

PRECEDENTIAL

UNITED STATES COURT OF APPEALS
FOR THE THIRD CIRCUIT

No. 10-2108

GLENN GATES; DONNA GATES, H/W,
ON BEHALF OF THEMSELVES
AND ALL OTHERS SIMILARLY SITUATED

v.

ROHM AND HAAS COMPANY;
MORTON INTERNATIONAL, INC. ;
ROHM AND HAAS CHEMICALS LLC;
HUNTSMAN; HUNTSMAN POLYURETHANES;
MODINE MANUFACTURING COMPANY

Glenn Gates, Donna Gates,
Appellants

On Appeal from the United States District Court
for the Eastern District of Pennsylvania
D.C. Civil Action No. 06-cv-01743
(Honorable Gene E.K. Pratter)

Argued November 3, 2010
Before: SCIRICA, RENDELL and ROTH, *Circuit Judges*.

(Filed: August 25, 2011)

LOUIS C. RICCIARDI, ESQUIRE (ARGUED)
Trujillo Rodriguez & Richards
1717 Arch Street, Suite 3838
Philadelphia, Pennsylvania 19103

AARON J. FREIWALD, ESQUIRE
Layser & Freiwald
1500 Walnut Street, 18th Floor
Philadelphia, Pennsylvania 19102
Attorneys for Appellants

CARL A. SOLANO, ESQUIRE (ARGUED)
NILAM A. SANGHVI, ESQUIRE
SAMUEL W. SILVER, ESQUIRE
RALPH G. WELLINGTON, ESQUIRE
Schnader Harrison Segal & Lewis
1600 Market Street, Suite 3600
Philadelphia, Pennsylvania 19103
Attorneys for Appellees,
Rohm and Haas Company,
Morton International, Inc.,
Rohm and Haas Chemicals LLC

OPINION OF THE COURT

SCIRICA, *Circuit Judge*.

This is an interlocutory appeal under Fed. R. Civ. P. 23(f) from the denial of class certification for medical

monitoring and property damage. Plaintiffs aver chemical companies dumped an alleged carcinogen at an industrial complex near their residences. The District Court found individual issues predominated on exposure, causation, and the need for medical monitoring and also found individual issues predominated as to a liability-only issue class for the property damage claims.

I.

Named plaintiffs Glenn and Donna Gates are residents of McCullom Lake Village, Illinois, a primarily residential area of approximately 2000 people and 400 homes. Defendants are chemical companies that owned and operated a facility in Ringwood, Illinois, one mile north of McCullom Lake Village. According to plaintiffs, defendants dumped wastewater containing vinylidene chloride into a nearby lagoon that seeped into an underground aquifer where it degraded into vinyl chloride, a carcinogen. Plaintiffs contend vinyl chloride evaporated into the air from the shallow aquifer and was swept by the wind over McCullom Lake Village.

Plaintiffs seek certification of two classes: (1) a class seeking medical monitoring for village residents exposed to the airborne vinyl chloride between 1968 and 2002, and (2) a liability-only issue class seeking compensation for property damage from the exposure. At issue is whether the District Court erred in finding individual issues barred certification of the proposed trial classes under Fed. R. Civ. P. 23(b)(2) or 23(b)(3). We will affirm.

A.

From 1951 to 2005, defendant Morton International

owned and operated the Ringwood facility. In June 1999, defendant Rohm & Haas Co. acquired Morton and from 2005, defendant Rohm & Haas Chemicals, LLC, a wholly-owned subsidiary of Rohm & Haas Co., has operated the Ringwood facility.¹

Morton made use of vinylidene chloride at the Ringwood facility and from 1960 to 1978, disposed wastewater containing vinylidene chloride into an on-site lagoon. In 1973, tests of the shallow aquifer under the Ringwood facility showed elevated levels of ammonia and chloride. This shallow aquifer does not extend under McCullom Lake Village. In 1978, Morton ceased using the on-site lagoon and covered it.

In 1984, Morton conducted an environmental assessment of the Ringwood facility and installed nineteen monitoring wells at the facility. Samples from these wells contained vinylidene chloride and vinyl chloride. Subsequently, more than ninety monitoring wells were installed in the area around the Ringwood facility.² To date, neither vinylidene chloride nor vinyl chloride has been detected in tests of residential wells in McCullom Lake Village used to obtain drinking water. Plaintiffs contend

¹Additional defendants Huntsman and Huntsman Polyurethanes were dismissed by stipulation without prejudice and defendant Modine reached a class settlement that the District Court approved.

²In 1991, Morton voluntarily enrolled the Ringwood facility in the Illinois Environmental Protection Agency's remediation program, an ongoing process. The remediation plan for the shallow aquifer involves using wells and a wastewater treatment plant to decontaminate the water.

these chemicals may be present at undetectable levels.

B.

In 2006, named plaintiffs filed a complaint alleging there were multiple pathways of contamination from multiple chemicals including vinyl chloride.³ The putative classes include only those with economic injury or exposure. Persons alleging physical injury (including brain cancer) are excluded from the classes.

Despite asserting multiple potential pathways of contamination, plaintiffs limited their arguments at class certification to a single chemical, vinyl chloride, and a single pathway, via a shallow aquifer into the air. A deeper aquifer runs underneath the Ringwood facility, but the parties dispute whether it has become contaminated and whether the aquifer flows to the village. Plaintiffs originally alleged this deeper aquifer (“deeper plume”) carried vinyl chloride to the ground water under the village. They also alleged “air stripping” equipment used to remove contamination from the facility’s groundwater caused contaminants to be released into the air.

Despite asserting several claims for relief including medical monitoring, property damage claims, relief under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9601 *et seq.*, the Illinois Environmental Protection Act, 415 Ill. Comp. Stat. § 5/1 *et seq.*, and state-law fraudulent misrepresentation and willful and wanton misconduct claims, plaintiffs chose to proceed on a class basis only on the medical monitoring and

³The other contaminants included trichloroethylene (TCE), and 1, 1-Dichloroethylene (DCE) both industrial solvents.

property damage claims and, as noted, solely with regard to vinyl chloride exposure. The proposed medical monitoring class includes:

All individuals who lived for one year or more in total (whether consecutively or not) within McCullom Lake Village during the time period from January 1, 1968 to December 31, 2002. Excluded from the class are individuals for whom brain cancer has been detected and individuals bringing claims in any court of competent jurisdiction arising out of exposure to chlorinated solvents.

