed an application which takes up 40% of their U.K. sales." (*Id.*) Wiggins Teape's conclusion at this stage was that the government scientists were confused by the scope of the PCB problem and the complexities of discovering the source of PCBs. "The more they look into the matter, the more complex and diffuse it becomes. All of this is obviously to our good." (*Id.* at 2.) The confusion and continued nondisclosure of NCR paper as a source of PCBs would allow Wiggins Teape some "breathing space to put our house in order before it is inspected." (*Id.*)

On April 16, 1970, representatives of Wiggins Teape met with Monsanto near London. The context during this period was an ongoing series of meetings with various UK government agencies, including the Ministry of Agriculture and the Ministry of Technology. Recently, a government scientist, J. Bailey, had discovered PCBs in boxed cashews, and his report concluded that the cardboard boxes – made from recycled NCR broke – were involved in the contamination. (Ferguson Decl., Ex. 52.) (Recall that the problem of PCBs in food wrappings had been anticipated by Wiggins Teape some five years earlier.) At the April 16 meeting, Wiggins Teape told Monsanto that it was going to disclose its production of NCR paper to the government, apparently in order to get ahead of Bailey's soon-to-be published article

linking PCBs to cardboard food cartons. Monsanto's minutes of the meeting indicate that Wiggins Teape had "liaised closely with NCR and ourselves" about the issue. (*Id.*, Ex. 53 at 1.) At some point, Wiggins Teape had proposed that perhaps the government could be convinced to withhold Bailey's report, but both Monsanto and NCR thought that would be "dangerous . . . particularly if it misfired and subsequently became public knowledge." (*Id.* at 2.)

Although Wiggins Teape had decided that disclosure was the best course of action, at this time NCR was still insisting to Monsanto that its name be kept out of any governmental correspondence or meetings. At Monsanto's January 1970 meeting with the Ministry of Agriculture, Monsanto was "questioned closely about the quantities of PCB used in the U.K. and the major industrial applications. . . . No mention was made of NCR but it will become increasingly difficult to maintain this position." (*Id.*, Ex. 49 at 3.) As noted earlier, at a meeting the previous day NCR had "asked that we [Monsanto] did not identify NCR paper as a major outlet for Aroclor at our forthcoming meeting with the Ministry of Agriculture, although they realized this information would become public knowledge eventually and that we had our own interests and integrity to protect." (*Id.*, Ex. 41.) NCR soon did an about-face and decided that disclosure to the UK government would be a "positive step." (*Id.*, Ex. 42, at 3.)

In June, 1970, Monsanto informed its customers, including NCR, that it was ceasing the sale of Aroclor 1242 effective August 30, 1970:

> Dear Customer:
>
> You have received our letter mailed February 27, 1970 notifying you of the allegations that certain polychlorinated biphenyls (PCBs) had been found in the environment and were contaminants. Since that time, other reports concerning PCBs have been published. An examination of the PCB matter has indicated that their use in synthetic resin compositions may be a source of the alleged environmental contamination.

. . .

> In review of the allegations which have been made concerning PCBs, and being a concerned and responsible member of the world community, we have come to a decision to discontinue the sale of PCB-containing products for modifier and plasticizer applications effective August 30, 1970.

. . .

(*Id.*, Ex. 44.)

By April 1971, NCR had fully phased-out its use of PCBs in the production of CCP (Monsanto continued selling its existing stock of Aroclor 1242). As noted earlier, the EPA and DNR have estimated that 98 percent of PCB discharges into the river had occurred by this time, i.e., the production period between 1954 and April 1971 when the broke arising out of the production of NCR carbonless copy paper was sold to the Defendant mills for recycling.

A year later, NCR employee T. E. Hoover prepared an internal memorandum for NCR's vice president of research entitled, "The Status of Polychlorinated Biphenyl Uses at NCR." (Bogart Decl., Ex. 7.) The memo, dated October 13, 1972, was an attempt to summarize NCR's past use of Aroclor, the dangers of such use, and itemize any remaining uses of PCBs within NCR's operations. Among other things, the memo noted that

> In the late 1960's accumulative evidence began to show that PCB's may have adverse effects on certain forms of animal life. The same properties that contributed to their usefulness were indi[c]ted as contributing to the possible hazardous effects. The resistance to breakdown—such as thermal and biodegradation—was shown to lead to accumulations in the environment.

(*Id.* at 350916-350917.)

Although the use of PCBs in carbonless paper had ended, the fallout was in its infancy as

regulators and media began investigating the extent of the problem. Two post-production period documents stand out in the record. In 1975 Plaintiffs had occasion to comment on a brief regarding PCBs that the Wisconsin Paper Council had submitted to the Wisconsin DNR. Among other things, NCR's Lowell Schleicher (one of the inventors of carbonless copy paper) commented that the "Brief made a strong and correct plea that the recycling companies are the innocent victims of circumstance created by carbonless manufactures which are still a part of the paper industry." (Ferguson Decl., Ex. 67.) This view was echoed in a January 29, 1976 editorial in the *Appleton Post-Crescent*, which stated that the "recycling mills are innocent victims in the PCB controversy." (Ferguson Decl., Ex. 7 at API-GE026911.)

My own conclusions regarding the parties' knowledge and the implications of that knowledge are set forth below.

II. Analysis

Section 113(f)(1) of CERCLA provides that "[i]n resolving contribution claims, the court may allocate response costs among liable parties using such equitable factors as the court determines are appropriate." 42 U.S.C. § 9613(f)(1). Not only does the statute allow allocation based on equitable factors, it provides that district judges may determine which factors are "appropriate." The Seventh Circuit has called a district judge's power in this context "broad and loose." *Browning-Ferris Industries of Illinois, Inc. v. Ter Maat,* 195 F.3d 953, 957 (7th Cir. 1999). Yet of course a court's analysis is not unfettered: it is governed by traditional principles of equity, such as the relative fault of the parties, any contracts between the parties bearing on the allocation of cleanup costs, and the so called "Gore factors."

