UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TENNESSEE

GREG ADKISSON, et al., Plaintiffs, v. JACOBS ENGINEERING GROUP, INC., Defendant.	No.: 3:13-CV-505-TAV-HBG
Lead Case Consolidated with	
KEVIN THOMPSON, et al., Plaintiffs, v. JACOBS ENGINEERING GROUP, INC., Defendant.	No.: 3:13-CV-666-TAV-HBG
as c*onsolidated with*	
JOE CUNNINGHAM, et al., Plaintiffs, v. JACOBS ENGINEERING GROUP, INC., Defendant.	No.: 3:14-CV-20-TAV-HBG
BILL ROSE, Plaintiff, v. JACOBS ENGINEERING GROUP, INC., Defendant.	No.: 3:15-CV-17-TAV-HBG
CRAIG WILKINSON, et al., Plaintiffs, v. JACOBS ENGINEERING GROUP, INC., Defendant.	No.: 3:15-CV-274-TAV-HBG
ANGIE SHELTON, as wife and next of Kin on behalf of Mike Shelton, et al., Plaintiffs, v. JACOBS ENGINEERING GROUP, INC., Defendant.	No.: 3:15-CV-420-TAV-HBG

JOHNNY CHURCH, Plaintiff, v. JACOBS ENGINEERING GROUP, INC., Defendant.	)	No.: 3:15-CV-460-TAV-HBG
DONALD R. VANGUILDER, JR., Plaintiff, v. JACOBS ENGINEERING GROUP, INC., Defendant.	)	No.: 3:15-CV-462-TAV-HBG
JUDY IVENS, as sister and next of kin, on behalf of JEAN NANCE, deceased, Plaintiff, v. JACOBS ENGINEERING GROUP, INC., Defendant.	)	No.: 3:16-CV-635-TAV-HBG
PAUL RANDY FARROW, Plaintiff, v. JACOBS ENGINEERING GROUP, INC., Defendant.	)	No.: 3:16-CV-636-TAV-HBG

MEMORANDUM OPINION AND ORDER

This matter is before the Court on defendant's two pending dispositive motions: one for summary judgment on the issue of general causation [Doc. 237], and one for judgment on the pleadings with respect to plaintiffs' strict liability claims [Doc. 251]. Plaintiffs oppose both motions [Doc. 253 (summary judgment); Doc. 254 (judgment on the pleadings)]. Defendant replied for the summary judgment motion only [Doc. 263]. Recently, at the Court's request, the parties simultaneously filed supplemental briefs addressing biological plausibility

and bioavailability, two matters relating to general causation [Doc. 296 (plaintiffs); Doc. 295 (defendant)].

Defendant's summary judgment motion will be denied because plaintiffs have put forward evidence from which a reasonable jury could find that plaintiffs' exposure was capable of causing the complained-of diseases. Defendant's motion for judgment on the pleadings will be granted because plaintiffs do not have a cognizable strict liability claim under Tennessee state law. After a brief background, each motion will be addressed in turn.

I. Background

The facts and procedural history of this case are long, complicated, and well-documented in numerous other court filings [*E.g.*, Doc. 39, at 2–16; Doc. 279, at 3–8]. The background necessary for resolving these motions follows.

Plaintiffs, who worked, or had spouses or next of kin who worked, on the fly ash[1] cleanup, removal, and recovery project at the Kingston Fossil Fuel Plant following the December 22, 2008, ash spill in Roane County, Tennessee [*see* Doc. 59], brought these actions against defendant. Plaintiffs' claims are for negligence, negligence per se, recklessness, fraud, misrepresentation, and strict liability for ultrahazardous or abnormally dangerous activity [*Id.* at ¶ 70–125]. They allege that defendant's failings as construction manager caused plaintiffs'

[1] "Fly ash is a product of burning finely ground coal in a boiler to produce electricity. Fly ash is removed from the plant exhaust gases primarily by electrostatic precipitators or baghouses and secondarily by wet scrubber systems. Physically, fly ash is a very fine, powdery material, composed mostly of silica. Nearly all particles are spherical in shape." 75 Fed. Reg. 35128, 35137 (June 21, 2010). The term "coal ash" has been used in the briefing to describe what appears to be the same substance. This opinion will refer to the substance as "fly ash," except where quoting a source that does otherwise.

personal injuries, including pulmonary injuries, leukemia, sinus injuries, and skin problems, as a result of "continuous, unlawful exposure to arsenic, the neurotoxin mercury, barium, strontium, thallium, lead, silica, quartz, asbestos, radioactive material, selenium, aluminum oxide, iron oxide, calcium oxide, boron and other hazardous substances associated with" fly ash while working on the cleanup [Doc. 59 at ¶ 48, 89].

The trial will take place in two phases [Doc. 136]. "Phase I will involve issues and evidence relating to: (1) whether defendant owed plaintiffs a legal duty; (2) whether defendant breached that duty; and (3) whether defendant's breach was capable of causing plaintiffs' alleged injuries" [Doc. 136 at 7]. "Phase II will involve issues and evidence relating to: (1) specific causation with respect to individual plaintiffs; (2) each plaintiff's alleged injuries; and (3) the extent to which individual plaintiffs are entitled to damages" [*Id.*]. In other words, Phase I will deal with, among other things, the issue of general causation, and Phase II will deal with, among other things, specific causation concerning each individual plaintiff [*Id.*]. Phase I of the trial is currently scheduled for October 16, 2018 [Doc. 265]. Phase II would begin at some undetermined date thereafter.

Discovery disputes have ensued, all the details of which need not be recounted. Plaintiffs have withdrawn all of their experts, except for one: Dr. Paul Terry, an epidemiologist who will testify about general causation [Doc. 261, at 1, 5–6]. Magistrate Judge Guyton described Dr. Terry's expert report[2] as follows:

> Dr. Terry's general causation analysis, which seeks to answer whether "exposure to a chemical or other factor [can] cause a disease," now employs an

[2] This is technically Dr. Terry's third expert report, but his first two have been withdrawn [Doc. 261].

> extensive literature review methodology to determine whether specific components of coal fly ash reported to be present at the Site—fine particulate matter, arsenic, cadmium, chromium, lead, nickel, vanadium, and naturally occurring radioactive materials—are causally associated with the specific diseases reported by Plaintiffs, including hypertension, coronary artery disease, lung cancer, leukemia, non-melanoma skin cancer, allergic contact dermatitis, peripheral neuropathy, asthma, chronic obstructive pulmonary disease, and various respiratory conditions such as cough, sore throat, dyspnea on exertion, chest pain or discomfit, bronchitis, and emphysema.

[Doc. 279, at 4-6]. Defendants, arguing that Dr. Terry's opinions were not reliable, moved to exclude his report and testimony under Rule 702 and *Daubert* [Doc. 241]. Magistrate Judge Guyton issued an order denying that motion [Doc. 279]. Defendant's objections to that order were overruled [Doc. 291]. In the meantime, the Court took judicial notice of the existence of the Administrative Order on Consent [Doc. 287].