The proposed property damage class includes:

All persons who presently own real property within McCullom Lake Village, or who owned real property within McCullom Lake Village as of April 25, 2006 (the date of the filing of the complaint) through the present. Excluded from the Class are individuals who have already brought claims in any court of competent jurisdiction arising out of exposure to chlorinated solvents.

Plaintiffs sought certification of only these classes.

At the class certification hearing both parties submitted expert evidence.⁴ Plaintiffs relied on a report from Paolo

⁴By stipulation the parties agreed to delay consideration of a pending omnibus *Daubert* motion regarding their proposed experts. In the interim, we decided *In re Hydrogen Peroxide*

Zannetti and a report and testimony from Gary Ginsberg. Zannetti, an expert in modeling dispersion of air pollution, submitted a report estimating the dispersion of vinyl chloride over the village based on data from the monitoring wells. Ginsberg, a toxicologist at the Connecticut Department of Public Health, presented a risk assessment of exposure to vinyl chloride.

To measure the exposure from pollutants such as vinyl chloride, the experts modeled the exposure of residents compared to their background levels of exposure absent the alleged pollution attributable to the defendants.⁵ Plaintiffs contend the natural background level is 0.042 micrograms per cubic meter (“ $\mu\text{/m}^3$ ”), a measure contained in the federal Environmental Protection Agency’s 1999 National-Scale Air Toxics Assessment.

Zannetti’s report modeled the emissions over the

Antitrust Litig., 552 F.3d 305 (3d Cir. 2008), which required a “rigorous analysis” of the proposed classes in light of the requirements for class certification. *Id.* at 309. The District Court ordered supplementary briefing and informed the parties that they may need to address the reliability of expert evidence to the extent it related to class certification issues. The District Court’s analysis turned largely on whether the experts’ opinions qualified as common proof and not whether their methods were reliable.

⁵Exposure is compared to background levels unless the defendant’s contamination is so severe that it alters the baseline background level. See *In re Paoli R.R. Yard PCB Litig.*, 113 F.3d 444, 461 (3d Cir. 1997). The District Court found the expert testimony did not meet that standard and plaintiffs do not challenge that finding on appeal.

village using data from monitoring wells to develop models for the concentration of vinyl chloride in the air during four time periods, 1940-67, 1968-89, 1990-96, and 1997-2006. Included in his report are maps of the village with isopleth lines⁶ showing the concentration of vinyl chloride exposure for persons within the isopleth during each time period. The isopleths are based on his “high scenario,” which was an estimate based on the highest single recorded concentration at each monitoring site. He also developed a scenario he termed the “low scenario,” which extrapolated exposure from the average of all recorded concentrations at each site. Zannetti used the highest recorded data because, in his opinion, the contamination had ended by the time the monitoring began and the historical levels were expected to be significantly higher than those measured. The exposure at the part of the village closest to the shallow plume ranged from 0.0266 μm^3 to 0.210 μm^3 in the “high scenario” and 0.00554 μm^3 to 0.0159 μm^3 in the “low scenario.”⁷

⁶Isopleths are lines on a map joining points of equal value to show distributions of a specific variable, such as the use of contour lines on a topographical map to show elevation. The isopleth lines here demarcate areas in and around the village where the estimated concentration of vinyl chloride within the line equals or exceeds the stated value.

⁷Three isopleth maps show the concentration during the class period. The isopleth modeling the high emission scenario from 1968 to 1989 shows a small fraction of the Village in an isopleth of 0.20 μm^3 with the remainder of the Village in an isopleth of 0.08 μm^3 . The isopleth of the period from 1990 to 1996 shows a significant portion of the Village in an isopleth of 0.08 μm^3 and the rest in an isopleth of 0.022

Ginsberg testified that the average amount of exposure for residents of the village over a twenty-five year period from the shallow plume would be $0.127 \mu\text{m}^3$ (in addition to any background exposure). Ginsberg arrived at this figure by averaging the concentrations in Zannetti's isopleths based on the "high scenario."⁸ The "high scenario" extrapolated exposure levels based on maximum detected concentration at monitoring wells from 1985 to 1990. He used the "high scenario" because "the contamination was likely higher in the past." In his view, the scenario still probably underestimated the exposure. If the "low scenario" were used the average exposure for a twenty-five year period would be $0.011 \mu\text{m}^3$.

Ginsberg disclaimed that his report⁹ was conclusive as

μm^3 . The last isopleth map showing the period from 1997 to 2006 shows a minority of the village in an isopleth of $0.026 \mu\text{m}^3$ and the remainder in an isopleth of $0.008 \mu\text{m}^3$.

⁸The District Court noted Ginsberg described his calculation of the 0.127 figure "in two different, contradictory ways" at the hearing and during his deposition. At his deposition Ginsberg testified he used Zannetti's "high scenario" which is calculated only for the point of the Village closest to the plume. But at the hearing, Ginsberg testified he averaged the two ends of the isopleth distribution—the point closest to the contamination and the point at the furthest end of the village. The District Court found that either explanation would not change the fact the number represents an average of class members' exposure.

⁹The bulk of Ginsberg's report provides a detailed analysis of the carcinogenic nature of vinyl chloride. The defendants dispute whether vinyl chloride poses a cancer risk to humans. We need not address the issue as it presents a merits

to individual cases. At one point during his hearing testimony, Ginsberg stated the hypothetical risk calculations are “not meant to predict risk for a single individual under any specific scenario” because of “individual or personal variability—susceptibility.”

The District Court denied class certification for both classes. It found the medical monitoring class lacked the cohesiveness needed to maintain a class under Rule 23(b)(2) and that common issues of law and fact did not predominate as required under Rule 23(b)(3). Both failed for the same reason—the “common” evidence proposed for trial did not adequately typify the specific individuals that composed the two classes. The court also found the remaining individual issues would require trial, undoing any efficiencies of class proceedings and possibly leading a second jury to reconsider evidence presented to the jury in the class proceeding.

The court found plaintiffs failed to present common proof of three issues critical to recovering on the medical monitoring claim—(1) that plaintiffs suffered from exposure greater than normal background levels, (2) the proximate result of which is significantly increased risk of developing a serious disease, and (3) whether the proposed medical monitoring regime is reasonably medically necessary.