Kerr-McGee Chemical Corp. v. Lefton Iron & Metal Co., 14 F.3d 321, 326 (7th Cir. 1994). These factors include:

> (1) the ability of the parties to demonstrate that their contribution to a discharge, release or disposal of a hazardous waste can be distinguished;
> (2) the amount of the hazardous waste involved;
> (3) the degree of toxicity of the hazardous waste involved;
> (4) the degree of involvement by the parties in the generation, transportation, treatment, storage, or disposal of the hazardous waste;
> (5) the degree of care exercised by the parties with respect to the hazardous waste concerned, taking into account the characteristics of such hazardous waste; and
> (6) the degree of cooperation by the parties with Federal, State, or local officials to prevent any harm to the public health or the environment.

Id.

In addition, the Seventh Circuit has stated that "a court may consider any factors appropriate to balance the equities in the totality of the circumstances," and such factors could include a party's degree of involvement in the disposal of hazardous waste, the amount of hazardous waste involved, and the degree of care exercised by the parties. *Environmental Transp. Systems, Inc. v. ENSCO, Inc.,* 969 F.2d 503, 509 (7th Cir. 1992).

A. Plaintiffs Knew of PCB Risks in the Late 1960's

Before proceeding further, it is necessary to address the argument Plaintiffs advance in their own motion for summary judgment. Plaintiffs argue that the knowledge of NCR Corp. is irrelevant to Phase I because NCR has no independent CERCLA liability for its own actions. After all, it never operated any facilities on the river – it merely sold its carbonless paper to consumers. NCR and Appleton Papers Inc.

(the two plaintiffs in this action) are liable only as successors to their predecessor company, Appleton Coated Paper Company, which purchased the emulsion from NCR to make NCR carbonless copy paper.[20] Appleton Coated discharged its PCB-laden wastewater to treatment facilities and thus into the river, and it further sold its broke to the Defendant recyclers who then discharged it into the river. Because these actions are the sole basis of the Plaintiffs' potential liability (i.e., they are the reason the Plaintiffs are PRPs in the first place), the knowledge of NCR itself should not factor into this Court's equitable analysis. Although the two companies had a close business relationship (as detailed above), NCR did not purchase Appleton Coated until 1970. Accordingly, Plaintiffs argue, there is no basis for delving into any knowledge about PCBs that NCR itself might have possessed prior to that date.

It is well-recognized that the liability of a successor company is limited to the liability possessed by the predecessor. But here we are not addressing the question of liability *per se* – we are here, in the Plaintiffs' own action, to determine whether it is fair to require any of the Defendants to compensate the Plaintiffs for the costs of cleaning up the site. In a sense, it is a case about the Defendants' knowledge much more than it is about the Plaintiffs'. The Plaintiffs' knowledge sheds light on the question of comparative fault and, in a more general sense, the question of what is fair and equitable. Such an analysis must account for what each Plaintiff actually knew, however, without respect to *why* the party became a PRP in the first place. As the Defendants point out, several of the oft-cited equitable factors in § 113 actions have nothing to do with the reasons the parties are considered PRPs. And Plaintiffs have not identified any case suggesting that a court may not consider the knowledge of a company who is only liable

[20]This leaves aside the unanswered question of arranger liability.

as a successor based on the actions of another company. Instead, the cases cited above overwhelmingly suggest that a court's equitable powers are broad, and the considerations it chooses to use are not bound by the kinds of narrow and legalistic arguments such as the one Plaintiffs now put forward. Simply put, if one company is instrumental in causing environmental damage, it would not make sense, in an equitable action, to ignore that company's past actions on the grounds that it is liable only as a successor in interest to another company. Accordingly, I will consider the knowledge of NCR not just in its role as a successor corporation to Appleton Coated, but also in its role as the creator of carbonless copy paper and a key customer of Monsanto.

I will turn now to the evidence. From the documents produced in this case, it is clear that Plaintiffs knew PCBs were "toxic," in a general sense, at a very early stage – the 1950's, certainly. But here we are concerned about a particular kind of toxicity, namely, the problem of PCBs persisting in the environment and causing health problems to animals and humans through their release into waterways. It is this particular problem that gave rise to the cleanup action and its attendant costs, and awareness of that problem did not arise until much later.

As one 1971 article put it, PCBs "have been suspected since 1966 of causing many of the same ill effects in organisms as DDT and other chlorinated pesticides. Gradually the evidence has accumulated, and now there is little doubt of their danger." ("First DDT, Now PCB," *Science News*, October 28, 1971; Ferguson Decl., Ex. 52 at 332.) But at what point did the Plaintiffs actually appreciate the risks of using and recycling PCBs? As a starting point, it is clear that Plaintiffs knew about the potentially serious environmental impact of using PCBs by early 1970, when Monsanto sent its customers a letter notifying them that because of the environmental concerns it had it was discontinuing the production of Aroclor

1242 for paper coating applications. (Ferguson Decl., Ex. 44.) But it is also clear that NCR must have appreciated the *risk* of the use of PCBs much earlier. In 1965 NCR was performing toxicity tests on rabbits, and its licensee in Europe was noting the possible dangers of using repulped NCR paper in food wrappings.[21] In 1966 the Jensen report was produced, and the record shows that this was very quickly shared between Monsanto and NCR. This report showed not only that PCBs were "toxic" in a general sense but that they persisted, like DDT, in the environment – particularly in waterways – and could lead to lingering environmental and health problems. In fact, if Monsanto's documents establish anything, it is that it and NCR were working in tandem on the PCB problem. NCR was Monsanto's largest customer for Aroclor 1242, and both companies, along with Wiggins Teape, coordinated their approaches not just internally but in their relations with the government and media. By 1969, the parties were conducting increasingly frequent meetings on the subject of PCBs. In 1970 an internal WT memo noted that "[e]ver since Wiggins Teape started making NCR paper in Britain in 1955 they have known that one of its ingredients was potentially toxic. The ingredient is a chemical called Aroclor 1242." (Hogan Decl., Dkt. # 667, Ex. 17 at BCFOX00004097.)

Thus, the Plaintiffs' present claim that they never knew about the dangers of PCBs until after 1971 rings roughly as hollow as Captain Renault's feigned outrage upon being "shocked, shocked" to discover gambling at Rick's Casablanca café. Wiggins Teape concluded that it was Jensen's 1966 report that awoke the "sleeping tiger" of PCB dangers and even NCR's own 1972 analysis concluded that

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[21] At this time NCR and Appleton Coated also knew, of course, that broke was being recycled. (*See, e.g.*, Bogart Decl., Dkt. # 716, Ex. 2

> *In the late 1960's* accumulative evidence began to show that PCB's may have adverse effects on certain forms of animal life. The same properties that contributed to their usefulness were indi[c]ted as contributing to the possible hazardous effects. The resistance to breakdown—such as thermal and biodegradation—was shown to lead to accumulations in the environment.

