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## Chapter 36

### A BROWNFIELD MODEL COLLAPSES UNDER THE WEIGHT OF LITIGATION:

*City of Wichita v. Trustees of the Apco Oil Corporation Liquidating Trust*

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**Abstract:** This presentation will focus on the City of Wichita's largely failed efforts to collect its response costs for remediating the Gilbert & Mosley Site ("Site"), one of the premier Brownfield redevelopment models. In *City of Wichita v. Trustees of the Apco Oil Corporation Liquidating Trust*, 306 F. Supp. 2d 1040 (D. Kansas 2003), the Court held that if properly used, computer models are invaluable in estimating the size of overlapping contaminant plumes. Both parties used computerized groundwater modeling to determine the plume sizes allegedly migrating from each source, and mathematical computations to allocate orphan shares within the Site. Both parties agreed that where plumes overlapped, the overlapped area should be divided by the number of PRPs whose plumes contributed to the overlap. However, the parties then parted ways. The City proposed two allocation models; the Trustees evaluated six allocation models. The City's groundwater modeling expert modeled parent CVOCs for some sources, and daughter CVOCs for others; the Trustees' expert modeled parent CVOCs for some sources, and daughter CVOCs for others; the Trustees' expert modeled both parent and daughter CVOCs for all sources. The City saddled the last two defendants remaining at trial with the entire orphan share; the trustees argued that they should be saddled with little if any orphan share. Both parties used the same computer model, but inputted different variables. Faced with competing modeling, the Court reasoned that "even in the best of circumstances, a model is only an estimate and the accuracy of the estimate depends to a considerable extent on the data selected for use in the computer model, the quality and reliability of that data and, of course, the skill of the modeler." Ultimately, the Court rejected the City's modeling base don *Daubert*, holding that, "To be reliable, the expert's testimony must be based on the 'methods and procedures of science' and reflect more than the witness' 'subjective belief or unsupported speculation.'" After examining glaring errors in the City's modeling, the Court rejected the City's methodology because it was not based on any guidelines or standards, but rather on poor quality "professional judgment". The presentation will delve into groundwater modeling, modeling presentation, allocation, *Daubert* principles, and witness creditability.

## 1. INTRODUCTION

The City of Wichita's Gilbert & Mosley Site ("Site") has long been recognized as one of the premier models for urban Brownfield redevelopment. In a recent decision, however, the City was rebuked in its efforts to collect the largest portion of its response costs. In *City of Wichita v. Trustees of the Apco Oil Corporation Liquidating Trust*, 306 F. Supp. 2d 1040 (D. Kansas 2003), the United States District Court for the District of Kansas ruled that the City could not saddle polluters with the large orphan share at Site. The Court's ruling was based upon its findings that the City inadequately investigated contaminant sources, assumed liability for numerous properties, and delayed implementation of remedial measures. The Court also held that liability could be apportioned among parties responsible for commingled contamination based on computer modeling. This holding further

weakens the doctrine of joint and several liability that in large part has predominated in cost recovery and contribution actions. The ruling has far-reaching implications for municipalities involved in Brownfield projects suing, or contemplating suing, multiple contamination sources, as well as parties seeking to allocate liability for commingled contamination.

The case involved liability under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA") for cleaning up the six square-mile Site contaminated with chlorinated volatile organic compounds ("CVOCs"). The Site consists of seven large CVOC-contaminated groundwater plumes. Within each of these plumes, there are a number of smaller overlapping CVOC plumes. Because the larger and internal CVOC plumes both consist of CVOCs, field data and computer modeling was necessary to differentiate the plumes.

As a result of the Site's pollution, the City was allegedly faced with a substantial erosion of its property tax base. Due to the uncertain nature of environmental liability, banks were purportedly unwilling to provide financing for real estate transactions within the Site. To address these issues, the City assumed liability for much of the contamination and funded the investigation and remediation of the Site through tax increment financing. The City then sought to recover its response costs by suing certain potentially responsible parties ("PRPs").

Despite the presence of thousands of properties within the Site, the City sued just 26 parties. All but four parties settled, most paying for a portion of so-called "orphan shares," areas of contamination that were attributed to defunct or insolvent parties, and a portion of so-called "unmodeled areas," areas of contamination that allegedly could not be attributed to any party. Contamination in these two types of areas covered nearly 40% of the Site. The City recovered approximately \$5,000,000-\$9,000,000 through settlement. The City alleged that the Trustees of the APCO Oil Corporation Liquidating Trust ("Trustees" or "ALT"), were liable for contamination migrating from 1001 E. Lincoln which was formerly owned and operated by Apco Oil Corporation. The City admitted that 1001 E. Lincoln was the most downgradient source in Plume B, one of the larger plumes at the Site.

The two-month long trial<sup>2</sup> against the four remaining defendants delved into such issues as groundwater contaminant plume modeling, compliance with the National Contingency Plan, source identification, remedy selection, municipal contract procurement, data quality and allocation. Ultimately, the most stunning aspect of the Court's decision was its allocation of liability.

The Court held the Trustees liable for 1.72% of the \$22,000,000 groundwater cleanup, rather than the millions sought at trial.<sup>3</sup>

## 2. ALLOCATION ANALYSIS

Section 113(f) 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). Both parties admitted, indeed contended that CERCLA does not mandate a single allocation method. Thus, there may be many appropriate liability apportionment methods. Both parties used a three-step allocation scheme. First, based on computerized groundwater modeling, the parties calculated the size of the plumes allegedly migrating from each source. Second, this raw plume size was increased through a mathematical computation to include certain "unmodeled areas" that, while within the Site, could not be attributed to any particular PRP. Third, the areas where the alleged plumes from PRPs overlapped was divided by the number of PRPs whose plumes contributed to the overlap. For example, if an area of contamination was caused by two different sources, each source was allocated one half of the liability for the overlapped area of groundwater contamination.