The court found the proposed expert evidence demonstrating the first element—exposure greater than normal background levels—did not reflect the exposure of any specified individuals within the class. The court rejected Ginsberg’s risk analysis and use of the $0.127 \mu\text{m}^3$ figure

determination that does not alter the analysis of the propriety of class certification.

because it represented an average exposure, not the exposure of any actual class member. The court also rejected as insufficient Zannetti's isopleths because the maps assumed a constant value for exposure during lengthy time periods. It found the isopleths were "overly simplistic" and averaged the class members' exposures, rendering them unsuitable as common proof.

The court found no common proof of minimum exposure level above which class members were at an increased risk of serious disease. The court rejected the proposed value of $0.07 \mu\text{m}^3$ —the EPA's regulatory standard for exposure to a mixed population of children and adults—because $0.07 \mu\text{m}^3$ is a precautionary value below which a mixed population is likely to be safe. It does not establish the converse, the required element—the point at which class members would likely be at risk.

The court doubted that putative "common" proof could demonstrate whether the proposed monitoring regime is reasonably medically necessary. Plaintiffs wanted class members to receive serial MRIs to scan for cancerous tumors or CAT scans, if MRIs would pose health risks. The court did not believe a regime could be developed using common proof because of class members' differing ages, medical histories, genetic predispositions, and tolerance of serial MRIs.

The court also denied certification of the property damage class, finding similar defects with the "common" proof. The court noted "[p]laintiffs rely on the same expert testimony that they offered to support their medical monitoring claim." The court refused to certify a liability-only class because the common evidence could not establish

contamination at each property that was attributable to the defendants.

II.

The District Court's reasoned analysis of the denial of class certification makes clear it did not abuse its discretion. "Factual determinations necessary to make Rule 23 findings must be made by a preponderance of the evidence." *Hydrogen Peroxide*, 552 F.3d at 320. We review the District Court's findings for abuse of discretion. *Id.* at 312. A district court abuses its discretion if its "decision rests upon a clearly erroneous finding of fact, an errant conclusion of law or an improper application of law to fact." *Id.* (internal quotation marks omitted). Plaintiffs sought certification of the medical monitoring class under either Rule 23(b)(2) or 23(b)(3). We will first address denial of class certification under Rule 23(b)(2).

A.

Rule 23(b)(2) applies when "the party opposing the class has acted or refused to act on grounds that apply generally to the class, so that final injunctive relief or corresponding declaratory relief is appropriate respecting the class as a whole." Fed. R. Civ. P. 23(b)(2). The Supreme Court recently clarified "Rule 23(b)(2) applies only when a single injunction or declaratory judgment would provide relief to each member of the class." *Wal-Mart Stores, Inc., v. Dukes*, --- U.S. ----, 131 S. Ct. 2541, 2557 (2011). Rule 23(b)(2), in contrast to (b)(3), "does not authorize class certification when each class member would be entitled to an individualized award of monetary damages." *Id.* But the Court did not conclusively decide "whether there are any

forms of ‘incidental’ monetary relief that are consistent with the interpretation of Rule 23(b)(2) we have announced and that comply with the Due Process Clause.” *Id.* at 2561.

1.

Medical monitoring cannot be easily categorized as injunctive or monetary relief. A medical monitoring cause of action allows those exposed to toxic substances to recover the costs of periodic medical appointments and the costs of tests to detect the early signs of diseases associated with exposure. The few states that recognize medical monitoring as a remedy recognize it as a cause of action, like Pennsylvania, *Redland Soccer Club, Inc. v. Dep’t of the Army*, 696 A.2d 137, 142 (Pa. 1997), or treat it as a type of relief granted in connection with a traditional tort cause of action, *see, e.g., Bourgeois v. A.P. Green Indus., Inc.*, 716 So.2d 355, 359 (La. 1998).¹⁰

¹⁰See Principles of the Law of Aggregate Litigation § 2.04 reporter’s notes cmt. b, at 124 (2010) (“As a matter of substantive law, courts are split on the viability of, and proper approach to medical monitoring actions.”); 7AA Charles Alan Wright, Arthur R. Miller & Mary Kay Kane, Federal Practice & Procedure § 1775, at 55-56 (3d ed. 2005) (“One type of order about which there is some disagreement in the courts is a request for medical monitoring. Some courts have deemed that request the equivalent of one for an injunction; others have treated it as a form of damage relief.” (footnote omitted)); 1 Joseph M. McLaughlin, McLaughlin on Class Actions: Law and Practice § 5:18, at 5-70 (3d ed. 2006) (“Medical monitoring is a controversial, cutting-edge concept that has not undergone widespread scrutiny in the state courts, let alone gained widespread acceptance.”). Only a handful of states have allowed plaintiffs to recover the costs of medical

The remedy of medical monitoring has divided courts on whether plaintiffs should proceed under Rule 23(b)(2) or Rule 23(b)(3).¹¹ The Pennsylvania Supreme Court has endorsed awarding medical monitoring damages as a trust fund which “compensates the plaintiff for only the monitoring costs actually incurred.” *Redland Soccer Club*, 696 A.2d at 142 n.6. It has not yet decided whether medical monitoring awards can be in the form of a lump-sum verdict. *Id.* We have previously reviewed the certification of a Pennsylvania-law medical monitoring class under Rule 23(b)(2) without comment on whether medical monitoring claims are predominately claims for injunctive or monetary relief. *See Barnes v. Am. Tobacco Co.*, 161 F.3d 127, 143 (3d Cir. 1998).

The District Court here denied certification under both

monitoring without other physical injury. *See Burns v. Jaquays Mining Corp.*, 752 P.2d 28, 33-34 (Ariz. Ct. App. 1987); *Potter v. Firestone Tire and Rubber Co.*, 863 P.2d 795, 822-23 (Cal. 1993); *Ayers v. Twp. of Jackson*, 525 A.2d 287, 314 (N.J. 1987); *Redland Soccer Club, Inc. v. Dep’t of the Army*, 696 A.2d 137, 142 (Pa. 1997); *Hansen v. Mountain Fuel Supply Co.*, 858 P.2d 970, 979-80 (Utah 1993); *Bower v. Westinghouse Elec. Corp.*, 522 S.E.2d 424, 429-30 (W.Va. 1999); *see also Adkins v. Thomas Solvent Co.*, 487 N.W.2d 715, 720 (Mich. 1992) (recognizing threats or impending threats to health as actionable under a private nuisance cause of action).