(Bogart Decl., Ex. 7 at 350916-350917) (italics added).

Although the nature of the knowledge question precludes fixing a date with any kind of scientific exactitude – particularly at the summary judgment stage – it is enough for present purposes to conclude that, in NCR's own terms, the evidence showed "in the late 1960's" that PCBs were a dangerous environmental toxin. And from that it may readily be inferred that sending broke and wastewater for recycling and treatment could have led to the same kinds of harms described in the Jensen report. But more importantly, as set forth more fully below, it was the known *potential* for environmental harm that is key to the equities in this case. In the face of increasing red flags, Plaintiffs' approach in the late 1960s was to worry about publicity and wait for the "second shoe" to drop. At its essence, Plaintiffs' approach was a risk management strategy to accept the risk of potential environmental harm in exchange for the financial benefits of continued (and increasing) sales of carbonless paper containing Aroclor 1242. So although there is little basis to conclude that Plaintiffs *knew* about specific harms that would definitely occur (no one had such concrete knowledge at the time), I am satisfied that by the late 1960's Plaintiffs had access to the vanguard of data suggesting an appreciable *risk* of serious and long-lasting environmental damage resulting from the production and recycling of NCR paper.[22]

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[22]For completeness, I note that there is frequent notation in the record about NCR's desire to find a substitute for Aroclor 1242, and this effort began in the early 1960's or even earlier. Although the Defendants find this suggestive, the record would not support making any kind of negative inference out of NCR's early efforts to stop using Aroclor 1242. Instead, the record suggests other issues (cost, odor)

B. No Defendant Appreciated the Risks of PCBs until after the Production Period

Plaintiffs argue that the equities balance out because many of the Defendants themselves knew that they were discharging toxic PCBs into the Fox River during the 1960s. Plaintiffs limit their argument to a single page in one of their briefs, however, and the evidence they cite is extremely sparse, especially when compared to the mountain of documentary evidence the Defendants have marshaled. I will address their assertions briefly.

First, Plaintiffs note that a paper industry report stated that the presence of PCBs in "paper products and mill effluents has been recognized since the late 1960s."[23] The document they cite, however, is a 1976 report, and thus it is not "evidence" that the Defendants themselves recognized the presence, and dangers, of PCBs seven or more years earlier. Moreover, Plaintiffs do not explain which, if any, of the Defendants were involved in producing the report, nor do they identify which Defendants might have received the report. In short, the report is not material to the question of whether any of the Defendants actually knew about the risks of recycling CCP during the production period.

Plaintiffs also cite the testimony of a Menasha Corporation purchasing agent, David Austin, who claimed in another proceeding that as early as the 1950s he was instructed not to buy CCP because it might contain PCBs. This testimony has been repudiated by the deponent. (Dkt. # 727, Ex. 47.) In fact, even the Plaintiffs themselves have specifically rejected Austin's testimony in their comments on the

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were the principal reasons for the proposed substitute. This changes, however, by 1969, when it is clear that bad publicity and fallout from PCBs is a key component of the desire to change or to develop, in Monsanto's term, an "insurance policy." (Ferguson Decl., Ex. 29.)

[23]Plaintiffs' brief (Dkt. # 658 at 27) cites to their proposed findings of fact at ¶¶ 311-313, but these findings do not refer to this report. Instead, it appears the report is found at Ex. 105 to the Roach Declaration (Dkt. # 677).

January 15, 1999 revision of the Technical Memorandum 2nd. (*Id.,* Ex. 48 at 5.) In their comments to the DNR, they described Austin's testimony as "not believable" and sarcastically suggested that Austin must have been "prescient" to be aware of PCBs as early as the 1950s or 1960s. (*Id.* n. 8.) It is disturbing that a decade later, when it is convenient, they now cite Austin's discredited testimony as evidence of the knowledge of one of the Defendants.

Plaintiffs further cite the testimony of Donald Schneider, a Fort Howard employee, who testified that Monsanto's decision to stop production of Aroclor 1242 in 1970 was "well known." Thus, Plaintiffs argue, he and employees of the other Defendants would have known in 1970 about the dangers of PCBs in NCR's emulsion. It should go without saying, however, that one individual's testimony about what others might have known is not probative evidence of the others' knowledge. In addition, review of Schneider's deposition testimony makes clear that his memory of events was not particularly crystalline (which is not surprising). As such, no jury would place any weight on the snippets of testimony the Plaintiffs have cited. More importantly, Schneider testified that his knowledge of Monsanto's decision arose out of reading various trade journals in 1971, and thus there is no evidence that he or any other of the Defendants' employees learned of it in 1970. In fact, Schneider dates his company's knowledge of the problem to 1974, when the DNR started testing for PCBs. (Dkt. # 677, Ex. 112 at 126.) In sum, none of the evidence cited by Plaintiffs suggests that any of the Defendants possessed any knowledge of PCBs in NCR's emulsion during the production period.

Not only do the Plaintiffs lack any evidence that Defendants appreciated the risks of PCB use during the production period, it appears likely from the record that few, if any, of the Defendants learned of the risks until significantly later. In fact, there is no evidence that the Defendants even knew NCR broke

contained PCBs during the production period, much less that PCBs could cause environmental damage. Accordingly, I will wholly reject Plaintiffs' unsupported claims that any of the Defendants possessed meaningful knowledge of the risks of recycling PCBs during the production period.

C. Plaintiffs are not Entitled to Contribution for Damage Caused by Releases Made During the Production Period

Plaintiffs raise a number of arguments in support of their claim for contribution. At its essence, their claim can be boiled down to two assertions. First, they argue that many of the Defendants were knowing polluters of the Fox River over the course of many decades, and these Defendants therefore cannot now claim to be "innocent" parties in these proceedings. Second, they assert that none of the parties knew about the dangers of PCBs during most of the production period, and thus the equities balance out and liability for the cleanup costs should be shared. I address these arguments below, and I explain the other considerations that factor into my conclusion that Plaintiffs' claim for contribution should be denied in its entirety.