However, that is where the parties parted ways. The City proposed two allocation models; the Trustees evaluated six allocation models.<sup>4</sup> The City's groundwater modeling expert modeled parent CVOCs for some sources, and daughter CVOCs for others; the Trustees' expert modeled both parent and daughter CVOCs for all sources. The City sought to saddle the few remaining defendants at trial with the entire orphan share; the Trustees argued that they should not be saddled with any orphan share, or at most, an orphan share proportionate to their liability. The City sought to allocate

defendants a proportionate share of the entire “unmodeled area,” even if the unmodeled area was upgradient, “separate” or “distinct” from the defendant’s plume; the Trustees proposed allocating to a defendant only those unmodeled areas contiguous with such defendant’s plume, and then only one half of that area.

Using its most aggressive allocation scheme, the Trustees argued that the City sought to increase the Trustees’ raw plume size approximately eleven fold. For example, the settled Coleman Corporation, whose plume was about eight times larger than the plume migrating from 1001 E. Lincoln, was allocated only 18% more response costs than the Trustees. In fact, the City’s allocation scheme was so aggressive that, while there were a number of settlements in excess of the non-orphan allocated share, these amounts were not credited against the allocation to the remaining defendants.<sup>5</sup> Ultimately the Court sided with the Trustees on allocation.<sup>6</sup>

## 2.1 Allocation of Liability for Commingled Groundwater Plumes Based on Groundwater Modeling

In a significant breakthrough, the Court apportioned liability for commingled contaminant plumes using computer modeling. Courts have often imposed joint and several liability on parties that caused indivisible harm because of commingled contaminant plumes. While statutorily only available under CERCLA § 107 cost recovery actions, joint and several liability has often worked its way into contribution actions under CERCLA § 113 when multiple parties were alleged to have contributed to the contamination.<sup>7</sup> In such instances, courts have often required defendants to provide evidence apportioning harm pursuant to the principles provided in the Restatement (Second) of Torts (“Restatement”) § 43 3A, a difficult burden. *See, United States v. Hercules, Inc.*, 247 F.3d 706, 717 (8<sup>th</sup> Cir. 2001). The Restatement provides that two parties can apportion damages for harm they caused by showing the harms are distinct or by offering a reasonable basis to determine the contribution of each party.<sup>8</sup> Defendants in a CERCLA § 113 contribution action can, in theory, apportion their liability based on the waste’s relative toxicity, migratory potential, extent of migration, distinct geographical area,<sup>9</sup> release chronology (time) and contamination volume. *U.S. v. Hercules*, at 247 F.3d at 718; *U.S. v. Alcan Aluminum*, 990 F.2d at 711, 722 (2<sup>nd</sup> Cir. 1993); *U.S. v. Alcan Aluminum*, 964 F.2d at 270 n. 29, 271; *U.S. v. Broderick*, 862 F. Supp. 272, 276-77 (D. Colo. 1994). However, with few exceptions, courts have refused to acknowledge a divisibility of harm in cases where contaminant plumes have commingled.<sup>10</sup>

In *City of Wichita*, both parties engaged in computer modeling to determine the size of each source’s groundwater contaminant plume. The Court held that “if properly used, computer models appear to be an invaluable tool in approximating the complexities of underground fluid flow.” 306 F. Supp. 2d at 1106. “Through modeling, reservoir flow and contaminant transport can be calculated using complex mathematical operations that simulate the aquifer characteristics. From that effort, the model can simulate the progression of contaminant plumes from each source, thereby providing an estimate of the size of each plume at any given time.” *Id.* “This is especially true when there is extensive and overlapping contamination from multiple sources, where contamination cannot be traced entirely to a specific source and when the extent of contamination is difficult to determine by ‘field methods’ such as geoprobing and drilling test wells.” *Id.* at 1108.

Both parties used the same computer model, CDM’s proprietary Dynflow and Dyntrac models, to make an “apples-to-apples” comparison. However, the experts inputted different variables. The experts derived the variables by interpreting field data, using various default parameters, and applying basic chemistry. Faced with competing modeling, the Court had to select the most accurate model.

“Nevertheless, even in the best of circumstances, a model is only an estimate and the accuracy of the estimate depends to a considerable extent on the data selected for use in the computer model, the quality and reliability of that data and, of course, the skill of the modeler.” *Id.*

For computer modeling purposes, the size of the alleged groundwater plumes migrating from individual sources was determined in large part by the alleged CVOC concentrations in the groundwater at the source, referred to as “source loadings” that are fed into the computer model. Typically, the higher the source loading, the larger the plume. While the City’s allocation expert, Dr.

Olsen with the firm of Camp, Dresser and McKee, testified that it is important to be consistent when modeling the plume size migrating from each source, the Trustees argued that the City's experts were inconsistent in three key respects. First, while the City's experts used only the highest CVOC loadings to model the plume allegedly migrating from the source attributed to the Trustees, 1001 E. Lincoln, they rejected using the highest CVOC loadings when modeling the plumes from upgradient sources. Second, while it is well established that perchloroethylene (PCE) degrades to trichloroethylene (TCE), which degrades to the daughter products dichloroethylene (DCE) which in turn degrades to the daughter product vinyl chloride (VC), the City's experts modeled the daughter products only for the two remaining defendants. The City modeled only the parent products PCE and TCE for the upgradient settled parties. This approach shortened the upgradient plumes and lengthened the plumes attributed to the two remaining defendants.