¹¹Compare, e.g., *Boughton v. Cotter Corp.*, 65 F.3d 823, 827 (10th Cir. 1995) with *Zinser v. Accufix Research Inst. Inc.*, 253 F.3d 1180, 1194-96, amended, 273 F.3d 1266 (9th Cir. 2001).

subsections for reasons unrelated to the injunctive or monetary nature of the relief sought. In light of the Supreme Court's recent decision in *Wal-Mart Stores, Inc., v. Dukes*, --- U.S. ----, 131 S. Ct. 2541 (2011), we question whether the kind of medical monitoring sought here can be certified under Rule 23(b)(2) but we do not reach the issue. As noted, the Court held "Rule 23(b)(2) applies only when a single injunction or declaratory judgment would provide relief to each member of the class" but left open the question "whether there are any forms of 'incidental' monetary relief that are consistent with the interpretation of Rule 23(b)(2) we have announced and that comply with the Due Process Clause." *Id.* at 2557, 2561 (quoting *Allison v. Citgo Petroleum Corp.*, 151 F.3d 402, 415 (5th Cir. 1998)). If the plaintiffs prevail, class members' regimes of medical screenings and the corresponding cost will vary individual by individual. But we need not determine whether the monetary aspects of plaintiffs' medical monitoring claims are incidental to the grant of injunctive or declaratory relief. "[A] single injunction or declaratory judgment" cannot "provide relief to each member of the class" proposed here, *id.* at 2557, due to individual issues unrelated to the monetary nature of the claim. For its part, the District Court found certification improper under either category for reasons apart from the monetary nature of plaintiffs' claims.

2.

Although Rule 23(b)(2) classes need not meet the additional predominance and superiority requirements of Rule 23(b)(3), "it is well established that the class claims must be cohesive." *Barnes*, 161 F.3d at 143. Rule 23(b)(2) requires that "the party opposing the class has acted or refused to act on grounds that apply generally to the class." Fed. R. Civ. P.

23(b)(2). “The key to the (b)(2) class is ‘the indivisible nature of the injunctive or declaratory remedy warranted—the notion that the conduct is such that it can be enjoined or declared unlawful only as to all of the class members or as to none of them.’” *Wal-Mart Stores, Inc*, 131 S. Ct. at 2557 (quoting Richard A. Nagareda, *Class Certification in the Age of Aggregate Proof*, 84 N.Y.U. L. Rev. 97, 132 (2009)). “Indeed, a (b)(2) class may require more cohesiveness than a (b)(3) class.” *Barnes*, 161 F.3d at 142.¹²

As all class members will be bound by a single judgment, members of a proposed Rule 23(b)(2) injunctive or declaratory class must have strong commonality of interests. The Supreme Court in *Wal-Mart* recently highlighted the importance of cohesiveness in light of the limited protections for absent class members under subsections (b)(1) and (b)(2):

Classes certified under (b)(1) and (b)(2) share the most traditional justifications for class treatment—that individual adjudications would be impossible or unworkable, as in a (b)(1)

¹²Commentators have noted that certification requirements under Rule 23(b)(2) are more stringent than under (b)(3). *See* 7AA Charles Alan Wright, Arthur R. Miller & Mary Kay Kane, *Federal Practice and Procedure*, § 1784.1, at 343 (3d ed. 2005) (“[T]he common-question and superiority standards of Rule 23(b)(3) are in some ways much less demanding than that of either Rule 23(b)(1) or Rule 23(b)(2)”); *see also* 1 Joseph M. McLaughlin, *McLaughlin on Class Actions: Law and Practice* § 5:15, at 5-57 (3d ed. 2006) (“[I]t is well established that a rule 23(b)(2) class should actually have more cohesiveness than a Rule 23(b)(3) class.” (internal quotations omitted)).

class, or that the relief sought must perforce affect the entire class at once, as in a (b)(2) class. For that reason these are also mandatory classes: The Rule provides no opportunity for (b)(1) or (b)(2) class members to opt out, and does not even oblige the District Court to afford them notice of the action.

Wal-Mart Stores, Inc., 131 S. Ct. at 2558 (footnote omitted). The “disparate factual circumstances of class members” may prevent a class from being cohesive and, therefore, make the class unable to be certified under Rule 23(b)(2). *Carter v. Butz*, 479 F.2d 1084, 1089 (3d Cir. 1973).

Because causation and medical necessity often require individual proof, medical monitoring classes may founder for lack of cohesion. *See In re St. Jude Med. Inc.*, 425 F.3d 1116, 1122 (8th Cir. 2005); *Ball v. Union Carbide Corp.*, 385 F.3d 713, 727-28 (6th Cir. 2004); *Zinser v. Accufix Research Inst., Inc.*, 253 F.3d 1180, 1195-96, *amended*, 273 F.3d 1266 (9th Cir. 2001); *Barnes*, 161 F.3d at 143-46; *Boughton v. Cotter Corp.*, 65 F.3d 823, 827 (10th Cir. 1995). Rule 23(b)(2) “does not authorize class certification when each class member would be entitled to an individualized award of monetary damages.”¹³ *Wal-Mart*, 131 S. Ct. at 2557.

The District Court found individual issues were significant to certain elements of the medical monitoring claims here. To prevail on a medical monitoring claim under

¹³As noted, the Court left open whether monetary awards incidental to the grant of declaratory or injunctive relief were permissible. *Id.* at 2561.

Pennsylvania law,¹⁴ plaintiffs must prove:

- (1) exposure greater than normal background levels;
- (2) to a proven hazardous substance;
- (3) caused by the defendant's negligence;
- (4) as a proximate result of the exposure, plaintiff has a significantly increased risk of contracting a serious latent disease;
- (5) a monitoring procedure exists that makes the early detection of the disease possible;
- (6) the prescribed monitoring regime is different from that normally recommended in the absence of the exposure; and
- (7) the prescribed monitoring regime is reasonably necessary according to contemporary scientific principles.