1. Other forms of Pollution

One of Plaintiffs' key lines of argument highlights several Defendants' knowing pollution of the river over the course of many decades. (Dkt. # 655.) Plaintiffs note that the unhealthy condition of the river was obvious to any passerby in the late 1960's and 1970's. Dead fish were floating amid pools of filth and other debris; the "waters at this point had a turbid gray appearance;" and there existed a "strong odor of hydrogen sulfide gas from decomposing organic deposits." (Dkt. # 656, PPFOF ¶ 39.) Because several of the Defendants knew they were dumping significant quantities of solids into the river, the Plaintiffs argue,

they cannot now assert that they are "innocent" parties upon whom it would be unfair to impose some liability for the PCB cleanup.

I do not rule out the possibility that the polluting actions of some Defendants could, under other circumstances, reasonably be considered by a court in equity. But this case is about a very specific toxin – PCBs, primarily in the form of Aroclor 1242 – and it is the presence of that toxin that has given rise to the massively expensive cleanup action that has itself given rise to this case. This is, at its core, a case about money – who should pay for that cleanup. Although several of the Defendants may have polluted the river in other ways, that pollution simply did not result in an EPA-ordered cleanup. Accordingly, any arguments based on the existence of *other* kinds of pollution do not speak to the equities of whether any of the Defendants should pay for the cleanup of PCBs in the Lower Fox River.

2. The Equities Overwhelmingly Favor the Defendants

Plaintiffs' key assertion is that during much of the production period neither the Plaintiffs nor the Defendants were cognizant of the risks of PCBs being released into waterways through recycling or otherwise. During this period of general ignorance, Plaintiffs believe the equities balance out on the knowledge issue, which would mean that liability should be apportioned on equitable factors *apart* from knowledge. This would require additional phases of the trial so that the parties could, for example, prove how many pounds of PCBs they released into the river, and when.

A number of reasons cause me to reject Plaintiffs' claim that the equities balance out. First, as I have concluded above, Plaintiffs were not completely ignorant of the dangers of PCBs during the production period. I need not repeat those conclusions here, but it is worth highlighting the fact that PCB releases did not occur at a steady rate throughout the 1960s. During the period Plaintiffs *were* aware of

the potential PCB problem – the late 1960s and 1970-71 – their use of PCBs and corresponding releases into the river rose to their peak. Graphs depicting the production of NCR paper containing PCBs show a steady, and then precipitous, increase in production throughout the decade. Production grew from about a million reams in 1961 to roughly 1. 5 million reams in 1964, but then production spiked to nearly 4 million by 1970-71. (Dkt. # 47, Fig. 5.) Accordingly, it is clear that a large percentage of the releases occurred when Plaintiffs would have known that there was risk of environmental damage. As such, Plaintiffs' premise that both sides were equally ignorant of the risks during the production period is simply not accurate.

Second, I conclude that during much of the period when Plaintiffs did not actually appreciate the risks of recycling their CCP, they were in fact in the best position to learn of those risks. The records show that Wiggins Teape, the exclusive producer of NCR paper in Europe, had been conducting tests throughout the 1960s. Plaintiffs have not attempted to identify any serious studies they undertook during the crucial period; instead, the records are suggestive of a completely passive "wait and see" approach based on reacting to information *others* produced. (For example, in 1969 NCR appeared unimpressed by a *San Francisco Chronicle* article on PCBs and "regarded this as just another in the series of articles on the toxicity of PCBs and viewed them with patience." (Ferguson Decl., Ex. 29.)) Rather than capitalizing on their position as the largest consumer of Aroclor 1242 and the close relationship NCR had with Monsanto, not to mention the legions of scientists they employed, Plaintiffs appeared content to allow remote journalists and scientists to uncover any potential environmental problems in a wholly unsystematic fashion. The fact that they were in a much better position to learn of the risks of PCBs than the Defendants substantially weakens their assertion that the Defendants should be forced to share in the cleanup costs.

See, e.g., Lone Star Industries, Inc. v. Horman Family Trust, 1990 WL 640001, *8 (D. Utah 1990) ("the court concludes that there is an insufficient equitable basis to apportion response costs onto the Williamsen defendants. Lone Star was the party that generated, transported and disposed of the waste. Lone Star claims to have had no knowledge about the potential hazards of its waste, and yet it was in the best position of all the parties to have reason to know about such hazards. Equity should not condone imposing liability upon a landowner who merely consented to the deposit of waste materials under these circumstances.")

Third, and relatedly, I conclude that even during the period when *no* parties could have been aware of the dangers inherent in the use and recycling of PCBs (i.e., 1954 through the mid-1960s), the equities strongly favor the Defendants. This case is apparently unique among contribution actions in that the environmental repercussions of the discharged product were not fully appreciated until much of the damage had already been done. It does not require persuasive precedent, however, to conclude that between parties who *produced* the product and those who merely processed it and recycled it along with all other paper products or water sources, these latter parties are significantly less blameworthy. One reason is that it makes sense from a policy perspective to place the risk of future harms on the creators and marketers of products rather than their end users. As noted above, the parties in the best position to investigate PCBs in general were Monsanto, their creator, and Plaintiffs, the largest consumer of the product. But Monsanto (not a party here) made its Aroclor products for a variety of applications, most of which had nothing to do with paper. It was NCR who developed CCP using Aroclor 1242 and created the market for that product, and Appleton Coated (whom NCR bought) that coated Aroclor onto the carbonless paper. These companies placed this product into the stream of commerce while knowing

that some of it would be recycled and they sold their scraps, for profit, directly to recyclers. (In 1965 an Appleton Coated employee boasted about receiving a "quite high" price for its recycled NCR paper. (Bogart Decl., Ex. 2.)) Defendants are recyclers of paper and municipal sewerage entities who simply processed paper and water, and they would have had little reason or ability to inspect or investigate the chemical makeup of anything that came in the door. As the inventor of NCR paper himself stated, the recyclers were the "innocent victims" of the circumstances. (Ferguson Decl., Ex. 67.) This is even more true for Defendants who merely received and released wastewater containing invisible PCBs in it.