Further, each of the CVOCs has different cleanup levels at the Site, and the City's experts used the cleanup level for one CVOC, referred to as a surrogate, to define the extent of another CVOC's plume. For example, when modeling the size of the alleged DCE plume migrating from 1001 E. Lincoln, the City's expert modeled the extent of the DCE plume using the alternate cleanup level (ACL) for VC, 2 parts per billion (ppb), instead of the ACL for DCE, 70 ppb. Using a lower cleanup level to define the plume gave the impression that the plume's size and length was larger than in reality (i.e., a plume defined by a 70 ppb boundary is much smaller than a plume that stretches all the way out to a 2 ppb boundary).

These modeling manipulations falsely shortened the upgradient plumes so that they did not appreciably overlap the plumes migrating from the properties formerly owned by the two largest remaining defendants.

The Court rejected the City's approach: "The City's groundwater modeling expert, Michael Smith acknowledged that never before in his professional career had he modeled a parent product using the ACL for a daughter or surrogate product. He had never seen any literature which approved the use of a surrogate. Smith admitted that if he had modeled DCE using the corresponding ACL line for DCE, the resulting simulated plume would have been 'considerably smaller.' In contrast to what appears to be a shortcut by Smith, when ALT's expert [Dr. Edward McBean of Conestoga-Rovers & Assoc.] wanted to know the plume sizes for parent and daughter products, he modeled them both. Had Smith done something similar, his work might have retained more credibility. Finally, Smith and Olsen knew that allocation modeling was for use in this case. In other words, they knew the rules of the game. Smith's failure to follow the rules by not disclosing his change from usual modeling methodology cannot be seen as an innocent mistake. This damaged not only Smith's, but Olsen's, credibility, too." *Id.* at 1109-1110.

Ultimately, the Court rejected the City's contaminant plume modeling methodology based on Federal Rules of Evidence 702(2) and (3), and the *Daubert* line of cases.<sup>11</sup> "To be reliable, the expert's testimony must be based on the 'methods and procedures of science' and reflect more than the witness' 'subjective belief or unsupported speculation.' The Court must assess whether the reasoning or methodology underlying the testimony is scientifically valid and whether the reasoning or methodology properly can be applied to the facts in issue. A determination of reliability requires consideration of the flexible, non-exclusive and now-famous *Daubert* factors: (1) whether the theory or technique can be or has been tested; (2) whether the theory or technique has been subjected to peer review or publication; (3) whether there is a potential or known rate of error for the theory or technique; and (4) whether the theory or technique is accepted in the scientific community." *Id.* at 1108.

The Court then examined various glaring errors in the City's modeling. One example was the City's modeling of contamination from their own upgradient source, the City's Bus Barn. The City's expert modeled the direction of the Bus Barn plume contrary to the groundwater flow direction and the plume orientation of every other party's plume in the vicinity. In the City's modeling, the Bus Barn plume flows from northeast to southwest, despite the fact that the City's groundwater monitoring report showed the groundwater flowing from north to south. The Court ruled that "this had the effect of quickly driving the City's plume outside the known boundaries of the actual plumes, a substantial portion of the City's pollution plume was truncated and thus ignored." *Id.* at 1111. This approach

decreased the size of the Bus Barn plume, and directed it away from the plume attributed to the Defendants. In Dr. McBean's modeling, the Bus Barn plume tracks underneath 1001 E. Lincoln. The City took other liberties with the modeling as well: "The City's modeling expert also did not always 'truncate' areas where the model showed contamination but the field data did not. He acknowledged, for example, that his model at APCO was not consistent with reality because it modeled contamination north or upgradient of APCO which was not confirmed by field data. Yet he did not truncate that area. The effect of this use of 'professional judgment' was to allocate contamination to APCO which APCO could not have caused." *Id.* at 1109.

The Court noted that Smith "conceded that his modeling techniques and methodology are not based on any specific guidelines or standards, but rather on his 'professional judgment.'" *Id.* at 1108. The Court then found that his judgment should be accorded little weight.<sup>12</sup>

One of the most important aspects of both parties' allocation scheme was the principle that areas of plumes which overlap should be divided equally between the parties. By shortening the plumes from upgradient sources, the City found that only one plume from an upgradient source overlapped the plume allegedly migrating from 1001 E. Lincoln, and only a portion of 1001 E. Lincoln's plume at that. By contrast, to determine the number of overlaps, the Trustees' groundwater modeling expert, Dr. Edward McBean, modeled both the parent products PCE and TCE as well as the daughter products DCE and VC for all sources in Plume B. Next, he corrected the flow of CVOC plumes to make them consistent with groundwater flow direction. Using the same computer model used by the City's expert, coupled with the CHAIN model, Dr. McBean determined that there were actually four (4) plumes overlapping the plume allegedly migrating from 1001 E. Lincoln (rather than one as alleged by the City), and that each overlapped the entire alleged 1001 E. Lincoln plume. In accordance with the principles expressed by the City's experts, Dr. McBean divided the area attributed to 1001 E. Lincoln by a factor of five (5).

The Court's ruling has a number of important ramifications. First, groundwater modeling, which has been used for several decades in developing remedial actions, is now a viable tool for apportioning damages even when the plumes are commingled. This should provide defendants in contribution actions with a viable defense to joint and several liability. Second, the Court will scrutinize groundwater modeling to assure that it meets the *Daubert* principles. There will be fertile ground for argument on this issue. Despite being used for years in CERCLA's remedial investigation, feasibility study and remedial design phases, the use of such modeling has received relatively little judicial scrutiny. Modeling often appears to be more of an art than a science. In the *City of Wichita* case, both parties used the same computer model; yet the parties, by changing the variables in the computer program, derived vastly different results. There are a number of other groundwater contaminant transport computer models. No doubt, in the future, parties will use competing computer programs, yielding even more divergent portrayals of contaminant fate and transport, and ultimately allocation.