Defendants have two experts on general causation. Dr. Scott D. Phillips, a board-certified physician in internal medicine and medical toxicology, opines that "[p]laintiffs have not been exposed at Kingston Fossil Plant to levels of fly ash sufficient to cause illness," and that "[m]etals are bound to the fly ash particles and are not dissolving out of the particles and into the body to cause illness" [Doc. 237-7, at 6 of 90]. Dr. David. G. Hoel, an epidemiologist, has not addressed Dr. Terry's latest report, but states, "The scientific literature does not support Dr. Terry's conclusions about fly ash exposures at low exposure levels" [Doc. 237-8, at 7 of 41]. Dr. Hoel's report also generally discusses the science of epidemiology and epidemiological methods [*Id.* at 7–11].

Before the Court is defendant's motion for summary judgment on the issue of general causation, and also defendant's motion for judgment on the pleadings on its strict liability for

ultrahazardous or abnormally dangerous activity. For the reasons that follow, the summary judgment motion will be denied, but the motion for judgement on the pleadings will be granted.

II. Summary judgment on the issue of general causation is not warranted.

Summary judgment is not proper here because there is evidence in the record from which a reasonable jury could conclude that plaintiffs have met their burden on general causation. Plaintiffs have presented evidence that they, in general and as a group, were exposed to large amounts of coal and fly ash at the Kingston site and were not allowed to wear protection. Defendant concedes that the toxic constituents found in that ash can, under certain circumstances, cause the complained-of diseases. Moreover, Dr. Terry's report discusses the levels of various toxic constituents found within the Kingston fly ash, and concludes, based on his review of hundreds of epidemiological studies, that those levels can cause many of the complained-of diseases. Defendant's counterarguments—concerning biological plausibility and bioavailability—are unavailing, as a causal association can exist without either, and there is enough evidence for a reasonable jury to draw that conclusion here. For these reasons, summary judgment on the issue of general causation will be denied.

A. Legal Standard

Summary judgment under Rule 56 of the Federal Rules of Civil Procedure is proper "if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). The moving party—here, defendant—bears the burden of establishing that no genuine issues of material fact exist. *Celotex Corp. v. Catrett*, 477 U.S. 317, 330 n.2 (1986); *Moore v. Phillip Morris Cos., Inc.*, 8 F.3d 335, 339 (6th Cir. 1993). All facts and all inferences to be drawn therefrom must be

viewed in the light most favorable to the non-moving party, here, the plaintiffs. *Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986); *Burchett v. Kiefer*, 301 F.3d 937, 942 (6th Cir. 2002).

"Once the moving party presents evidence sufficient to support a motion under Rule 56, the nonmoving party is not entitled to a trial merely on the basis of allegations." *Curtis Through Curtis v. Universal Match Corp.*, 778 F. Supp. 1421, 1423 (E.D. Tenn. 1991) (citing *Celotex*, 477 U.S. at 317). To establish a genuine issue as to the existence of a particular element, the non-moving party must point to evidence in the record upon which a reasonable finder of fact could find in its favor. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). The genuine issue must also be material; that is, it must involve facts that might affect the outcome of the suit under the governing law. *Id.*

The Court's function at the point of summary judgment is limited to determining whether sufficient evidence has been presented to make the issue of fact a proper question for the factfinder. *Anderson*, 477 U.S. at 250. The Court does not weigh the evidence or determine the truth of the matter. *Id.* at 249. Nor does the Court search the record "to establish that it is bereft of a genuine issue of material fact." *Street v. J.C. Bradford & Co.*, 886 F.2d 1472, 1479–80 (6th Cir. 1989). Thus, "the inquiry performed is the threshold inquiry of determining whether there is a need for a trial—whether, in other words, there are any genuine factual issues that properly can be resolved only by a finder of fact because they may reasonably be resolved in favor of either party." *Anderson*, 477 U.S. at 250.

"[S]ummary judgment is not intended to resolve disagreements among experts." *Spirit Airlines, Inc. v. Northwest Airlines, Inc.*, 431 F.3d 917, 931 (6th Cir. 2005); *see also Phillips v. Cohen*, 400 F.3d 388, 399 (6th Cir. 2005) ("Indeed, competing expert opinions present the 'classic battle of the experts and it [is] up to a jury to evaluate what weight and credibility each expert opinion deserves.'"); *Boyer v. Lacy*, 665 Fed. Appx. 476, 483 (6th Cir. 2016) ("[O]n a motion for summary judgment, weighing and drawing inferences from competing medical-opinion evidence, and determining the credibility of medical experts, are functions reserved for the jury."); *Walker v. Rhea Medical Center*, No. 1:06-cv-248, 2008 WL 11342607, at *3 (E.D. Tenn., Sept. 30, 2008) ("These contradictory expert opinions establish a significant and genuine issue of material fact that cannot be resolved on summary judgment").

B. A reasonable jury could find for plaintiffs on general causation.

Under Tennessee law, it is the plaintiffs' burden to show that defendant's allegedly tortious conduct was the factual cause of their injuries. *See Bradshaw v. Daniel*, 854 S.W.2d 865, 869 (Tenn. 1993). "Cause in fact[] means that the injury or harm would not have occurred 'but for' the defendant's negligent conduct." *Kilpatrick v. Bryant*, 868 S.W.2d 594, 598 (Tenn. 1993). Because the causal mechanisms of disease are usually not self-evident or self-proving, this inquiry is notoriously tricky in toxic-tort cases, which are therefore usually "won or lost on the strength of the scientific evidence presented to prove causation." *Rider v. Sandoz Pharm. Corp.*, 295 F.3d 1194, 1197 (11th Cir. 2002). The factual causation inquiry is therefore often split into two parts, general and specific causation. *See* Restatement (Third) of Torts: Phys. & Emot. Harm § 28 cmt. c. (2010). The Sixth Circuit has endorsed this practice: "In a toxic-tort case . . . the plaintiff must establish both general and specific causation." *Pluck v.*

BP Oil Pipeline Co., 640 F.3d 671, 676–77 (6th Cir. 2011) (citing *In re Meridia Prod. Liab. Litig.*, 328 F. Supp. 2d 791, 798 (N.D. Ohio 2004)). General causation requires "proof that the toxic substance is capable of causing . . . the plaintiff's alleged injury." *Pluck*, 640 F.3d at 676–77. In contrast, specific causation requires "proof that the toxic substance . . . did cause[] the plaintiff's alleged injury." *Id.* This basic distinction is well-accepted in the federal courts.[3]

Only general causation is at issue here.[4] As explained above, "'General causation' exists when a substance is capable of causing a given disease." Restatement (Third) of Torts:

[3] *See e.g.*, *Knight v. Kirby Inland Marine Inc.*, 482 F.3d 347, 351 (5th Cir. 2007) ("General causation is whether a substance is capable of causing a particular injury or condition in the general population, while specific causation is whether a substance caused a particular individual's injury."); *Raynor v. Merrell Pharms., Inc.*, 104 F.3d 1371, 1376 (D.C. Cir. 1997) ("[T]estimony on specific causation had legitimacy only as follow-up to admissible evidence that the drug in question could in general cause birth defects").