That innocent end-users should not have to bear the burdens of unknown defects is reflected in Restatement § 886B. Plaintiffs are correct that this is not a lawsuit for indemnification, and indeed by its terms § 886B applies only when one party brings an indemnification lawsuit against another *after* having discharged their common liability. Even so, the principles reflected in that section would require a manufacturer to compensate an innocent party if, for example, the manufacturer "supplied a defective chattel or performed defective work upon land or buildings as a result of which both were liable to the third person, and the indemnitee innocently or negligently failed to discover the defect." Rest. (2d) Torts § 886B(2)(d). Similarly, one could get compensation from the manufacturer if "[t]he indemnitor created a dangerous condition of land or chattels as a result of which both were liable to the third person, and the indemnitee innocently or negligently failed to discover the defect." *Id.*, § 886B(2)(e). Here, the Plaintiffs created a dangerous condition and product that gave rise to a common liability, and the Defendants innocently failed to discover that condition.

Defendants make clear that they are not making an independent claim for indemnification, but they argue that the considerations set forth in § 886B are nevertheless properly considered in a CERCLA

contribution action like this one. Although the indemnification model does not fit the procedural stance of this case, indemnification reflects primarily equitable considerations (such as preventing unjust enrichment), and I agree that there is no reason CERCLA § 113 should exclude reference to such considerations, if only by analogy. As noted above, a contribution action under CERCLA allows judges to consider a multitude of equitable considerations, and principal among these is relative fault. Restatement § 886B expresses a particular kind of fault-based analysis that allows a party who innocently failed to discover a defect to recover from the creator of that defect, and there is no reason that analogy to such a result cannot be applied prospectively in a case like this to prevent the creator of the hidden defect from recovering from the innocent party.

Such considerations are especially salient in a case like this where the Plaintiffs are the creators of the product in question and where the "defect" – the PCB-containing emulsion – was itself key to the product's usefulness and thus its profitability. The Aroclor was not incidental to the carbonless paper product; it was a crucial element. And without their Aroclor-containing product, there would have been nothing to recycle and no PCB-laden wastewater. As the EPA's 1977 study noted, "In a sense, these PCBs were mobilized upon the initial production of the paper, and their passage through paper mills merely resulted in partition between the accepting media (water, air, solid wastes, products)." (Ferguson Decl., Ex. 9 at 6.) In other words, by creating ("mobilizing") the product in the first place, Plaintiffs set in motion the pollution that has given rise to this cleanup effort. And because the disposal of the waste products (broke and trim) was a necessary byproduct of the manufacture of CCP, Plaintiffs' involvement in the creation of the pollution was paramount. *Kerr-McGee Chemical Corp. v. Lefton Iron & Metal Co.,* 14 F.3d 321, 326 (7th Cir. 1994) (court may consider party's involvement in the generation of waste).

Plaintiffs themselves point out that recycling of the product was a deliberate profit-making strategy for Appleton Coated. (Dkt. # 671, ¶ 10.) The Defendants' contact with the product was largely incidental by comparison; it was, in the 1977 study's words, merely a function of partitioning the PCBs between release into the water, air, and other media.[24]

An additional reason for denying contribution involves Plaintiffs' sluggish response to the data during the late 1960s and early 1970s. *Kerr-McGee Chemical Corp.,* 14 F.3d at 326 (holding that courts may consider parties' efforts to address environmental problems and their cooperation with authorities). The DNR has estimated that roughly 45 million pounds of Aroclor 1242 was used in NCR CCP production during the production period.[25] (Foley Decl., Dkt. # 727, Ex. 15 at APIFOX00000021.) These figures are based on Plaintiffs' own records. (Ferguson Decl., Ex. 30.) The figures for the final years are, as noted above, the highest (with the exception of 1971, when use of Aroclor ceased in April). For the years 1969, 1970 and 1971, for example, roughly 14 million pounds were used, an amount constituting roughly 31 percent of the total. If 1967 and 1968 are included, this adds another 22 percent. In other words, NCR produced *more than half* of all PCBs used in the production of NCR paper after receiving the Jensen article highlighting PCBs' persistence in the environment.

I suggested earlier that this is a case about risk management because we are dealing with a product whose danger was not fully appreciated until recently. Various red flags and warning signs appeared along

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[24]I am discussing the Defendants generally, but it is clear that some of their involvement is exceptionally limited.

[25]This figure apparently includes NCR's plant in Dayton, which produced about one-third of the total NCR paper. As noted earlier, the government estimates that roughly 30 million pounds of PCBs were used in the production of NCR paper in the Fox River area.

the way, as with products like asbestos or prescription drugs that eventually prove dangerous only after years of distribution on a large scale. And so at each new bit of data, corporate meeting or scientific study, the company faces and makes a choice, either explicitly or implicitly: move forward, pause, or stop. Here, the record clearly shows that Plaintiffs did not pause. But neither did they continue with business as usual. Instead, they pressed "Fast Forward" and ramped up production in the final years that Aroclor 1242 was available. There is no evidence that production increased at the end *because* they knew Monsanto would soon discontinue Aroclor 1242; that is, it was not necessarily a considered effort to obtain as much of the soon-to-be-discontinued product as they could before Monsanto stopped selling it. The increased production was likely a result of demand. Even so, the decision to move forward and accelerate production in 1969 and 1970 despite having frequent meetings about PCBs and increasing danger signs is enough, in my view, to preclude Plaintiffs from recovering from the Defendants. These were the highest-selling years of the product and resulted in the most environmental damage. In fact, even after Monsanto wrote its customers explaining why it was discontinuing production of Aroclor 1242 (early 1970), Plaintiffs continued producing carbonless paper for another year at a rapid pace. Although Plaintiffs were in the best position, by far, to appreciate the risks of PCB contamination, during the last few years of production they single-handedly mobilized more PCB-laden product and sent more through the system than had been produced in the decade prior.

Plaintiffs protest that they moved quickly to change from Aroclor 1242 to another product once it became feasible, but economic feasibility is not the only touchstone equity affords. The language of CERCLA and equity is not limited by business or competitive concerns – it allows for the not-so-radical possibility that Plaintiffs could have done something that was *not* economically advantageous – e.g.,

stopping or slowing production – rather than gradually transitioning from one product to another after years of trials established that the substitute would be tolerable to the marketplace. This happens in the consumer world all the time – dangerous products are recalled or taken off the market altogether. If a company is making poisonous breakfast cereal, surely it is no defense to say that the company switched ingredients as soon as it found a less toxic ingredient at an economically viable price. Ceasing production might have been hugely expensive, of course, but it was a legitimate choice they could have made (it is a choice similar to the one Monsanto did make). Wiggins Teape, notably, showed that it could change from Aroclor to another product (HB 40) as early as July 1970. (Hogan Decl., Dkt. # 754, Ex. 23.)