## 2.2 Attributing the Unmodeled Areas

In the second step of the parties' proposed allocation models, the area attributed to each of the defendants, settling and non-settling, was proportionately increased through a mathematical computation in order to encompass the "unmodeled areas" of contamination. Again, the Trustees adopted this approach to make an apples-to-apples comparison. "Unmodeled areas" are those areas that are contaminated above the ACLs, but which the City did not attribute to any known source. The unmodeled areas cover approximately 20% of the Site.

The City allocated the unmodeled areas to defendants regardless of where the unmodeled areas were located. Upgradient areas of contamination that were not contiguous with a defendant's plume were, nonetheless, allocated to that defendant. APCO's former property at 1001 E. Lincoln is one of the most downgradient sources, and its plume is either "separate and distinct" or "downgradient" from almost every other plume, unmodeled area or orphan share. Based on the fact that it is impossible for alleged contamination from 1001 E. Lincoln to migrate into these unmodeled areas, as well as relevant case law,<sup>13</sup> the Trustees' expert declined to allocate the Trustees liability for these unmodeled areas.

For the unmodeled areas adjacent to the plume allegedly migrating from 1001 E. Lincoln in some of the Trustees' models, the Trustees allocated half of the unmodeled areas to the City because the City owned sewers and properties in these areas and issued releases to owners of properties in these areas.

Ultimately, the Court selected a computer model proposed by the Trustees' expert which established that there were no unmodeled areas next to the plume allegedly migrating from 1001 E. Lincoln because the groundwater contamination in such areas was attributable to known upgradient sources.

### 2.3 Allocating the Orphan Shares

In the third step of the City's allocation scheme, after increasing all defendants' shares to encompass the unmodeled areas, the non-settling defendants were also allocated all of the "orphan shares," geographical plume areas for sources where the owner or operator at the time of disposal is allegedly either unknown, or known but deemed by the City to be defunct or insolvent. Ten of the 25 named defendants were designated orphans by the City. The orphan share totaled approximately 20% of the modeled areas in the Site.

Under the City's allocation scheme, the orphan share was borne entirely by the non-settling defendants remaining at trial instead of being distributed between all viable parties, settlors and non-settlors alike. As the City settled with a defendant, the City's experts retired from further allocation to non-settlors the geographical region of contamination associated with that defendant as well as the unmodeled area allocated to that defendant. However, orphan shares were never retired. Instead, Dr. Olsen reallocated the orphan share which previously had been tacked onto the settlor's share to the remaining non-settling defendants. The orphan shares re-allocated to the remaining defendants also included unmodeled areas tacked onto those orphan shares. As a result of the City's allocation approach, non-settling defendants faced an ever-increasing risk of having to pay a larger allocation share the longer they refused to settle and remained in the case.

The Trustees' expert, Mr. Frank Rovers, testified that orphan shares should be allocated to all parties, including the City, not just the non-settling defendants being tried. The Trustees argued that under the Uniform Contribution Fault Act ("UCFA"),<sup>14</sup> and related case law,<sup>15</sup> orphan shares attributed to defunct or insolvent companies should be allocated to all parties (including the City), not just non-settling defendants remaining in the litigation. The Trustees argued that the Court is required under UCFA to reduce the Trustees' share of the liability by the amount of the settling parties' equitable share of liability. They argued that the Court may not re-allocate the settling defendants' orphan share to the non-settling defendants, because it would effectively hang the non-settlors "out to dry", contravening established Tenth Circuit case law.<sup>16</sup>

The *Apeco* Court ultimately decided not to allocate any orphan shares to the remaining defendants. In reaching this decision, the Court relied primarily upon its equitable authority under CERCLA §113. The Court's decision was based largely upon the City's acceptance of liability under its Certificate and Release ("CAR") program, the City's failure to adequately investigate contamination at property owned or operated by CAR recipients, the City's failure to identify all contaminant sources within the Site, the Trustees' efforts to cooperate with government agencies, and the City's delay in conducting source control at 1001 E. Lincoln. These elements of the Court's decision have a number of implications for urban Brownfield redevelopment projects.

#### 2.3.1 The City's Acceptance of Liability Under the Certificate and Release Program

To encourage the Site's economic development, the City instituted a novel program where it would release from CERCLA liability those property owners who demonstrated that they had not contributed to the contamination.

The Trustees successfully argued that the City assumed liability for CAR recipients because the City had done an inadequate job investigating the sources that were released. Hundreds of businesses operate at the Site, and the Trustees' expert Bruce Clegg testified that many conduct, or conducted, operations involving hazardous substances that may have affected the Site's groundwater. These include gas stations, dry cleaners, auto body shops, airplane parts manufacturers, printing companies,

and a host of other types of industrial concerns. Indeed, in this respect, the City of Wichita is not different from any other medium to large urban city in the United States.

Among these actual and potential sources within the Site are a number of properties where parties were given releases by the City through its CAR program. For example, the Trustees expert testified that the City released, among other sources, an automotive repair facility where solvent odor was detected in an excavation, an automotive facility containing a parts washer, a dry cleaner where dichloroethene was detected in the groundwater and petroleum hydrocarbons were found in the soil, and a property containing paint thinners and cleaning solvents. The City issued a CAR for one property on the very same day that two 500-gallon underground storage tanks used for “dry cleaning solvents” were removed from its property. Documentation in the City’s possession stated “that significant soil contamination was encountered during the excavation of the solvent tanks at this facility.” Additionally, KDHE noted that “it became evident by the odors that we are very likely dealing with a chlorinated solvent.”