[4] Because this action is before the Court based on diversity jurisdiction under 28 U.S.C. § 1332, the Court must apply the substantive law of the forum state—here, Tennessee. *Savedoff v. Access Grp., Inc.*, 524 F.3d 754, 762 (6th Cir. 2008) (citing *Erie R.R. v. Tompkins*, 304 U.S. 64, 78 (1938)). To determine that law, federal courts first look to see if the forum state's highest court has spoken to the issue; if it has, the federal court is generally bound by that decision. *Kirk v. Hanes Corp. of N.C.*, 16 F.3d 705, 707 (6th Cir. 1994). If the state high court has not addressed a particular question, the federal court must make a so-called *Erie* guess, which is an attempt to predict what the state high court would do if confronted with the issue. *Conlin v. Mortgage Elec. Registration Sys., Inc.*, 714 F.3d 355, 358 (6th Cir. 2013). In making this determination, on-point state appellate court decisions are generally conclusive "absent a strong showing that the state's highest court would decide the issue differently." *In re Akron–Cleveland Auto Rental, Inc.*, 921 F.2d 659, 662 (6th Cir. 1990).

Here, it appears that neither the Tennessee Supreme Court, nor any of Tennessee's Courts of Appeals, have considered the standard for general (or, for that matter, specific) causation in toxic-tort cases. Accordingly, the Court will "consider all relevant data, including jurisprudence from other jurisdictions," *Combs v. Int'l Ins. Co.*, 354 F.3d 568, 577 (6th Cir. 2004) (internal citations and quotation marks omitted), and will "make [the] best prediction, even in the absence of direct state court precedent, of what the [Tennessee] Supreme Court would do if it were confronted with this question," *Managed Health Care Assocs., Inc. v. Kethan*, 209 F.3d 923, 927 (6th Cir. 2000) (first alteration in original) (quoting *Welsh v. United States*, 844 F.2d 1239, 1245 (6th Cir. 1988)).

Phys. & Emot. Harm § 28, cmt. c.(3) (2010); *see also Norris v. Baxter Healthcare Corp.*, 397 F.3d 878, 881 (10th Cir. 2005) ("General causation is whether a substance is capable of causing a particular injury or condition in the general population."). In *Sterling v. Velsicol Chem. Corp*., 855 F.2d 1188 (6th Cir. 1988), the Sixth Circuit explained that the concept of "generic causation," as general causation is sometimes called, relates to "whether the combination of the chemical contaminants and the plaintiffs' exposure to them had the capacity to cause the harm alleged." *Id.* at 1200.

1. Plaintiffs have presented adequate evidence of their exposure to fly ash for general causation purposes.

The parties disagree about whether, and to what extent, plaintiffs are required to prove their exposure at this stage of the litigation. According to defendant, plaintiffs must prove: "the minimum levels of exposure to constituents of fly ash necessary to cause the types of illnesses they allege," and "the doses or levels of the constituents to which Plaintiffs were potentially exposed while working at Kingston, *i.e.*, actual exposure to potentially harmful levels of the constituents" [*E.g.*, Doc. 295, at 12]. Plaintiffs, on the other hand, argue that general causation "does not require proof of the doses or levels of the constituents to which individual Plaintiffs were exposed while cleaning up the coal fly ash at Kingston" [*E.g.*, Doc. 253, at 12].

Plaintiffs have the better of this argument. Plaintiffs need not show any one individual plaintiff's exposure level, because general causation does not require individualized proof. The Sixth Circuit, noting that general causation is suitable for class-wide adjudication, suggested as much in *Sterling*: "Although such generic and individual causation may appear

to be inextricably intertwined, the procedural device of the class action permitted the court initially to assess the defendant's potential liability for its conduct *without regard to the individual components of each plaintiff's injuries*." *Sterling v. Velsicol Chem. Corp.*, 855 F.2d 1188, 1200 (6th Cir. 1988) (emphasis added). And in *Pluck v. BP Oil Pipeline Co.*, 640 F.3d 671 (6th Cir. 2011), the Sixth Circuit clearly stated that such proof relates to specific, not general, causation: "As to specific causation, the plaintiff must show that she was exposed to the toxic substance and that the level of exposure was sufficient to induce the complained-of medical condition." *Id.* at 677 (cleaned up). Moreover, the court in *Pluck* referred to the expert opinion, which the district court had excluded for failing to quantify plaintiffs' exposure to benzene, as a "specific causation opinion." *Id.*

Other federal appellate courts similarly suggest that individualized proof is not required to prove general causation. *See, e.g.*, *McClain v. Metabolife Intern., Inc*., 401 F.3d 1233, 1239 (11th Cir. 2005) ("General causation is concerned with whether an agent increases the incidence of disease in a group and not whether the agent caused any given individual's disease" (quoting Michael D. Green et al., *Reference Guide on Epidemiology*, *in* Reference Manual on Scientific Evidence 392 (Federal Judicial Center, 2d ed. 2000))); *In re Hanford Nuclear Reservation Litigation*, 292 F.3d 1124, 1133–35 (9th Cir. 2002) (hereinafter, "*In re Hanford*") ("General, or 'generic' causation has been defined by courts to mean whether the substance at issue had the capacity to cause the harm alleged, while 'individual causation' refers to whether a particular individual suffers from a particular ailment as a result of exposure to a substance.").

This general understanding makes sense. Because general causation is something all plaintiffs have in common, individualized proof cannot be necessary. Indeed, that is why general causation is often litigated on a class-wide, or at least collective or consolidated, basis. In *McClain*, for example, the Eleventh Circuit recognized (albeit in dicta) that, in cases where "the medical community generally recognizes the toxicity of the drug or chemical at issue," the court need not extensively analyze general causation. *Id.* at 1239. If defendants are correct that toxic-tort plaintiffs must quantify their exposures to show general causation, the Eleventh Circuit's statement cannot be true, because plaintiffs would still have to put forward extensive evidence on exposure and dose. Requiring quantified proof of plaintiffs' exposure, like defendant suggests, would thus frustrate the main reason for bifurcating toxic-tort trials in the first place.