Redland Soccer Club, 696 A.2d at 145-46. “Expert testimony is required to prove these elements.” *Sheridan v. NGK Metals Corp.*, 609 F.3d 239, 251 (3d Cir. 2010) (citing *Redland Soccer Club*, 696 A.2d at 145-46). The District Court identified individual issues that would eclipse common issues in at least three of the required elements, noting several potential variations in proving exposure above background, a significantly increased risk of a serious latent disease, and the reasonable necessity of the monitoring regime. Plaintiffs

¹⁴Neither party challenges the trial court’s conclusion that Pennsylvania law applies or that, if Illinois law applied, the Illinois Supreme Court would adopt a cause of action for medical monitoring with the same essential elements as Pennsylvania law.

contend the court misinterpreted and improperly evaluated the evidence on the merits, rather than under a class certification standard, an error compounded by the parties' stipulation that consideration of *Daubert* issues would be put off until after class certification.

3.

The District Court did not err in considering whether the proposed common proof would accurately reflect the exposure of individual members of the class to vinyl chloride.¹⁵ "Frequently the 'rigorous analysis' will entail some overlap with the merits of the plaintiff's underlying claim." *Wal-Mart Stores, Inc.*, 131 S. Ct. at 2551. "[T]he court may 'consider the substantive elements of the plaintiffs' case in order to envision the form that a trial on those issues would take." *Hydrogen Peroxide*, 552 F.3d at 317 (quoting *Newton v. Merrill Lynch, Pierce, Fenner & Smith, Inc.*, 259 F.3d 154, 166 (3d Cir. 2001)).

Plaintiffs proposed to show the exposure of class members through the expert opinions of Zannetti and Ginsberg. On appeal, plaintiffs contend the court failed to concentrate on Zannetti's isopleths and failed to recognize that the isopleths provide average exposure per person, not a class-wide average across class members.

¹⁵ Plaintiffs were aware that the issues of class certification were linked to the merits of their claims. In their reply brief to the District Court, plaintiffs stated "[a]lthough typically a party moving for class certification need not present expert opinions on the merits (as opposed to the experts' proposed methodologies), in this case, merits and certification are closely linked."

The District Court found that the isopleths could not constitute common proof of exposure above background levels. It noted several problems—that the isopleths only showed average daily exposure, not minimum exposure, used average exposure over very long periods of time when exposure likely varied, and could not show that every class member was exposed above background.¹⁶

Instead of showing the exposure of the class member with the least amount of exposure, plaintiffs' proof would show only the amount that hypothetical residents of the village would have been exposed to under a uniform set of assumptions without accounting for differences in exposure year-by-year or based upon an individual's characteristics. At most, the isopleths show the exposure only of persons who lived in the village for the entire period the isopleth represents and who behaved according to all assumptions that Zannetti made in creating the isopleth.

Plaintiffs cannot substitute evidence of exposure of actual class members with evidence of hypothetical, composite persons in order to gain class certification. *Cf.* Principles of the Law of Aggregate Litigation § 2.02 cmt. d, at 89 (2010) (“Aggregate treatment is thus possible when a trial would allow for the presentation of evidence sufficient to demonstrate the validity or invalidity of all claims with respect to a common issue under applicable substantive law,

¹⁶While plaintiffs argue the court committed error by describing their evidence as “averages,” plaintiffs themselves stated in their reply brief to the District Court that “[p]laintiffs will prove that daily *average* levels of vinyl chloride during the defined periods of time migrated from defendants’ manufacturing sites to the Village.” (emphasis added).

without altering the substantive standard that would be applied were each claim to be tried independently and without compromising the ability of the defendant to dispute allegations made by claimants or to raise pertinent substantive defenses.”). The evidence here is not “common” because it is not shared by all (possibly even most) individuals in the class. Averages or community-wide estimations would not be probative of any individual’s claim because any one class member may have an exposure level well above or below the average.

Attempts to meet the burden of proof using modeling and assumptions that do not reflect the individual characteristics of class members have been met with skepticism. *See In re Fibreboard Corp.*, 893 F.2d 706, 712 (5th Cir. 1990) (“It is evident that these statistical estimates deal only with general causation, for population-based probability estimates do *not* speak to a probability of causation in any one case; the estimate of relative risk is a property of the studied population, not of an individual’s case.” (internal quotation omitted) (emphasis in original)); *In re “Agent Orange” Prod. Liab. Litig. MDL No. 381*, 818 F.2d 145, 165 (2d Cir. 1987) (noting that “generic causation and individual circumstances concerning each plaintiff and his or her exposure to Agent Orange . . . appear to be inextricably intertwined” and expressing concern that if the class had been certified for trial “the class action would have allowed generic causation to be determined without regard to those characteristics and the individual’s exposure”); *see also* 2 Joseph M. McLaughlin, *McLaughlin on Class Actions: Law and Practice* § 8:9, at 8-55 to -57 (3d ed. 2006) (“Permitting a class to proceed with its suit without linking its proof to even a single class member would contravene the overwhelming

authority recognizing the individualized nature of the causation inquiry in mass tort cases.”).

There are several reasons the amount of vinyl chloride exposure for class members would differ from the exposure estimated by Zannetti’s isopleths. Levels of vinyl chloride varied within the periods the isopleth measures. Zannetti assumes one constant level of exposure for 1968 to 1989, another for 1990 to 1996 and a third for 1997 to 2006. But another part of Zannetti’s report notes the temporal level of exposure varied drastically—even hourly. He states “hourly concentration impacts are frequently one order of magnitude (i.e., 10 times) greater and even two orders of magnitude (i.e., 100 times) greater than the annual average.” The implication of Zannetti’s statement is that for the average to be at the calculated level there would be periods when the concentration would be significantly lower than the period average, in addition to the periods when the concentration is significantly higher. This fluctuation makes the specific period of time and amount of time class members were in the village critical in deciding whether they were exposed to higher than background levels. As the court noted, within each of these periods, the exposure varied and only persons residing within the village the entire period would have their personal average exposure equal the average exposure within the isopleth lines.

Plaintiffs’ experts contended that, because the dumping of vinylidene chloride stopped in 1978, the concentration of vinyl chloride fell during much of the class period. But under the plaintiffs’ proposed modeling and isopleths, a class member who lived in the village from 1988-89—a full decade after the dumping ended—would be assumed to have been exposed to the same concentration of

vinyl chloride as a person living in the same neighborhood from 1968-69 when dumping occurred.