The Court observed that “this Site involves over 8,000 parcels of land, and the Court is not remotely convinced that the City has identified all sources of chlorinated solvent releases. The City voluntarily undertook this cleanup, and should have been aware of the Herculean effort required to identify PRPs.” *Id.* at 1105-1106. The Court held that “While a review of [CAR application files] provided by ALT indicates that some of them appeared adequately investigated, other applicants indicated that solvents and similar pollutants were actively used on their property. ALT’s expert testified that he could find no evidence that the City had performed any sampling on many of these properties, and the City made no effort to rebut that claim.” *Id.* at 1105. The Court held that “[t]he City compounded its financial risk when it decided to start issuing formal releases to potential polluters. Issuing those releases with only cursory investigations raises the risk even more. Accordingly, the Court finds that this factor weighs in favor of limiting defendants’ liability for orphan shares.” *Id.*

This aspect of the Court’s ruling has particularly significant implications for municipalities conducting Brownfield projects, and indeed any other party that seeks to recover their response costs through litigation. The burden of identifying defendants clearly falls on the plaintiff, and not the defendants. Should the plaintiff fail to adequately investigate a potential source of contamination, the plaintiff, in essence, assumes that liability. This will mostly like be a very heavy burden in almost any urban or multi-contaminant source setting.

### **2.3.2 Cooperation With KDHE**

The next factor weighted heavily by Court in declining to allocate orphan shares to the remaining defendants was the Trustees’ continuous offers to perform source control measures at 1001 E. Lincoln, and KDHE’s summary rejection of those efforts. KDHE invited the remaining defendants to conduct source control measures at their respective sites. The Trustees responded with an initial proposal for conducting source control provided that they received some form of contribution protection from KDHE. KDHE rejected the proposal and identified several technical deficiencies in the Trustees’ proposal that had to be addressed. In a final letter, the Trustees capitulated on these issues. KDHE never responded to the final letter. “Indeed, according to KDHE attorney Erika Bessey, she barely read past the first page of the letter, after which she ‘got real annoyed and threw it in a pile,’ never bothering to look at it again. Moreover, Bessey noted that even if she had read the letter, she would not have been willing to reach an agreement with ALT - an agreement which she had initially invited, even though ALT was agreeable to everything the KDHE had previously requested. The Court finds Bessey’s conduct was counterproductive to the KDHE’s obligations to oversee environmental protection in Kansas.” *Id.* at 1103. The Court reasoned that “there is something to be said for allowing the party who pays the bill to be involved in selecting the solution, especially where the KDHE has already invited it to do so. Here, the City appears to want to dictate source control measures at the APCO site, while passing the costs on to the Trustees. ALT offered to perform its own source control measures while still remaining accountable to the KDHE for doing a satisfactory job. In doing so, ALT would have been able to better control its own costs while still being obligated to perform the cleanup according to KDHE standards.” *Id.* at 1103-1104. “The Court was also very troubled by the KDHE’s

irresponsible rejection of ALT's source control proposals with no apparent effort to reach a solution." *Id.* at 1104.

Finally, the Court held that the City's own lack of diligence in pursuing remediation of 1001 E. Lincoln was grounds for denying the City's argument that orphan shares should be allocated to the Trustees: "there is evidence that shows the City's own dilatory conduct with regard to source control may have exacerbated the groundwater pollution problem. As early as 1996, the KDHE was harping on the City to pursue source control; yet, to this day the only source control efforts undertaken at the Site were conducted at one of the Coleman facilities and the City's Bus Barn." *Id.* at 1103. "The City has characterized APCO and Reid as two of the 'largest sources of CVOC groundwater contamination at the Site,' yet no effort to control the sources at those sites has been performed. Thus, as a result of the City's delays at source control, chlorinated solvents have had an additional seven years to enter the aquifer and aggravate the groundwater contamination problem. ALT offered to perform source control, and was turned down. The City was asked to do it, but has failed to comply." *Id.*

The implications of this aspect of the Court's ruling are clear. A defendant's efforts to cooperate with the government could substantially reduce its allocated share. Conversely, a party that delays implication of a remedy so that contamination continues to migrate will, itself, be saddled with additional liability.

### 3. CONCLUSION

The "Wichita Model" has long been touted as a premier model for other municipalities conducting Brownfields redevelopment. The City's use of Tax Increment Financing to pay for environmental remediation is an innovative method for spreading the environmental costs among property tax payers that has been copied many times. Seeking to recover those costs from PRPs, however, is another matter. The Court's ruling places the burden of identifying all PRPs on the party bringing the Section 113 action. Numerous evidentiary issues, equitable considerations, scientific uncertainty and practical impediments could leave a municipality, or indeed any plaintiff saddled with the orphan shares that are often so prevalent in urban settings. Further, municipalities that release landowners from liability should be prepared to accept that liability unless they can show that they thoroughly evaluated the released property. This will be a difficult burden in urban settings where land use history is often complex, and contaminant migration is difficult to determine. Municipalities will also have to take prompt steps to remediate contaminant sources or risk being saddled with orphan share liability.

The Court's ruling has also paved the way for using computer modeling to distinguish between overlapping plumes comprised of the same constituents. While there no doubt will be significant disagreement about modeling techniques and results, this approach will yield a far fairer allocation than the principle of joint and several liability.

### NOTES

<sup>1</sup> Unless noted as an implication of the ruling, most, if not all facts and holding are derived from the holding or documents filed by the parties in court.

<sup>2</sup> The case was a massive undertaking, involving hundreds of witnesses and depositions, and over 750,000 pages of documentary evidence. All exhibits were recorded on multiple computer databases for retrieval during discovery and trial. Nearly all exhibits tendered at trial were presented electronically. They were also hyper-linked when referenced in electronically filed post-trial briefs.

<sup>3</sup> The Court also found that Reid Supply, the other remaining defendant, who agreed to accept the Trustees' allocation model, was liable for 0.16% of site cleanup costs. Reid Supply was also located in the downgradient portion Plume B.