This is not to suggest that the concepts of exposure and dose are irrelevant to the general causation inquiry. Rather, as a matter of basic science, "the dose makes the poison." Bernard D. Goldstein & Mary Sue Henifin, Reference Guide on Toxicology, *in* Reference Manual on Scientific Evidence 636 (Federal Judicial Center 3d ed. 2011) (hereinafter, "Reference Manual"). Thus, there are safe exposures levels of many substances normally considered "dangerous," and conversely, dangerous exposure levels to many substances normally considered "safe." Therefore, to say that a chemical agent is capable of causing a disease—i.e., that plaintiffs' burden on general causation is satisfied—without some reference to a particular dose, would be incoherent. But, as explained above, general causation does not require individual or particularized proof about dose or exposure because those matters fall within the ambit of specific causation. Rather, at this stage of this litigation, it is enough for

plaintiffs to show that the amount of toxic constituents generally present in the fly ash at the Kingston site was capable of causing the complained-of diseases.[5]

As far as their exposure is concerned, plaintiffs have met that burden. The record is replete with evidence about plaintiffs' exposure to fly ash. Plaintiffs, other fly-ash cleanup workers, and their families have provided declarations concerning their significant and repeated exposure to fly ash [*see* Docs. 253, 255, Exhibits 6–21], photographs of fly ash in the air and on worker's skin and clothing [*see* Docs. 255, 256, Exhibits 22–24], and deposition excerpts with testimony concerning plaintiffs' exposure [*see* Doc 256, Exhibits 26–41]. These affidavits show that plaintiffs worked various jobs in the fly-ash cleanup, many in the so-called "Exclusion Zone," where the amount of fly ash was greatest. The ash was abundant and often airborne, obscuring vision [Doc. 255-6, at 4], and sometimes producing "ash twisters[s]" [Doc. 256-3, at 8 or 10]. The fly ash would find its way into plaintiffs' mouths [Doc. 255-4, at 4], and other orifices [Doc. 255-5, at 4]. One affiant recounts his being stuck in knee-deep fly ash for approximately ten minutes [Doc. 255-5, at 4]. Another affiant recalls that some plaintiffs ate food that had been contaminated with fly ash and were told that it was safe to do so [Doc. 253-7]. Moreover, there is evidence in the record that plaintiffs were not allowed to wear respiratory protection or dust masks, despite requests, and even when prescribed by a doctor

[5] Defendant appears to more or less agree with this standard at one point in its reply brief: "In other words, Plaintiffs need not prove the levels to which particular individuals were exposed at this stage, but they are required to prove that the nature and degree of the exposure to fly ash to which Plaintiffs and others might have been subjected could have caused the types of illnesses they allege" [Doc. 257, at 4].

[*e.g.*, Docs. 109-2, at 4; 253-11, at 4]. The evidence proffered of plaintiffs' collective, significant exposure to fly ash is legion and need not be detailed further.

For general causation purposes, "[p]roof of exposure may entail relatively straightforward historical facts, such as the presence of asbestos at the plaintiff's workplace." Restatement (Third) of Torts: Phys. & Emot. Harm § 28, cmt. c.(3) (2010). Here, these historical facts show such extensive exposure that further proof is unnecessary at this stage of the litigation. Plaintiffs have done more than enough to demonstrate exposure sufficient to overcome summary judgment on general causation.

Contrary to defendant's argument, this Court's decision in *In re Tennessee Valley Auth. Ash Spill Litig.*, 805 F. Supp. 2d 468 (E.D. Tenn. 2011) (hereinafter, "*In re TVA*"), does not compel a different conclusion. Defendant quotes the Court's statement that "the mere existence of a toxin in the environment is insufficient to establish causation without proof that the individual was actually exposed to the toxin and at a level sufficient to cause injury or stress," *id.* at 482, as legal authority that plaintiffs must show their actual exposure levels to toxic fly-ash constituents to establish general causation. This argument, however, fails to account for the different context and procedural posture in which the Court penned that opinion. There, the trial had not yet been bifurcated, which is why the opinion never discusses the distinction between general and specific causation, and also why much of the opinion, as plaintiffs correctly point out, speaks in terms that would clearly relate to specific, rather than

general, causation in a trial plan bifurcated like the present one.[6] There, unlike here, both general and specific causation issues were still on the table and ripe for resolution at summary judgment. All of these statements of law are, of course, still true: plaintiffs *do* have to show their actual exposures to disease-causing doses (through individualized proof), and they *do* have to show that those exposures actually *did* cause their individual diseases (by, for example, eliminating alternative causes). Just, not now. Those matters all relate to specific causation, *see, e.g.*, *Pluck*, 640 F.3d at 677, and will thus be litigated in phase two of this case.

2. A reasonable jury could conclude that the toxic constituents in fly ash are capable of causing the complained-of diseases.

There is no serious dispute that the identified constituents of fly ash are capable of causing the identified diseases. Indeed, the record evidence is clear, and defendant explicitly concedes, that the chemical constituents found in the Kingston fly ash are capable of causing most of the complained-of diseases [*E.g.*, Doc 283, at 19]. Furthermore, Dr. Terry's third report discusses the amount of each constituent in the fly ash at Kingston [Doc. 261-1, at, e.g., 12–13 (lead), 15–16 (arsenic)], and the Administrative Order on Consent confirms that the ash at the Kingston site contained the constituents listed in Dr. Terry's report [Doc. 267-1, at 7]. Dr. Terry's report collected hundreds of studies with populations exposed to the fly-ash constituents through various different exposure pathways and systematically reviewed those

[6] *See, e.g.*, *TVA*, 805 F. Supp. 2d at 480 ("It is the responsibility of each individual plaintiff to show that his or her specific injuries or damages were proximately caused by ingestion or otherwise using the contaminated water. We cannot emphasize this point strongly enough because generalized proofs will not suffice to prove individual damages." (cleaned up) (quoting *Sterling*, 855 F.2d at 1200)); *id.* at 482 ("Plaintiffs have not put forth evidence of a causation link between exposure to the ash *and a specific personal injury, respiratory symptom, or emotional distress*." (emphasis added)).

reports. For each of the toxic constituents, the report concludes, based on analysis of data gleaned from the hundreds of cited studies, that the levels found in the Kingston fly ash were capable of causing the identified diseases. Specifically, Dr. Terry's report concludes that:

1. Lead in coal ash can cause hypertension.
2. Arsenic, cadmium, and fine particulate matter in coal ash can cause coronary artery disease.
3. Arsenic, cadmium, chromium, and fine particulate matter in coal ash can cause lung cancer.
4. Ionizing radiation in coal ash can cause leukemia.
5. Arsenic in coal ash can cause non-melanoma skin cancer.
6. Chromium and nickel in coal ash can cause allergic contact dermatitis (skin allergy).
7. Arsenic and lead in coal ash can cause peripheral neuropathy.
8. Chromium, fine particulate matter, nickel, and vanadium in coal ash can cause asthma.
9. Cadmium and fine particulate matter in coal ash can cause chronic obstructive pulmonary disease.
10. Fine particulate matter and other coal ash constituents can cause respiratory conditions, including cough, sore throat, dyspnea on exertion, chest pain or discomfort, bronchitis and emphysema.

[Doc. 261-1, at 5]. Based on these facts—Dr. Terry's conclusions that the abovementioned constituents are capable of causing the abovementioned diseases—combined with plaintiffs' significant and repeated exposure to fly ash (discussed above), a reasonable jury could conclude that plaintiffs' exposure to those constituents was capable of causing those diseases.