Moreover, the isopleths do not reflect that different persons may have different levels of exposure based on biological factors or individual activities over the class period. Factors which affect a person's exposure to toxins can include activity level, age, sex, and genetic make-up. *See* Federal Judicial Center, Reference Manual on Scientific Evidence 430 (2d ed. 2000). On cross-examination, Ginsberg stated that “[s]ome people will have higher breathing rates per body weight, et cetera,” which would create a disparity between the concentrations of vinyl chloride (based on estimated exposure as opposed to actual exposure).

Each person's work, travel, and recreational habits may have affected their level of exposure to vinyl chloride. Ginsberg admitted that differences in the amount of time spent outside the village would create different average concentrations to which the class members were exposed. A person who worked outside the village would have been exposed less than a stay-at-home parent, or retiree. The isopleths assume exposure to the same concentration for class members who may have spent very different amounts of time in the village.

Plaintiffs argue unconvincingly that the isopleths reflect average exposure of individuals rather than a classwide average. They contend the isopleth represents a concentration which is the “least exposure of anyone within the area circumscribed by the isopleth line.” But one cannot evaluate the accuracy of this claim unless plaintiffs presented some way to measure the actual minimum levels of exposure of individual class members. Plaintiffs’ model assumes away

relevant variations between the hundreds of residents within the same isopleth lines that would result in exposure to different concentrations of vinyl chloride.¹⁷ Their model does not provide individual average exposures of actual class members.

4.

The District Court did not abuse its discretion in finding plaintiffs would be unable to prove a concentration of vinyl chloride that would create a significant risk of contracting a serious latent disease for all class members. Nor was there common proof that could establish the danger point for all class members.

The court identified two problems with the proposed evidence. First, it rejected the plaintiffs' proposed threshold—exposure above 0.07 μm^3 , developed as a regulatory threshold by the EPA for mixed populations of adults and children—as a proper standard for determining liability under tort law. Second, the court correctly noted, even if the 0.07 μm^3 standard were a correct measurement of the aggregate threshold, it would not be the threshold for each class member who may be more or less susceptible to diseases from exposure to vinyl chloride.¹⁸

¹⁷Zannetti's report does not list the assumptions made that would affect the concentration of exposure, such as the amount of time spent in the village. Ginsberg, in reaching his average, assumed the residents were present 350 days in a year for 24 hours-a-day, 7 days-a-week for twenty-five years.

¹⁸Plaintiffs' experts agreed risk levels varied by individual. Melissa Neiman, a board certified neurosurgeon, noted

Although the positions of regulatory policymakers are relevant, their risk assessments are not necessarily conclusive in determining what risk exposure presents to specified individuals. *See* Federal Judicial Center, Reference Manual on Scientific Evidence 413 (2d ed. 2000) (“While risk assessment information about a chemical can be somewhat useful in a toxic tort case, at least in terms of setting reasonable boundaries as to the likelihood of causation, the impetus for the development of risk assessment has been the regulatory process, which has different goals.”); *id.* at 423 (“Particularly problematic are generalizations made in personal injury litigation from regulatory positions. . . . [I]f regulatory standards are discussed in toxic tort cases to provide a reference point for assessing exposure levels, it must be recognized that there is a great deal of variability in the extent of evidence required to support different regulations.”).

“[i]ndividuals in the class will likely have varying degrees of risk regarding the development of brain tumors,” although in her opinion all exposed persons would have a higher risk than the average non-exposed person. Ginsberg’s report states exposure to vinyl chloride has “greater cancer effects in early life for liver and other tumor sites.” Therefore, exposure at the screening target of 0.07 $\mu\text{/m}^3$ used for “mixed populations” may pose little risk for healthy adults, but may pose a great risk for children. For example, Ginsberg testified that EPA Region 3 considers 0.16 $\mu\text{/m}^3$ as the “*de minimis* risk threshold” but, according to Ginsberg, the EPA uses “a lower screening level [the 0.07 $\mu\text{/m}^3$ standard] for community risk if it’s a mixed population, meaning young children and adults.”

Thus, plaintiffs could not carry their burden of proof for a class of specific persons simply by citing regulatory standards for the population as a whole. *Cf. Wright v. Willamette Indus., Inc.*, 91 F.3d 1105, 1107 (8th Cir. 1996) (“Whatever may be the considerations that ought to guide a legislature in its determination of what the general good requires, courts and juries, in deciding cases, traditionally make more particularized inquiries into matters of cause and effect.”).

Plaintiffs have failed to propose a method of proving the proper point where exposure to vinyl chloride presents a significant risk of developing a serious latent disease for each class member. Plaintiffs propose a single concentration without accounting for the age of the class member being exposed, the length of exposure, other individual factors such as medical history, or showing the exposure was so toxic that such individual factors are irrelevant. The court did not abuse its discretion in concluding individual issues on this point make trial as a class unfeasible, defeating cohesion.

5.

Nor did the court abuse its discretion in determining individual issues defeat cohesion with respect to whether the proposed monitoring regime is reasonably medically necessary. We have been skeptical that the necessity for individuals’ medical monitoring regimes can be proven on a class basis. *See Barnes*, 161 F.3d at 146 (“Although the general public’s monitoring program can be proved on a classwide basis, an individual’s monitoring program by definition cannot.”); *see* Principles of the Law of Aggregate Litigation § 2.04 reporter’s notes cmt. b, at 126 (2010) (“[A]fter *Barnes*, courts often have withheld class

certification for medical monitoring due to the presence of individualized issues”). Plaintiffs’ proposed common evidence and trial plan do not resolve any of the issues in proving medical necessity on an aggregate basis.

The District Court did not err in rejecting plaintiffs’ conclusory allegation they could prove the need for serial MRIs on a classwide basis. There were conflicting expert reports. Ginsberg’s report contended class members were at increased risk due to exposure but did not discuss possible monitoring and treatment regimes. Melissa Neiman, a neurosurgeon, suggested that serial MRIs and neurological examinations can be used to detect types of brain cancer associated with exposure to vinyl chloride without explanation of their effectiveness or potential risk. None of plaintiffs’ experts addressed how medical monitoring would proceed. Defendants’ expert Peter Valberg, a toxicologist, maintained the negative health effects of screening may outweigh any potential benefits. Another defense expert, Henry Friedman, a neuro-oncologist, contended a regime of serial MRIs would be contraindicated and potentially risky because the contrast agent used for MRIs poses dangers to those with kidney disease. The court did not err in crediting defense experts’ detailed discussions of why the medical monitoring regime would present individual rather than common issues. *See Hydrogen Peroxide*, 552 F.3d at 323 (“Weighing conflicting expert testimony at the certification stage is not only permissible; it may be integral to the rigorous analysis Rule 23 demands.”).