<sup>4</sup> Unlike the City which presented two allocation schemes, the Trustees' expert, Frank Rovers, of Conestoga Rovers & Associates, evaluated six (6) allocation models and ultimately selected portions

of them in proposing the most reasonable allocation model, if any liability was imposed on the Trustees. The six allocation models included the model proposed by the City, a model using the same scheme proposed by the City except that orphan shares were allocated to all parties and unmodeled areas were allocated to just contiguous plumes, two models that followed the above approach but used different source loadings at 1001 E. Lincoln, and a model based upon the number of wells used to remediate the plume migrating from 1001 E. Lincoln. The Trustees used the multiple models to find fairness through common results and reject outlying allocation schemes. The Court ultimately selected one of the Trustees' allocation models and the City's model. All of Mr. Rover's allocation models accepted the City's cost figures, and allocated all such costs. The Court selected a figure from the "Trustees Allocation Model 2", which modified the City's allocation model in two important respects: (1) groundwater modeling and (2) allocation of orphan shares.

<sup>5</sup> The Court observed that "the settlement figures make clear that the City has, on occasion, done very well for itself." *Id.* at 1104 For example, while the City's own estimates show that one party was only responsible for \$196,002 in past costs, the City reaped \$1.2 million from this party, giving the City a substantial windfall to cover orphan shares. *Id.* The City also settled with a solvent product transporter for \$225,000, but did not account for the transporter's contribution when it allocated response costs to defendants in this lawsuit. This had the effect of making the transporter's settlement appear as another windfall. *Id.*

"Finally, the Court also discovered that the City also received \$200,000 in exchange for indemnifying a former owner of the City's Bus Barn property against environmental liability, yet failed to include this figure in its accounting for past settlements, thereby providing yet another opportunity for double recovery through the remaining defendants. Although the Bus Barn agreement was an indemnification for environmental liability, rather than a formal settlement agreement with a PRP, the Court sees little substantive difference between the two under these particular facts." *Id.* at 1104-1105. In considering these facts, the Court noted that the City suffered shortfalls in some of its settlements. "Nonetheless, the City was in control of its own destiny when it agreed to those numbers. Taking all these facts into consideration, the Court finds that this factor also weighs in favor of limiting defendants' liability for any orphan shares." *Id.* at 1105.

The implication of this aspect of the Court's ruling, is that a municipality, like almost every other plaintiff in a civil action, bears the burden that it settled for too little money

<sup>6</sup> The Trustees advanced a number of arguments that they should be allocated little or no response costs at the G&M Site: (1) the remedy was not necessary; (2) the costs of response did not comply with the City's contract procurement requirements; the remedy was not consistent with the NCP; the City's data was neither accurate, precise nor reliable; (5) APCO's operations did not cause CVOCs to leach to groundwater at levels exceeding ACLs; (6) the Trustees' cooperation with KDHE; (7) the City's failure to determine when a release occurred at 1001 E. Lincoln; (8) the City's assumption of liability through the COR Program; (9) the City's receipt of an economic benefit from the remediation which spurred development within the Site; (10) the City's delay in remediating its own property; (11) the City voluntarily agreed to cleanup the G&M Site even though it had no legal obligation to do so; (12) the City obtained a significant tax benefit and economic benefit from accepting the responsibility; (13) the City failed to follow its own ordinances with regard to estimating costs and competitive bidding; (14) its remediation of the Bus Barn was incomplete and left significant contamination on that property; and (15) the City allowed its sewer to leak CVOCs. While the Court declined to award no damages to the City, it used a number of these factors in declining to saddle the Trustees with any orphan share.

<sup>7</sup> The divisibility analysis in a CERCLA § 107 and 113 actions occur at different stages. In a cost recovery action brought pursuant CERCLA § 107, most Courts allow defendants the opportunity to establish divisibility during the liability stage because liability in a section 107 cost recovery action is joint and several. In a CERCLA § 113 contribution action, Courts have determined that the divisibility "defense" is not applicable at the liability stage since defendant's liability is only several. Thus, defendants must prove one of the defenses set forth in CERCLA § 107(b) to avoid

liability in a CERCLA § 113 contribution action. Nevertheless, because CERCLA § 113 permits Courts to evaluate all equitable factors it deems appropriate to allocate response costs, divisibility criteria are evaluated during the allocation stage in a contribution action. *See Akzo Coatings, Inc. v. Aigner Corp.*, 909 F. Supp. 1154, 1161 (N.D.Ind. 1995) (“Causation, while irrelevant when determining liability, can affect the ultimate determination of damages under § 113(f).”) and *U.S. v. Alcan Aluminum* (964 F.2d 252, 270 (3rd Cir. 1992) (“In a sense, the ‘contribution’ inquiry involves an analysis similar to the ‘divisibility’ inquiry, as both focus on what harm the defendant caused.”)

<sup>8</sup> Unlike the Gore factors, which were specifically designed to equitably apportion liability, the divisibility doctrine is based in the principles of causation.

<sup>9</sup> Geographical division can also occur where different media, such as soil and groundwater, are contaminated. *Memphis Zane May Associates v. IBC Manufacturing Company*, 952 F. Supp. 541, 548 (W.D. Tenn. 1996).