To be sure, defendant's experts disagree with Dr. Terry's assessment. But "summary judgment is not intended to resolve disagreements among experts." *Spirit Airlines, Inc. v. Northwest Airlines, Inc.*, 431 F.3d 917, 931 (6th Cir. 2005). Of course, defendants remain free to challenge Dr. Terry's conclusions at trial, either by their own experts or through crossexamination. Moreover, neither defendant's motion, reply, or supplemental brief challenges Dr. Terry's conclusion about the ability of any individual fly-ash constituent to

cause any associated disease (by arguing, for example, that Dr. Terry was wrong about how much lead was in the Kingston fly ash, or about there being a causal association between lead and hypertension).[7] Rather, defendant's arguments all appear to be based on wholesale challenges to Dr. Terry's report based primarily on the biological plausibility and bioavailability of fly ash, arguments which are addressed at length in the next section. As it stands, there is sufficient evidence for a reasonable jury to conclude that plaintiffs have met their burden on general causation.

Case law supports this conclusion. In *In re Hanford*, the Ninth Circuit reversed the district court, which had required the plaintiffs "to prove that they were exposed to a specific level of radiation" in order to establish general causation. 292 F.3d at 1137. In doing so, the Ninth Circuit held that the plaintiffs' expert testimony, which showed "the generic capacity of levels of radiation emitted from the Hanford facility to cause the illnesses experienced by the plaintiffs," was sufficient to establish general causation, which required only "evidence that radiation was capable of causing the type of injuries plaintiffs actually suffered." *Id.* Thus, it appears that the plaintiffs in *Hanford* had not shown that their exposures were capable of causing disease, as defendants imply, but rather that the general levels of radiation emitted

[7] For this reason, the Court declines to discuss in detail each individual fly-ash constituent associated with each individual disease. Dr. Terry's testimony at trial, and consequentially plaintiffs' recovery, will be limited to the constituents and causal associations identified in his report.

from the Hanford facility were capable of doing so.[8] Here, Dr. Terry has similarly offered testimony about the "generic capacity" of the levels of the toxic constituents found in the Kingston fly ash to cause disease, and has concluded, based on his literature review, that those levels were capable of causing various diseases. *In re Hanford* thus supports the conclusion that general causation is satisfied here.

Defendants contend that *McClain v. Metabolife*, 401 F.3d 1233 (11th Cir. 2005), is instructive because the general causation proof there was "similar to that offered by Plaintiffs in this case." The Court disagrees. There, the Eleventh Circuit found the opinions of plaintiffs' general causation expert—who was "an expert in pharmacy, pharmacology, and nutrition"—unreliable under *Daubert* and Federal Rule of Evidence 702. *Id.* at 1239–40. The court explained:

> O'Donnell's opinions lack the indicia of reliability necessary to survive a *Daubert* inquiry and challenge under Rule 702. He draws speculative conclusions about Metabolife's toxicity from questionable principles of pharmacology, while at the same time, neglecting the hallmark of the science of toxic torts—the dose-response relationship. He also draws unsubstantiated analogies between ephedrine and phenylpropanolamine, infers conclusions from studies and reports that the papers do not authorize, and unjustifiably relies on government public health reports and consumer complaints to establish medical causation. In short, O'Donnell does not support his opinions with sufficient data or reliable principles, as identified by the *Daubert* rubric, and fails to follow the basic methodology that experts should follow in toxic tort cases.

[8] Because the Ninth Circuit reversed the district court for exceeding the scope of the general causation inquiry by requiring individualized proof, any statements about the minimum requirements of general causation, i.e., what type of exposure plaintiffs must show, were not necessary to the disposition of that case and are thus dicta. *See* Black's Law Dictionary (10th ed. 2014) (defining "dictum" as, "A court's stating of a legal principle more broadly than is necessary to decide the case"). Defendant's statement that "[t]he court did, in fact, hold that in order to establish general causation, the plaintiffs were required to prove that the levels of radiation to which they claimed they were exposed were capable of causing their alleged injuries," [Doc. 263, at 7], is therefore incorrect.

Id. at 1240. The expert's opinion concluded, for example, that "any amount of Metabolife is too much," which ignored basic principles of toxicology. Here, in contrast, Dr. Terry has identified the levels of many toxic constituents present in the Kingston fly ash, analyzed hundreds of peer-reviewed epidemiological studies, and has applied the Bradford-Hill criteria to evaluate the strength of the associations found in the literature, to conclude that plaintiffs' exposure here was capable of causing the complained-of diseases.[9] His opinion thus does not suffer from the flaws identified by the court in *McClain*. Moreover, Dr. Terry's opinion has already been deemed reliable under *Daubert* and Rule 702 [*see* Docs. 279, 291], so the impact of *McClain* is limited in the context of summary judgment.

3. Defendant's evidence about biological plausibility and bioavailability does not warrant summary judgment.

According to defendant, plaintiffs must establish "that it is biologically plausible that their exposure could have caused the harm alleged" [*E.g.*, Doc. 295, at 12]. In support, defendant cites various record documents, which indicate that fly ash particles remain stable under most conditions and, as a result, the constituent elements remain bound to the fly ash particles. As a result, defendant maintains that because the toxic constituents of fly ash are not bioavailable, meaning that they are incapable of being absorbed by humans, it is not biologically plausible that exposure to fly ash caused plaintiffs' diseases. Thus, so the

[9] The Bradford-Hill factors are used by epidemiologists to determine whether a causal inference is justified given an identified association between a toxic agent and a disease. These factors are: temporal relationship; strength of the association; dose–response relationship; replication of the findings; biological plausibility (coherence with existing knowledge); consideration of alternative explanations; cessation of exposure; specificity of the association; and consistency with other knowledge. *See Michael D. Green et al.*, Reference Guide on Epidemiology, in Reference Manual at 599–606 (identifying and describing each factor).

argument goes, Dr. Terry's "opinions regarding certain *constituents* of fly ash do not establish that an exposure to *fly ash* is capable of causing the injuries alleged" [Doc. 295, at 12]. Accordingly, defendant argues that plaintiffs must show, for each toxic constituent: "(1) *how* and under what conditions the constituents can become unbound from the ash particles, and (2) whether and to what extent that might have occurred at Kingston" [Doc. 295, at 14].