And perhaps, under the circumstances, ceasing production was not considered to be a serious option. No doubt many companies would have made similar decisions – to wait and see, to hope for the best, etc., particularly given that potential liability under CERCLA (enacted in 1980) was not on anyone's radar screen at the time. But even so, the strategy of waiting was a deliberate acceptance of a large amount of risk to the environment and public health, and in fact the records suggest that the parties viewed their decisions through the lenses of risk. (At one point, they even discuss treating the future replacement of Aroclor as an "insurance policy.") (Ferguson Decl., Ex. 29.) Continuing on with the production of carbonless paper using Aroclor 1242 might have made a certain amount of business sense at the time, but CERCLA contribution is not an insurance policy designed to insure against the bad business judgments of toxin manufacturers. The public health risks assumed by Plaintiffs are not fairly translatable into financial burdens to be borne by any of the Defendants, and in fact the continued and increased use of Aroclor 1242 at the end of the production period caused so much of the damage that the Plaintiffs should be barred from contribution entirely. And certainly there is an element of moral hazard at work. If

manufacturers of a toxin are allowed to recover from innocent processors of that toxin, their own risky behavior is at least partially insulated from financial consequences. Such a result would encourage the taking and assumption of undue risks in an area where society would prefer extreme caution.

Finally, and relatedly, I conclude that denying contribution is the surest way to protect the public. "The hallmark of a court of equity is its ability to frame its decree to effect a balancing of all the equities and to protect the interest of all affected by it, including the public." *United States. v. R.W. Meyer, Inc.,* 932 F.2d 568, 572 (6th Cir. 1991) (quoting *Kay v. Mills,* 490 F. Supp. 844, 855 (E.D. Ky. 1980) (citing W. DeFuniak, *Handbook of Modern Equity* § 25 (1956); H. McClintock, *Equity* § 70 (2d ed.1948); D. Dobbs, *Remedies* 52-57 (1973))). I have concluded above that roughly one-third of the entire PCB discharge into the river occurred during a period in which NCR knew there was a significant risk that persistent environmental damage could occur. Half of the PCBs were produced *after* the Jensen report reached NCR. Plaintiffs could have turned off the spigot much earlier than April 1971 – either by ceasing production of CCP using Aroclor 1242 or simply by Appleton Coated ceasing the selling of broke to recyclers – and practically speaking they were the only entities that had such power. By curbing their ability to now recover for cleanup costs, this Court's equitable power will encourage other manufacturers to act swiftly and proactively – rather than wait for the second shoe to drop – as soon as data suggest that their product might cause environmental damage.

D. Plaintiffs are not Entitled to Contribution for Releases During the Post-Production Period

I have concluded that Plaintiffs are not entitled to contribution for cleanup costs resulting from damage that occurred during the production period (1954-1971). But what about the *post*-production

period? Plaintiffs have identified several defendants who continued to take in and recycle post-consumer waste products, which contained small amounts of PCBs from the emulsions found in lingering supplies of pre-1971 NCR paper that found its way into the waste they processed. In other words, pre-1971 carbonless paper sat on the shelves of businesses for months or years after NCR stopped using Aroclor 1242, and when the paper was finally used it was sent into the recycling stream along with other paper. Plaintiffs allege that this recycling occurred while these Defendants knew (a) that PCBs posed an environmental risk when discharged into the river and (b) that the post-consumer waste paper contained some non-negligible amount of PCBs.

For the following reasons, I conclude that the same considerations set forth above should apply to the post-production period as well. In the view of the Plaintiffs, the key obstacle to entry of judgment after Phase I is that the volume of discharges is a crucial element to any analysis and it was not a subject of the first Phase. They posit that the amounts the various parties discharged, and *when* these discharges occurred, are key issues in apportioning liability. For example, if Defendant Georgia-Pacific discharged 8 percent of the total PCBs into the river in 1976, while knowing full well of the risks of that discharge, it must be held liable for contribution on that basis. The Defendants, and the United States, argue that the relatively minimal discharges that occurred post-1971 should not factor into the contribution analysis. The amounts at issue are negligible in contrast to the flood of PCBs that flowed prior to the end of the production period, they argue, and sorting out when each Defendant discovered the dangers of PCB discharges would be an impossible task.

Although it is true that the volume of discharge was not specifically a topic of Phase I, this Court did note in a July 30 hearing that in some respects volume was "inevitably part of the analysis I'll make."

(Ferguson Decl., Ex. 47 at 25:19-20.) Not in the sense that I expected independent and new evidence to be marshaled, but in the more basic sense that by all accounts most of the damage had been done by the time NCR stopped using Aroclor in its carbonless paper. To recall, the DNR has concluded that no less than 98 percent of the discharges had occurred by the end of 1971, and that figure has been much bandied-about. The DNR's figure is neither binding on this Court nor conclusively established (an issue that is the subject of its own motion), but even so it is undeniable that all accounts confirm that the vast majority of the PCB releases – whether 98 percent or some other figure – occurred during the production period. For the reasons given below I conclude that it is enough that the overwhelming majority of the release occurred before any of the Defendants appreciated the risk; as such, I see no reason to forestall entry of judgment merely to sort out a few percentage points.

I begin by noting that the 98 percent figure is obviously a reasonable estimate. The DNR explained its conclusion more fully in its Record of Decision:

> During the period of use (1954 – 1971) an estimated 13.6 million kg (30 million lbs.) of emulsion were estimated to be used in the production of carbonless copy paper produced in the Fox River Valley. PCBs were released into the Lower Fox River in discharge water from several facilities. By analyzing purchase, manufacturing, and discharge records, conservative estimates have shown that approximately 313,600 kg (690,000 lbs.) of PCBs were released to the Fox River environment during this time. Ninety-eight percent of the total PCBs released into the Lower Fox River had been released by the end of 1971. Ceasing production of carbonless copy paper and the wastewater control measures put in place by the Clean Water Act were effective in eliminating point sources.