<sup>10</sup> *See e.g., United States v. Vertac Chem Corp.*, 79 F. Supp. 2d 1034 at 1037-38 (E.D. Ark. 1999) (rejecting contribution defendants’ attempt to divide site into “mini-sites” because wastes had commingled); *Raytheon Constructors, Inc. v. ASARCO, Inc.* 2000 WL 1635482 at \*11 n.1 (D. Colo. March 31, 2000), (“a defendant can secure apportionment of response costs and escape joint and several liability only if it can demonstrate that the harm it caused is divisible, a nearly impossible burden.”); *Centerior Service Co. v. Acme Scrap Iron & Metal Corp.*, 153 F.3d 344, 348 (6th Cir. 1998) (“Given the nature of hazardous waste disposal, rarely if ever will a PRP be able to demonstrate divisibility of harm, and therefore, joint and several liability is the norm.”); *Axel Johnson, Inc. v. Carroll Carolina Oil Co.*, 191 F. 3d 409, 417-418 (4<sup>th</sup> Cir. 1999) (rejecting plaintiffs argument that property could be divided into multiple facilities because contamination existed throughout the facility); *Northwestern Mutual Life Insurance v. Atlantic Richfield Corp.*, 847 F. Supp. 389, 401 (E.D. Va. 1994) (imposing joint and several liability on defendant despite multiple sources of hazardous substances, because the Court found it impossible to separate out the harms caused by the different units). The rule in *Apco* departed significantly from these line of cases.

<sup>11</sup> *Daubert v. Merrell Dow Pharmaceutical, Inc.*, 509 U.S. 579, 113 S. Ct. 2786 (1993).

<sup>12</sup> The Court was highly critical of Mr. Smith. "In countless opinions, courts have observed that an overriding purpose of expert testimony is helpfulness to the trier of fact. The vast majority of these opinions analyze a judge's decision to admit or exclude expert testimony offered in a jury trial. In this court trial, the written transcript does not adequately reflect the difficulties with the presentation of Smith's unnecessarily long, complex and confusing testimony. Both Smith and his presenting counsel were admonished that the court was having a great difficulty understanding Smith's testimony. The admonitions went unheeded. Eventually, the problem became so bad that the court threatened Smith with contempt and restricted him to "yes or no" answers on cross-examination, a step which was not necessary with any of the other witnesses, many of whom were experts. In the end, Smith's testimony did little to help the court reach a decision in this difficult case. Accordingly, Smith's testimony and his modeling work accorded little weight."

<sup>13</sup> In *U.S. v. Broderick*, the Court held that the defendant was not liable for a contaminant plume that had neither merged with the plume on its land nor migrated onto its parcel of land. 862 F. Supp., 272, 276 (D.Colo. 1994). (In *United States v. Broderick Inv. Co.*, 955 F. Supp. 1268 (D.Colo.1997) (“Broderick II”) *af'd in part, rev 'd in part U.S. v. Burlington Northern R. Co.*, 200 F.3d 679 (10<sup>th</sup> Cir. 1999) (affirmed apportionment of damages based on divisibility), the District Court ruled that the damages that were recoverable from defendant should be reduced proportionally according to the District Court's geographic divisibility ruling in *Broderick I*. Thus, defendant's liability was reduced by the portion of other defendants' settlement geographically attributable to the area of the Site for which defendant was jointly and severally liable with the other defendants under the District Court's prior holding.) In reaching its decision, the Court, relying on the Restatement (Second) Torts § 433A, reasoned that “where two or more joint tortfeasors act independently and cause a distinct or single harm for which there is a reasonable basis for division according to the contribution of each, then each is liable only for damages for its

own portion of the harm.” 862 F. Supp. at 276. The Court also noted that the Tenth Circuit, in a related case, distinguished between the two plumes as well for the purposes of insurance coverage. *Broderick Investment Co. v. Hartford Acc. & Indm. Co.*, 954 F.2d 601 (10th Cir. 1992).

In *U.S. v. Hercules*, the Eighth Circuit held that a site may be divisible if a defendant can establish that it consists of “non-contiguous” areas of contamination. 247 F.3d 706, 717-719 (8th Cir. 2001). The Court noted that defendants may be able to demonstrate distinct harms for divisibility based on geographical considerations, such as where a site consists of non-contiguous areas of contamination or separate and distinct plumes of groundwater contamination 247 F.3d at 719 (citing *Akzo Coatings, Inc. v. Aigner Corp.*, 881 F. Supp. 1202, 1210-1211 (N.D. Ind. 1994), *clarified on reconsid.*, 909 F. Supp. 1154 (N.D. Ind. 1995) (Granting defendants’ motion for summary judgment on the issue of joint and several liability because the contaminated sites were non-contiguous citing *Broderick*, 862 F. Supp. at 277). *See also FMC Corp. v. Vendo Co.*, 196 F.Supp.2d 1023, 1034 (E.D.Cal. 2002) (“Separate and distinct subterranean plumes of groundwater contamination provide a basis to divide CERCLA liability for a site.”); *Memphis Zane May Associates v. IBC Mfg. Co.*, 952 F.Supp. 541, 549 (W.D.Tenn. 1996) (Defendant can avoid joint and several liability by showing that hazardous substances occupy separate and distinct geographic areas of contamination.).

<sup>14</sup> Pursuant to the Uniform Comparative Fault Act of 1977 (“UCFA”), 12 U.L.A. 42, the Trustees argued that orphan shares should be attributed to all viable defendants, not just the remaining non-settling defendants.

UCFA creates a right to contribution between two or more persons who are jointly and severally liable for the same injury based upon the parties respective, proportionate, equitable share. UCFA § 4(a), UCFA § 2. The total fault is to be allocated among each claimant, defendant, third party defendant, and person who has been released from liability by agreement. UCFA § 2(a). UCFA specifically provides for insolvent parties’ shares to be allocated among solvent parties, including the plaintiff, according to their respective proportions of fault. UCFA § 2(d). UCFA requires that the liability of non-settling private parties is reduced by the amount of the settling private parties’ equitable share of liability, rather than by the actual dollar amounts of settlements.