Defendant's argument misses the mark. Plaintiffs are not required to show biological plausibility or bioavailability.[10] These matters are not elements of plaintiffs' claim, nor are they necessary conditions to plaintiffs' proving of general causation. Rather, biological plausibility is one of the nine Bradford-Hill criteria, which are "factors that guide epidemiologists in making judgments about causation" after an association between a toxic substance and a disease has been identified. Michael D. Green et al., Reference Guide on Epidemiology, *in* Reference Manual, at 60. As the Reference Manuel explains:

> There is no formula or algorithm that can be used to assess whether a causal inference is appropriate based on these guidelines. One or more [Bradford-Hill] factors may be absent even when a true causal relationship exists. Similarly, the existence of some factors does not ensure that a causal relationship exists. Drawing causal inferences after finding an association and considering these factors requires judgment and searching analysis, based on biology, of why a

[10] There is some confusion in the briefing about the precise meaning of the terms "biological plausibility" and "bioavailability." The Reference Manual defines "biological plausibility" as "consideration of existing knowledge about human biology and disease pathology to provide a judgment about the plausibility that an agent causes a disease," Michael D. Green et al., Reference Guide on Epidemiology, *in* Reference Manual at 620, and "bioavailability" as "[t]he rate and extent to which a chemical or chemical breakdown product enters the general circulation, thereby permitting access to the site of toxic action." Joseph V. Rodricks, Reference Guide on Exposure Science, *in* Reference Manual at 545. Bioavailability is also described as "the extent to which a compound . . . is taken up into the body." Bernard D. Goldstein & Mary Sue Henifin, Reference Guide on Toxicology, *in* Reference Manual at 667 n.92. Because defendant's argument appears to be based on both concepts, i.e., that plaintiffs have not demonstrated biological plausibility because they have not demonstrated bioavailability, the Court need not parse these difficult scientific concepts any further.

> factor or factors may be absent despite a causal relationship, and vice versa. Although the drawing of causal inferences is informed by scientific expertise, it is not a determination that is made by using an objective or algorithmic methodology.

Id. at 600. There is no threshold number of factors that must exist.[11] *Id.* at 599; *see also Cook v. Rockwell Int'l Corp.*, 580 F. Supp. 2d 1071, 1098 (D. Colo. 2006) ("Defendants cite no authority, scientific or legal, that compliance with all, or even one, of these [Bradford-Hill] factors is required."). The Third Restatement of Torts also implies that biological plausibility is not required, noting that only "occasionally" is "biological-mechanism[12] evidence . . . sufficiently developed to prove general causation." Restatement (Third) of Torts: Phys. & Emot. Harm § 28, cmt. c.(3) (2010); *see also id.* cmt. c.(4) ("Rarely will significant evidence bearing on the appropriate biological mechanism be available."). Thus, biological plausibility is not necessary to establish general causation, and, indeed, it relates most clearly to the reliability of Dr. Terry's testimony, which has already been established [Docs. 279, 291].

Defendant has cited no case holding otherwise. The closest is this Court's previous statement that "Under Tennessee law, in order to establish proximate cause for claims of intentional or negligent infliction of emotional distress or bodily injury due to environmental exposure to toxic chemicals or to diseases such as AIDS, 'evidence of a medically recognized

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[11] *See* Austin Bradford Hill, *The Environment and Disease: Association or Causation?* 58 Proc. Royal Soc'y Med. 295 (1965) (Hill acknowledged that his factors could only serve to assist in the inferential process: "None of my nine viewpoints can bring indisputable evidence for or against the cause-and-effect hypothesis and none can be required as a *sine qua non*." (cited at *Michael D. Green et al.*, Reference Guide on Epidemiology, in Reference Manual at 600 n.148)).

[12] "Biological mechanisms" appear to be related to, if not synonymous with, the concept of biological plausibility. *See Michael D. Green et al.*, Reference Guide on Epidemiology, in Reference Manual at 604-05.

channel of transmission' is required." *In re Tennessee Valley Auth. Ash Spill Litig.*, 805 F. Supp. 2d 468, 479 (E.D. Tenn. 2011) (quoting *Bain v. Wells*, 936 S.W.2d 618, 624–25 (Tenn. 1997)). First of all, and as explained above, the Court's opinion in *In re TVA* did not distinguish between general and specific causation. But more importantly, general causation, the only matter at issue here, relates to factual rather than proximate causation, *see* Restatement (Third) of Torts: Phys. & Emot. Harm § 28 cmt. c. (2010), and *Bain*, the case on which *In re TVA* relied, was clearly talking about proximate cause instead of factual. In *Bain*, the court held that, in order to establish proximate cause for a negligent-infliction-of-emotional-distress claim based on exposure to HIV, a plaintiff must show that he was actually exposed to HIV, rather than merely thinking he was. *See Bain*, 936 S.W.2d at 624 ("[P]roof of actual exposure is necessary to establish that reasonable connection between the act or omission of a defendant and the emotional distress of a plaintiff who fears contracting AIDS."). The court reasoned that "sound public policy considerations"—namely, preventing "widespread public misperception" about HIV and AIDS—necessitated such a rule of proximate cause, or a "legal limitation on the scope of liability." *Id.* at 625. And the rule from *Bain* had to be one of proximate causation because, logically, a believed-but-not-actual exposure to the HIV virus very well could be the factual cause of emotional distress. These matters—policy-based considerations about the scope of legal liability—are irrelevant to general causation, which concerns the capability of a substance to cause a disease as a matter of fact. Contrary to defendant's argument, *Bain*, and thus *In re TVA*, do not stand for the proposition that an epidemiologist must account for biological plausibility and bioavailability in determining that an identified association exhibits a causal relationship.

Because plaintiffs do not have to show biological plausibility or bioavailability, defendant's evidence about these points is not dispositive. In other words, general causation can exist without either. Thus, defendant is left to argue that the evidence presented on these matters cuts so overwhelmingly in its favor that no reasonable jury could find for plaintiffs on the issue of general causation.

But the evidence is not so clear. As an initial matter, and as plaintiffs point out, it does not appear that defendant's experts have identified any studies specifically showing that human lungs, human skin, or the human digestive system are incapable of absorbing any of the toxic substances from fly ash. Rather, these are the opinions of defendant's experts, who opine that plaintiffs have not demonstrated bioavailability of the toxic constituents of coal fly ash [Doc. 237-7 at 16-18; Doc. 263-2 at 5; Doc. 263-1 at 5]. Dr. Terry, after reviewing hundreds of studies (on the various constituents and exposure pathways many of which appear to discuss bioavailability), synthesized that information to disagree and conclude that general causation does exist for many of the fly-ash constituents and several associated diseases. Again, "summary judgment is not intended to resolve disagreements among experts." *Spirit Airlines*, 431 F.3d at 931.

What is more, bioavailability is completely irrelevant to part of plaintiffs' claim. Specifically, with respect to fine particulate matter, which according to Dr. Terry, can cause coronary artery disease [Doc. 253-4, at 30–33 of 139], lung cancer [*id.* at 52–56 of 139], asthma [*id.* at 81–84 of 139], chronic obstructive pulmonary disease [*id.* at 93–99 of 139], and other respiratory disorders [*id.* at 100–03 of 139], bioavailability is not implicated because the causal mechanisms identified in Dr. Terry's report [*e.g.*, *id.* at 33, 55 of 139], do not depend

upon these materials being released from the fly ash particles and absorbed into the body. Rather, these diseases are caused by the small particle size, which allows the particles to be inhaled deep into the lungs where they remain indefinitely, causing continued inflammatory effects on lung cells and immune function. And, as explained above, the evidence of plaintiffs' general, collective exposure to fly ash is extensive.