Plaintiffs’ proposed common evidence and trial plan would not be able to prove the medical necessity of plaintiffs’ proposed monitoring regime without further individual proceedings to consider class members’ individual

characteristics and medical histories and to weigh the benefits and safety of a monitoring program. Plaintiffs cannot show the cohesiveness required for certification of a Rule 23(b)(2) class. The court did not abuse its discretion in refusing to certify a class that would be able to resolve few if any issues that would materially advance resolution of the underlying claims.

B.

1.

Plaintiffs also sought certification under Rule 23(b)(3). The requirements of predominance and superiority¹⁹ for

¹⁹Rule 23(b)(3) requires “that the questions of law or fact common to class members predominate over any questions affecting only individual members, and that a class action is superior to other available methods for fairly and efficiently adjudicating the controversy.” Fed. R. Civ. P. 23(b)(3). It lists factors relevant to the predominance and superiority requirements:

- (A) the class members’ interests in individually controlling the prosecution or defense of separate actions;
- (B) the extent and nature of any litigation concerning the controversy already begun by or against class members;
- (C) the desirability or undesirability of concentrating the litigation of the claims in the particular forum; and
- (D) the likely difficulties in managing a class action.

Id.

maintaining a class action under Rule 23(b)(3) are less stringent than the cohesiveness requirement of Rule 23(b)(2).²⁰ *See Barnes*, 161 F.3d at 143; *In re St. Jude Med. Inc.*, 425 F.3d at 1121. But the two inquiries are similar. “The Rule 23(b)(3) predominance inquiry tests whether proposed classes are sufficiently cohesive to warrant adjudication by representation.” *Amchem*, 521 U.S. at 623.

Courts have generally denied certification of medical monitoring classes when individual questions involving causation and damages predominate over (and are more complex than) common issues such as whether defendants released the offending chemical into the environment. *See In re St. Jude Med., Inc.*, 522 F.3d 836, 840 (8th Cir. 2008) (reversing the decision to certify a Rule 23(b)(3) class for “the highly individualized remedy of medical monitoring”); *see generally* 7AA Charles Alan Wright, Arthur R. Miller, Mary Kay Kane & Richard L. Marcus, *Federal Practice & Procedure* § 1782 (3d ed. 2005) (“[T]o the extent that different injuries are alleged to have occurred to different class members and over different periods of time, it is difficult to show that common issues predominate and that a class action would be superior.”).

As discussed, the inquiries into whether class members were exposed above background levels, whether class members face a significantly increased risk of developing a serious latent disease, and whether a medical monitoring regime is reasonably medically necessary all require considering individual proof of class members’ specific

²⁰The parties do not address the court’s findings that a class action would not be a superior method of adjudication. In any event, we see no error here.

characteristics. The court did not abuse its discretion in finding individual issues predominate over any issues common to the class.

2.

Plaintiffs contend an alternative class could have been certified. They offer three possible modifications—only one of which they presented to the District Court. Plaintiffs suggested in a footnote in their trial reply brief that, if their proposed common proof were insufficient, they could create isopleths measuring exposure in each calendar year. The jury would then use these yearly isopleths to determine if residents' exposure levels in that year satisfied the elements of Pennsylvania's medical monitoring cause of action.

The court did not err in rejecting plaintiffs' alternative class definition. "A party's assurance to the court that it intends or plans to meet the requirements is insufficient." *Hydrogen Peroxide*, 552 F.3d at 318 (citing *Newton*, 259 F.3d at 191). "Rule 23 does not set forth a mere pleading standard. A party seeking class certification must affirmatively demonstrate his compliance with the Rule—that is, he must be prepared to prove that there are *in fact* sufficiently numerous parties, common questions of law or fact, etc." *Wal-Mart Stores, Inc.*, 131 S. Ct. at 2551. "[A] district court errs as a matter of law when it fails to resolve a genuine legal or factual dispute relevant to determining the requirements." *Hydrogen Peroxide*, 552 F.3d at 320. Plaintiffs did not present yearly isopleths to the trial court, did not show such isopleths to be feasible given the limited data available, and did not explain how these yearly determinations would correspond to actual class members.

On appeal, plaintiffs suggest for the first time two further refinements to their class definition. Plaintiffs contend common issues would predominate if the class definition were (1) amended to include only class residents who lived in the village for the entire period represented by the isopleths presented to the trial court, or (2) amended to include only class members who lived in the village for an entire calendar year and yearly isopleths were created. These alternatives are not properly before us, having never been presented to the trial court. Even if we were to consider plaintiffs' arguments, their alternatives do not resolve the defects in the isopleths nor provide enough detail to determine how the claims of such a class would be tried.

C.

1.

Plaintiffs also sought certification of a Rule 23(b)(3) class of property owners who allegedly suffered loss in property values due to defendants' contamination under theories of public nuisance, private nuisance, strict liability, CERCLA, conspiracy, negligence, negligence *per se*, and trespass. The court noted “[p]laintiffs rely on the same expert testimony that they offered to support their medical monitoring claim.” Accordingly, it found common questions did not predominate over individual questions because “[a]lthough many aspects of [p]laintiffs' claims may be common questions, the parties agree that resolution of those questions leaves significant and complex questions unanswered, including questions relating to causation of contamination, extent of contamination, fact of damages, and amount of damages.”

The District Court properly explained its reasons for finding that individuals issues predominated over common issues. Plaintiffs cannot fault the court for failing to examine each element of their purported causes of action when they failed to present arguments or propose common proof for each element. As the arguments for certification of the property class relied on the same purported “common” evidence as the medical monitoring class, the court did not err by denying certification of the property damage class.

The trial court properly considered and rejected the arguments plaintiffs did make. Plaintiffs rely on other instances of property contamination where the courts found common issues predominated. But those cases presented simpler theories of contamination or discrete incidents of contamination. In *Mejdrech v. Met-Coil Systems Corp.*, 319 F.3d 910 (7th Cir. 2003), the plaintiffs alleged the improper handling of chemicals contaminated the soil and groundwater beneath their properties. The court certified an issue class on the defendant’s negligence and the extent of contamination but left damages to be resolved individually. But the Seventh Circuit, in affirming the order certifying the class, noted the question of the “geographical scope of the contamination” was “not especially complex.” *Id.* at 912.