In *Barton Solvents v. Southwest Petro-Chem, Inc.*, the Court held that the non-settling defendants’ share of liability is not increased by settlements under the proportionate credit rule. 834 F. Supp. 342, 346 (D. Kan. 1993). UCFA protects “non-settling defendants by assuring that their liability will reflect only their responsibility for the cleanup costs.” *Id.* at 348 (quoting *Edward Hines Lumber Co. v. Vulcan Materials Co.*, 1987 WL 27368, at \*2 (N.D. Ill. 1987)). Additionally, the Court recognized that “UCFA does not ‘hang the non-settling defendants out to dry’ since the settling plaintiff bears the risk that the settling defendant’s proportionate share of the clean-up costs may be greater than the settlement amount.” *Id.* (quoting *Lyncott Corp. v. Chemical Waste Management, Inc.*, 690 F. Supp. 1409, 1418 (E.D. Pa. 1988)).

<sup>15</sup> *United States v. Atlas Minerals and Chemicals, Inc.*, 1995 U.S. Dist. LEXIS 13097 at \*234-237 (E.D. Penn. 1995) (Third-party defendants’ allocation will be reduced by the equitable shares of those third-party defendants which have settled, following UCFA); *Hillsborough County v. A & E Road Oiling Service, Inc.*, 853 F. Supp. 1402, 1410 (M.D. Fl. 1994) (“UCFA effectively embraces both prompt clean-up and fair allocation.”); *United States v. SCA Services of Indiana*, 827 F. Supp. 526, 536 (N.D. Ind. 1993) (UCFA secures equitable apportionment of liability for nonsettlers); *American Cyanamid Co. v. King Industries, Inc.*, 814 F. Supp. 215, 219 (D.R.I. 1993) (adopting UCFA and holding that plaintiffs’ remaining claims shall be reduced by the amount of each settling parties’ equitable share of liability, if any, as equitable shares are determined at trial); *Comerica Bank—Detroit v. Allen Indus., Inc.*, 769 F. Supp. 1408, 1414 (E.D. Mich. 1991) (UCFA “does not...hang the non-settling defendants out to dry...”); *Allied Corp. v. Acme Solvent Reclaiming, Inc.*, 771 F. Supp. 219, 223 (N.D. Ill. 1990) (“UCFA protects non-settling defendants by assuring them that they will not be liable for more than their equitable share as finally determined at the close of litigation.”); *U.S. v. Western*

*Processing Company*, 756 F. Supp. 1424, 1432 (W.D. Wash. 1990) (under UCFA, it is not equitable to require non-settlers to absorb orphan share liability as a result of settlements); *United*

*States v. Laskin*, 1989 U.S. Dist. LEXIS 4900 at \* 18 (N.D. Oh. 1989) (Applying UCFA, “the government’s claim against any non-settling defendant shall be reduced by the greater of the amount of the settling defendants’ combined equitable share of the obligation or the amount of the settlement.”); *Edward Hines Lumber Co. v. Vulcan Materials Co.*, 1987 WL 27368 at \*2 (N.D.Ill. 1987) (UCFA “protects non-settling defendants by assuring that their liability will reflect only their responsibility for the clean-up costs, regardless of the amount the settling defendant tendered to the plaintiff.”); *Lyncott Corp. v. Chemical Waste Management Inc.*, 690 F. Supp. 1409, 1418-19 (E.D. Pa. 1988) (UCFA “avoids the inequity that might develop were nonsettlers forced to absorb the total cost responsibility that are not allocable to solvent responsible parties.”).

<sup>16</sup> A number of Circuits have held that it would be unfair to allow innocent PRPs to proceed in a § 107 case and transfer all potential liability to other PRPs because there may be orphan shares of liability that should be equitably divided among the plaintiffs and other defendant PRPs. *Sun Co. v. Browning-Ferris, Inc.*, 124 F.3d 1187, 1193 n.4 (10th Cir. 1997) cert. denied, 118 S.Ct. 1045 (1998); *Morrison Enterprises v. McShares, Inc.*, 302 F.3d 1127, 1135 (10th Cir. 2002). See also, *Pinal Creek*

*Group v. Newmont Mining Corp.*, 188 F.3d 1298, 1303 (9th Cir. 1997) (“Immunizing PRPs who have directly paid for cleanup operations from the risk of sharing the cost associated with orphan shares would undermine the ability of Courts to allocate costs between all PRPs ‘using such equitable factors as the Court determines are appropriate.’”); *Ekotek Site PRP Committee v. Self*, 1 F. Supp. 2d 1282, 1293 (D. Utah 1998) (orphan shares to be allocated among all PRPs); *United States v. Davis*, 31 F. Supp. 2d 45, 62 (D. R.I. 1998) (“Equitable allocation calls for liability to be apportioned among all responsible parties.”); *Browning-Ferris Indus. of Ill., Inc. v. Ter Maat*, 13 F. Supp. 2d 756, 773 (N.D. Ill. 1998), rev’d in part, aff’d in part, *Browning-Ferris Indus. of Ill., Inc. v. Ter Maat*, 195 F. 3d 953 (7th Cir. 1999) (reversed on the issue of parent company liability but affirmed on the issue of allocation of responsibility for clean-up costs, stating “[o]rphan shares should be apportioned to the PRPs (both plaintiffs and defendants) according to their relative equitable share.”); *United States v. Kramer*, 953 F. Supp. 592, 598-99 (D. N.J. 1997) (“There is no reason in law or equity to rule out the notion that consideration may be given to equitable apportionment of the “orphan share” among all responsible parties...”); *Charter Township of Oshtemo v. American Cyanamid Co.*, 898 F. Supp. 506, 509 (W.D. Mi. 1995) (“Equity and fairness dictate that the shares that would have been attributed to parties that are now insolvent should be apportioned among all of the solvent PRPs.”).