Moreover, the remaining evidence on biological plausibility and bioavailability is not as clear as defendant claims it to be. For example, the EPA has expressed concern about the leachability of toxic metals from fly ash, noting that the constituents of most environmental concern include arsenic, cadmium and chromium. *See* 75 Fed. Reg. 35128, 35137–35142 (June 21, 2010), discussed at [Doc. 253-4, at 24–25 of 139].[13] The EPA also presented data showing numerous instances where these constituents (especially arsenic) have leached at levels of concern. *Id.* If these toxic constituents can become unbound through leaching, as the EPA seems to recognize, it stands to reason that Dr. Terry could extrapolate from that information how those constituents might also be absorbed by the body.

Dr. Terry's report also discusses bioavailability for many of the other constituents. For example, arsenic exposure through inhalation and ingestion is causally associated with cancer because it acts at the cell level by damaging DNA [Doc. 253-4, at 38 of 139]. For lead, Dr.

[13] Leaching is the process through which leachate originates. The EPA has defined "leachate" as "Water that collects contaminants as it trickles through wastes, pesticides, or fertilizers. Leaching may occur in farming areas, feedlots, and landfills, and may result in hazardous substances entering surface water, groundwater, or soil." National Service Center for Environmental Publications, U.S. Environmental Protection Agency, Terms of Environment: Glossary, Abbreviations, and Acronyms, at 16 (Sept. 1992), available at https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=200081E1.TXT.

Terry cites at least one study that addresses lead exposure and bioavailability [*Id.* at 20–21].[14] For cadmium, Dr. Terry discusses how "inhalation is the major route of cadmium exposure in occupational settings," and cites studies showing that "exposure to cadmium particles lead to cadmium absorption in animals and humans" [*Id.* at 50–51 of 139]. For chromium, Dr. Terry cites data which shows that fly ash leaches chromium in amounts that can greatly exceed EPA's threshold for hazardous waste at 5000 parts per billion (ppb), that the chromium that leaches from fly ash is the most harmful form of chromium, and that inhalation of chromium has been linked with cancer [*Id.* at 45 of 139]. Finally, for vanadium, Dr. Terry cites studies showing the changes in DNA and lung capacity caused by known exposures to airborne particles containing vanadium [*Id.* at 88 of 139].

It is true that, as defendant argues, most of the exposure pathways described in these studies are different than those potentially experienced by plaintiffs. But courts agree that epidemiological evidence—of any kind—is not necessary to establish general causation. *See In re Meridia Prod. Liab. Litig.*, 328 F. Supp. 2d 791, 801 (N.D. Ohio 2004), *aff'd sub nom. Meridia Prod. Liab. Litig. v. Abbott Labs.*, 447 F.3d 861 (6th Cir. 2006) (collecting cases and concluding that "no court has held that epidemiological evidence is necessary to establish general causation"). A fortiori, a precisely on-point epidemiological study mimicking plaintiffs' pathways of exposure is also not a requirement, as defendant seems to suggest. And that makes sense. As plaintiffs glibly remind, "Because scientists do not experiment on

[14] National Toxicology Program, U.S. Department of Health and Human Services. NTP Monograph on Health Effects of Low-Level Lead, June 13, 2012, available at https://ntp.niehs.nih.gov/ntp/ohat/lead/final/monographhealtheffectslowlevellead_newissn_508.pdf.

humans there are no comprehensive studies showing exactly what happens to coal fly ash in the body when it is inhaled, coats the skin, or ingested" [Doc. 296, at 12]. Commissioning an epidemiological study mimicking plaintiffs' exposures would very expensive, and as Dr. Terry no doubt understands from his attempt to do just that, logistically difficult. Thus, holding otherwise and requiring such a study would not only be contrary to law, but would make toxic-tort litigation prohibitively expensive (for both sides, because defendants would presumably have to somehow rebut plaintiffs' commissioned study, or else concede general causation). Defendants are therefore not entitled to summary judgment on the basis of this supposed evidentiary deficiency.

All told, defendant's argument merely highlights a disagreement among the experts about what is required to form an opinion about general causation. Defendant's experts maintain that such an opinion cannot be rendered without a showing of biological plausibility and bioavailability are required. Dr. Terry maintains otherwise, and has come to a conclusion without considering those factors, at least in the way that defendant understands them. Such disagreements are not appropriate grounds for summary judgment. *See Spirit Airlines*, 431 F.3d at 931. The factfinder will weigh these considerations at trial.

Biological plausibility and bioavailability are important scientific concepts. But it does not appear that either is strictly necessary for an association between a particular toxic agent and a particular disease to be considered causal. Accordingly, neither is required to establish proof of general causation. Defendant can, of course, continue to argue about biological plausibility and bioavailability at trial. But plaintiffs' purported failure to demonstrate those things does not doom their claims as a matter of law, and defendant's evidence on these points

is not so persuasive that no reasonable jury could, by a preponderance of the evidence, find for plaintiffs. Summary judgment is therefore not warranted, and defendant's motion will be denied.

III. Defendants are entitled to judgment on plaintiffs' strict liability claims.

Defendant's motion for judgment on the pleadings will be granted. Plaintiffs have not stated a viable strict liability claim under Tennessee law because the fly-ash cleanup and removal is not an inherently ultrahazardous or abnormally dangerous activity.

A. Legal Standard

Rule 12(c) provides that "[a]fter the pleadings are closed but within such time as not to delay the trial, any party may move for judgment on the pleadings." Fed. R. Civ. P. 12(c). Under Fed. R. Civ. P. 12(c), judgment on the pleadings is appropriate when there are no material facts in dispute and the moving party is "entitled to judgment as a matter of law." *Paskvan v. City of Cleveland Civil Service Commission*, 946 F.2d 1233, 1235 (6th Cir. 1991). In the Sixth Circuit, "[a] motion for judgment on the pleadings under Rule 12(c) of the Federal Rules of Civil Procedure is reviewed under the same standard applicable to a motion to dismiss under Rule 12(b)(6)." *Avalon Health Care, LLC v. Trustmark Ins. Co.*, 471 F. Supp. 2d 869, 871 (M.D. Tenn. 2007).

Accordingly, the factual allegations in the Amended Complaint must be treated as true for purposes of this motion. *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009). However, "the tenet that a court must accept as true all of the allegations contained in a complaint is inapplicable to legal conclusions." *Id.* Instead, the plaintiff must plead "factual content that allows the

court to draw the reasonable inference that the defendant is liable for the misconduct alleged." *Id*. at 678. The Court need not credit bald or conclusory allegations *Id.* at 681.