(ROD 1 at 4; Dkt. # 552, Ex. A.)

This conclusion makes perfect sense, since during the period of production using Aroclor 1242, Plaintiffs were shipping the broke, waste materials and wastewater *directly* to the Defendants for processing and release into the river. In fact, this direct relationship is one of the hallmarks of this case.

As opposed to post-consumer waste products, which may have *happened* to contain some carbonless copy paper, *all* of the material sent by the Plaintiffs during the production phase contained PCBs. The recycling of the material during that period was essentially part-and-parcel of the manufacturing process itself, as the broke and other waste products were necessary by-products of manufacturing.

In addition, it is noteworthy that the DNR's analysis is backed by an EPA study conducted in 1977 by Versar, Inc. (Ferguson Decl., Ex. 9.) That report concludes that "Since 1971, when NCR carbonless copy paper was no longer manufactured with a PCB dye solvent, PCB concentrations in paper products, effluents and sludges have shown a precipitous decline." (*Id.* at 4-5.) "The historical perspective shown by our mathematical model, and validated by the available data, show PCBs in paper mill effluents and product to have passed a maximum in the 1970-71 period and to be continuing down to pre-1957 levels under the influence of declining amounts of PCBs in the recycled waste paper stream." (*Id.* at 5.) Thus, although I have not relied exclusively on the DNR's conclusion that 98 percent of the PCBs had been discharged by 1971, I agree with the United States that there is no evidence that would "substantially undermine" the conclusion that 98 percent of the total PCBs were released by the end of 1971. (Dkt. # 649 at 5 n.4.) For purposes of equitable contribution, the key factor is that the overwhelming majority – whether 98 percent or 92 percent – of PCBs had been released during the production period. And because many of the Defendants did not learn of the risks of recycling NCR paper until even later – 1972 or 1973, for example – the amount of PCBs released by the time any of the Defendants possessed adequate knowledge of the risks of their activities could actually be more like 99 percent.

Having concluded that the overwhelming majority of PCBs had been released before any of the

Defendants appreciated the risks of recycling, I further note that any recycling of post-consumer waste paper during the 1970's occurred within a regulatory scheme that allowed such use (even if it did not specifically "encourage" it, as some of the Defendants suggest). Even in 1979, when the dangers of PCBs were widely known, the EPA specifically allowed the continued use of PCB-laden pre-1971 carbonless copy paper in light of several practical factors:

> Under this authorization, existing PCB carbonless copy paper may be used indefinitely. Prior to 1971, carbonless copy paper distributed by NCR Corporation was made with ink containing PCBs. There does not appear to be a way to distinguish PCB carbonless copy paper from non-PCB carbonless copy paper except perhaps by dates or other indications on unused inventories. A large portion of the PCB carbonless copy paper that has not been destroyed is probably in files. An enormous undertaking would be required of both business and government to purge existing files of PCB carbonless copy paper. Moreover, the amount of PCB on each sheet of carbonless copy paper is extremely small. In view of these practical considerations and because the potential PCB exposure and risks to human health or the environment are negligible, EPA has concluded that this activity does not present an unreasonable risk and is authorizing the continued use of existing PCB
> carbonless copy paper. In the proposal, EPA limited this authorization to five years. However, EPA does not now believe that a method for inexpensively separating PCB from non-PCB carbonless copy paper will be developed in the near future. Accordingly, EPA is authorizing the use of existing PCB carbonless copy paper indefinitely.

44 Fed. Reg. 31514, 31535 (May 31, 1979).

The Plaintiffs note that these regulations were the result of strenuous lobbying efforts by the paper industry, and no doubt that is true. The regulations do not constitute an official "permit" to release PCBs into the river, certainly. But it must be remembered that it is the government that ordered the cleanup in this action, and its own view at the time was that "the potential PCB exposure and risks to human health or the environment [from recycling waste paper] are negligible." *Id.* Granted, that was the view in 1979 rather than, say, 1972, when there was more Aroclor-containing carbonless paper circulating through the system. But the EPA's view was clear: after 1971, the amount of PCB on lingering sheets of CCP was

"extremely small" and there was no practicable way of sorting it out. This again underscores the government's apparent view that the damage here was primarily a result of the *manufacturing* process rather than the post-1971 *recycling* process that involves the Defendants.

In addition to the fact that only a negligible amount of PCBs were discharged after 1971, a related reason for precluding contribution altogether is that the knowledge of the numerous Defendants during the post-production period is not easily determined, and their knowledge did not necessarily arise the instant the Plaintiffs stopped using PCBs in 1971. Although Plaintiffs have cited various studies and interactions with governmental officials during the 1970's that suggest that different defendants knew (or should have known) about PCB dangers at various times, it would be a Herculean task to isolate and apportion contribution amounts among the Defendants given the shifting time frames and the fact that the Defendants would only be responsible for a tiny fraction of the entire total in any event. For example, suppose after a Phase I trial I concluded that Defendant A should have known about the risks of recycling post-consumer waste in September, 1973; Defendant B in July, 1975; and Defendant C in November, 1975. That would not end the question. Another phase of the trial would be required to show that, for example, Defendant A released 900 pounds of PCBs after it should have known about the dangers of doing so, and Defendant B released 1230 pounds, and so on. But of course such releases would be truly negligible. If 98 percent (or some similar amount) of the total discharge occurred during the production period, then it follows that the majority of the *post*-production releases (the remaining two percent) occurred in the months and years soon after April 1971 when recently produced NCR paper containing PCBs was working its way through the system. The record suggests that many of the Defendants did not learn about the risks of PCBs until significantly later, however, and thus it is likely that the result of a multi-phase trial

would show that something like one percent or less of the total amount of PCBs had been discharged by Defendants who appreciated some risk of environmental damage. The cost of sorting out this puzzle would far exceed any benefit. As the United States has aptly put it, "equity argues in favor of an early determination that [the Defendants] should not be dragged through a multi-year, costly litigation in order to assess whether they should contribute respective portions of approximately 2% of the costs for remediation of a problem created and perpetuated, in nearly all respects, by the Plaintiffs."[26] (Dkt. # 649 at 5.)