B. Defendant's coal and fly ash cleanup is not an ultrahazardous activity under Tennessee law

"In Tennessee, defendants engaged in ultrahazardous activities are held strictly liable for injuries caused to the person or property of another by defendant's participation in the activity." *Leatherwood v. Wadley*, 121 S.W.3d 682, 699 (Tenn. Ct. App. 2003) (citing *England v. Burns Stone Co., Inc.,* 874 S.W.2d 32, 37 (Tenn. Ct. App. 1993)). Although it does not appear that a Tennessee court has explicitly held that this is a question of law, as much can be inferred from *Leatherwood*, where the court, in granting summary judgment, analyzed and decided the issue itself as a matter of law. *Id.* at 700–01. In addition, the *Leatherwood* court adopted the factors from the Second Restatement of Torts, which also provides that "[w]hether an activity is an abnormally dangerous one is to be determined by the court." Restatement (Second) of Torts § 520, cmt. l. Other jurisdictions agree.[15] Plaintiffs have cited no case to the contrary.

Those factors adopted in *Leatherwood*, which come from § 520 of the Second Restatement of Torts, are as follows:

> (a) existence of a high degree of risk of some harm to the person, land or chattels of others;

[15] *See, e.g., Banks v. Ashland Oil Co.*, 127 F. Supp. 2d 679, 680 (E.D. Pa. 2001) ("The question of whether an activity is abnormally dangerous and, therefore, strict liability should apply is a matter of law for the court to decide."); *In re Hanford Nuclear Reservation Litig*., 350 F. Supp. 2d 871, 875 (E.D. Wash. 2004)*; Ne. Ill. Reg'l Commuter R.R. Corp. v. Kiewit W. Co.*, 396 F. Supp. 2d 913, 922 (N.D. Ill. 2005); *Marmo v. IBP, Inc*., 362 F. Supp. 2d 1129, 1133 (D. Neb. 2005); *Collins v. Olin Corp*., 418 F. Supp. 2d 34, 47 (D. Conn. 2006); *Ely v. Cabot Oil & Gas Corp.*, 38 F. Supp. 3d 518, 526 (M.D. Pa. 2014).

(b) likelihood that the harm that results from it will be great;
(c) inability to eliminate the risk by the exercise of reasonable care;
(d) extent to which the activity is not a matter of common usage;
(e) inappropriateness of the activity to the place where it is carried on; and
(f) extent to which its value to the community is outweighed by its dangerous attributes.

Leatherwood, 121 S.W.3d at 700. No single factor is dispositive. *Id.* at 700 n.12.

The balance of these factors weighs in defendant's favor, particularly in light of the fact that defendant's job was to clean up the already-spilled and potentially hazardous fly-ash. Factors (c) and (f) are particularly instructive here. Defendant could have eliminated much of the risk associated with the fly-ash cleanup through the exercise of reasonable care, such as adherence to the Site Wide Safety and Health Plan, to which plaintiffs refer in their complaint, and also through the kind of safety monitoring and protection that defendant allegedly failed to provide or allow. And the value of the fly-ash cleanup to the public outweighs any inherent danger that could not otherwise have been eliminated through reasonable care. Factor (d) also weighs in defendant's favor because fly ash is a byproduct of coal-powered energy, which is produced every day at Kingston and other coal-burning sites and is thus relatively common. Factor (e) similarly weighs in defendant's favor because the entire purpose of the fly-ash cleanup was to remove potentially hazardous waste from the surrounding area. The activity was thus appropriate for the area because it could not have been relocated elsewhere. Even if factors (a) and (b) were to weigh in plaintiffs' favor, the overall balance still favors defendants.

Other courts appear to agree that hazardous waste disposal or removal is not ultrahazardous or abnormally dangerous.[16] Once again, plaintiffs have cited no case to the contrary.

Indeed, plaintiffs' response does not address most of these factors, but rather argues that strict liability should attach for two main reasons: first, because defendant's unsafe handling of the fly-ash cleanup, allegedly in violation of environmental regulations, created an abnormal danger; and second, because defendant could be held strictly liable under the Comprehensive Environmental Response, Compensation, and Liability Act (hereinafter, "CERCLA"), 42 U.S.C. § 9601 et. seq., they must also be strictly liable for personal damages to plaintiffs under Tennessee law [Doc. 254 ¶ 6]. The first argument clearly sounds in terms of negligence or perhaps negligence per se, rather than strict liability. That plaintiffs characterize defendant's handling of the fly ash as unsafe and in violation of regulations implies that proper handling and disposal of these materials would minimize or eliminate the risk, which undercuts their assertion that the activity is inherently dangerous. Plaintiffs' second argument has no basis in law. There does appear to be something like a strict liability provision in CERCLA, 42 U.S.C. § 9607(a), which makes potentially responsible parties liable

[16] *See Bernbach v. Timex Corp*., 989 F. Supp. 403, 407 (D. Conn. 1996) (internal quotation omitted) (dismissing strict liability claims based on soil and groundwater contamination resulting from a manufacturing facility's disposal of various hazardous substances, where plaintiffs failed to allege "circumstances and conditions in . . . [defendant's] activities such that, irrespective of due care, the activities involve a risk of probable injury to such a degree that [they] fairly can be said to be intrinsically dangerous."); *Schwartzman, Inc. v. General Elec. Co.*, 848 F. Supp. 942, 945 (D.N.M. 1993) (granting motion to dismiss strict liability claim based on disposal of petroleum products and other hazardous wastes; despite the fact that such materials "may present a substantial degree of risk . . . when mishandled," the court held that "the risks can be eliminated through the exercise of reasonable care"); *Phillip Morris, Inc. v. Emerson*, 368 S.E.2d 268, 282 (Va. 1988) (strict liability did not apply to the removal of buried tanks of the "supertoxic" chemical pentaborane because defendants had the ability to eliminate the risk of injury by exercising reasonable care).

for cleanup, response, natural-resource damage, and health studies. *Id.* § 9607(a)(4). Even assuming that provision applied to defendant, there does not appear to be liability under CERCLA for the personal-injury damages on which plaintiffs' strict liability claims are based. 42 U.S.C. § 9607(a)(4). Thus, CERCLA says nothing about whether defendant should be held strictly liable for plaintiffs' alleged personal injuries. And in any event, whatever kind of strict liability the federal government might impose on defendant says very little about whether fly-ash disposal is ultrahazardous or abnormally dangerous under Tennessee state law. As previously discussed, it is not.

Defendant's motion for judgment on the pleadings will therefore be granted.

IV. Conclusion

For the reasons stated, defendant's motion for summary judgment on the issue of general causation [Doc. 237], is hereby **DENIED**, and defendant's motion for judgment on the pleadings with respect to plaintiffs' strict liability claims [Doc. 251] is **GRANTED**. These cases will therefore proceed to trial on phase one, in accordance with the bifurcated trial plan previously entered by the Court [Doc. 136].

IT IS SO ORDERED.

s/ Thomas A. Varlan
CHIEF UNITED STATES DISTRICT JUDGE