A fourth reason to leave the post-production period to one side is that there was very little any of the Defendants could have done even if they had learned of the problem sooner. The record shows that at the time there was no way of sorting out NCR wastepaper from non-NCR paper, nor was there any way of removing the Aroclor 1242 from the NCR paper. And, as noted above, the government sanctioned the continuing recycling of post-consumer paper products as having more benefits than drawbacks.

Finally, it is important to remember that this case is not primarily about assessing liability for environmental *damage,* it is about recovering the *costs* of remediating that damage. Although a more searching attribution of post-1971 activities might be relevant if we were trying to assess liability based on

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[26] Arguably, the cost of litigation could be considered as an equitable factor in an action like this one. The leverage afforded by the specter of a multi-year massive lawsuit like this one is particularly acute with respect to several Defendants who have almost no conceivable liability whatsoever. Though I do not rely particularly strongly on such a rationale in this decision, the United States' statement seems to stand for the common sense principle that if Plaintiffs are indeed responsible for somewhere in the vicinity of 98 percent of the damage, it does not serve equity to hold a multimillion-dollar trial to divvy up the remaining two percent, especially given the thorny issues involved in such a venture.

the gross volume or weight of PCBs actually discharged, in actuality this action is simply about responsibility for the cost of cleanup. Despite countless pages of briefing, there has been no evidence, nor any real suggestion, that the relatively minimal actions of the Defendants in the post-production period have added anything significant to the overall cost of remediation. Instead, all indications are that the costs of the cleanup would have been substantially the same even if the relevant Defendants had ceased recycling post-consumer waste paper in 1971. The cleanup effort requires dredging and capping, and the same river sediment would need to be dredged or capped with sand and gravel regardless of whether the Defendants' post-1971 activities added two percent or some slightly larger number to the total. The damage had already been done.

Consideration of the marginal costs of environmental damage was discussed by the Seventh Circuit in *Browning-Ferris Industries of Illinois, Inc. v. Ter Maat,* 195 F.3d 953, 958 (1999): "[S]uppose that even if X had not polluted the site, it would have to be cleaned up-and at the same cost-because of the amount of pollution by Y. (That would be a case, perhaps rare, in which the clean-up costs were sensitive neither to the amount of pollution nor to any synergistic interaction between the different pollutants.) Then X's pollution would not be a necessary condition of the clean up, or of any of the costs incurred in the clean up." But X is not home-free merely because the clean up is attributable to Y's activities:

> But that should not necessarily let X off the hook. For suppose that though if X had not polluted the site at all there still would have been enough pollution from Y to require a clean up, if Y had not polluted the site X's pollution would have been sufficient to require the clean up. In that case, the conduct of X and the conduct of Y would each be a sufficient but not a necessary condition of the clean up, and it would be entirely arbitrary to let either (or, even worse, both) off the hook on this basis.

Id. (emphasis added).

The underlined portion describes the case where X's pollution, on its own, would have required a cleanup action. In that scenario, it would not make sense to relieve X from contribution merely because Y was also guilty. But here we have a situation where the Defendants' post-production activities would *not* have required a cleanup on their own. How do we know that? The EPA and Wisconsin DNR – the agencies charged with ordering environmental cleanups – have told us that in their view 98 percent of the damage had been done during the period for which I am attributing sole liability to the Plaintiffs, and in the 1970s the EPA allowed continued recycling of waste paper on the basis that further PCB releases were negligible. In other words, there is no evidence either that the post-production period trickle of PCBs would have required a cleanup action or that it added materially to the cost of the cleanup action that *was* required due to the actions of the Plaintiffs.[27]

Ultimately, it is the Plaintiffs' own production of the CCP that is the *sine qua non* not just of the environmental damage, but of the entire cleanup effort and its attendant costs. As such, the cleanup cost is quite literally a "sunk" cost that is not dependent on the kinds of hair-splitting that Plaintiffs propose.[28] For all of these reasons, I conclude that it does not make sense to allow contribution based on any of the Defendants' post-1971 activities, which contributed very little to the overall PCB pollution and even less to the overall *cost* of the cleanup.

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[27]While it is conceivable that additional discharges may have added enough parts per million to some sediment to bring it over the threshold for removal (and thus theoretically increase the cleanup cost), that is purely speculative and not a basis on which to award contribution.

[28]Even if Plaintiffs were allowed to present a case discussing the relative amounts of volume discharges, I have serious doubts as to whether that would be a constructive undertaking forty years after the fact.

III. Conclusion

In the light of hindsight we must take care not to impose anachronistic knowledge on the principal actors. And in fact this case is not about blame or the imposition of liability per se – the result does not, for example, mean that the Defendants are "innocent" or not liable to the government, as liability under CERCLA is strict and all parties to this action are all potentially liable under that statute. Instead, the result simply means that as among these liable parties, the Plaintiffs are not entitled to recover from the Defendants for their costs incurred in cleaning up damage caused by dangers the Plaintiffs created. I have concluded that under the circumstances detailed above, when Plaintiffs introduce a toxin into a manufacturing process which they know or should know results in the discharge of that toxin into the environment, and then take a "wait and see" approach and view the danger as a matter of risk management and publicity control, equity will not allow them to later receive contribution from entities who are either completely faultless or nearly so, and who had no role to play in the risk strategy Plaintiffs undertook, a strategy that has now proved quite costly.

Accordingly, the Defendants' motions for summary judgment are **GRANTED**. The Plaintiffs' motion for summary judgment is **DENIED**. The Plaintiffs' motion regarding the "98 percent" statement is **GRANTED**.[29] The Plaintiffs' motion to strike the United States' response (Dkt. # 713) is **DENIED**.[30] The Final Pretrial Conference scheduled for December 21 is cancelled, as is the trial scheduled to begin

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[29]As discussed above, I have agreed with Plaintiffs that the 98 percent figure is not binding on the Court.

[30]It is true that the government's brief was not specifically a "response" to any motions filed against it, but under the unique circumstances of this case there seems little reason to ignore its filings, any more than I would ignore any positions it has advanced orally at the numerous hearings held in this action.

January 4. Parties with other pending motions are to notify the Court within 30 days whether there is any reason to delay entry of judgment in this action or whether their motions are now moot.

SO ORDERED this 16th day of December, 2009.

s/ William C. Griesbach
William C. Griesbach
United States District Judge