Similarly, in *Sterling v. Velsicol Chemical Corp.*, 855 F.2d 1188 (6th Cir. 1988), the plaintiffs alleged groundwater contamination that could be discovered merely by testing local wells. *Id.* at 1193. The Sixth Circuit affirmed the certification order but noted a class action is only suited for situations when “the cause of the disaster is a single course of conduct which is identical for each of the plaintiffs.” *Id.* at 1197. The court warned:

In complex, mass, toxic tort accidents, where no one set of operative facts establishes liability, no single proximate cause equally applies to each potential class member and each defendant, and individual issues outnumber common issues, the district court should properly question the appropriateness of a class action for resolving the controversy.

Id. Not all claims of property damage based on exposure are alike. Single instances or simple theories of contamination may be more apt for consolidated proceedings than extensive periods of contamination with multiple sources and various pathways. *See In re Methyl Tertiary Butyl Ether (“MTBE”) Prods. Liab. Litig.*, 241 F.R.D. 435, 447 (S.D.N.Y. 2007) (certifying class for damage to property from water contamination but noting “[c]ourts have repeatedly drawn distinctions between proposed classes involving a single incident or single source of harm and proposed classes involving multiple sources of harm occurring over time”); *Reilly v. Gould, Inc.*, 965 F. Supp. 588, 602 (M.D. Pa. 1997) (noting in refusing to certify a property damage class “it is the presence of additional individualized factors affecting individual plaintiffs which wreaks havoc on the notion that all plaintiffs’ injuries have been caused solely by the defendant’s actions”).

Here, plaintiffs contend varied levels of vinylidene chloride at various times seeped into a shallow aquifer, degraded into vinyl chloride, diffused from the aquifer to the ground above, and evaporated into the air to be carried over the village. Given the potential difference in contamination on the properties, common issues do not predominate. *Cf. Fisher v. Ciba Specialty Chems. Corp.*, 238 F.R.D. 273, 305

n.70 (S.D. Ala. 2006) (“[A] property-by-property inquiry will unquestionably be necessary to determine whether that source and that pathway have any bearing on the experience of a particular property owner within the Proposed Class Area.”). The District Court did not abuse its discretion in finding the property damage class members’ individual issues predominated over the issues common to the class.

2.

Alternatively, plaintiffs contend that, even if common issues do not predominate, the court should have certified an “issue only” class on liability. The court found an issue class was not feasible and would not advance the resolution of class members’ claims. The court noted both the fact of damages and the amount of damages “would remain following the class-wide determination of any common issues,” and further that causation and extent of contamination would need to be determined at follow-up proceedings. Due to the numerous individual issues that would remain, the court declined to certify a liability-only class.

“[A] court’s decision to exercise its discretion under Rule 23(c)(4),^[21] like any other certification determination under Rule 23, must be supported by rigorous analysis.” *Hohider v. United Parcel Serv., Inc.*, 574 F.3d 169, 200-01 (3d Cir. 2009). Rule 23(c)(4) “both imposes a duty on the court to insure that only those questions which are appropriate for class adjudication be certified, and gives it ample power to

²¹Fed. R. Civ. P. 23(c)(4) states: “Particular Issues. When appropriate, an action may be brought or maintained as a class action with respect to particular issues.”

“treat common things in common and to distinguish the distinguishable.”” *Chiang v. Veneman*, 385 F.3d 256, 267 (3d Cir. 2004) (quoting *Jenkins v. United Gas Corp.*, 400 F.2d 28, 35 (5th Cir. 1968)). “The interaction between the requirements for class certification under Rule 23(a) and (b) and the authorization of issue classes under Rule 23(c)(4) is a difficult matter that has generated divergent interpretations among the courts.” *Hohider*, 574 F.3d at 200 n.25.

Courts have disagreed over the extent to which the ability to certify issue classes alters the predominance requirement. Some appellate courts have viewed Rule 23(c)(4) as a “housekeeping rule” allowing common issues to be certified only when the cause of action, taken as a whole, meets the predominance requirement. *See Castano v. Am. Tobacco Co.*, 84 F.3d 734, 745 n.21 (5th Cir. 1996). Others have allowed certification of issue classes even if common questions do not predominate for the cause of action as a whole. *See In re Nassau County Strip Search Cases*, 461 F.3d 219, 226 (2d Cir. 2006); *Gunnells v. Healthplan Servs., Inc.*, 348 F.3d 417, 439 (4th Cir. 2003); *Valentino v. Carter-Wallace, Inc.*, 97 F.3d 1227, 1234 (9th Cir. 1996). We noted the split of authority in *Hohider*. 574 F.3d at 200 & n.25.

The District Court here found “resolution of [common] questions leaves significant and complex questions unanswered.” We agree, as the common issues here are not divisible from the individual issues. *See Hohider*, 574 F.3d at 200 n.25. Following *Hohider*, the District Court conducted a rigorous analysis on the effect “partial certification would have on the class action going forward.” *Id.* at 202. In *Hohider*, we provided relevant considerations on when a district court may wish to carve at the joints to form issue classes and cited the ALI’s Proposed Final Draft of the

Principles of the Law of Aggregate Litigation. The ALI's final draft preserved and expanded its discussion of these important considerations. *See Principles of the Law of Aggregate Litigation §§ 2.02-05, 2.07-2.08 (2010).*

Rather than joining either camp in the circuit disagreement, we believe the considerations set forth in *Hohider* and more recently in the Final Draft of the ALI's Principles of Aggregate Litigation provide the most sound guidance in resolving this complicated area of class action procedure.

In light of the adoption of the Final Draft of the Principles of Aggregate Litigation, when deciding whether or not to certify an issue class, the trial court should consider: the type of claim(s) and issue(s) in question; the overall complexity of the case; the efficiencies to be gained by granting partial certification in light of realistic procedural alternatives; the substantive law underlying the claim(s), including any choice-of-law questions it may present and whether the substantive law separates the issue(s) from other issues concerning liability or remedy; the impact partial certification will have on the constitutional and statutory rights of both the class members and the defendant(s); the potential preclusive effect or lack thereof that resolution of the proposed issue class will have; the repercussions certification of an issue(s) class will have on the effectiveness and fairness of resolution of remaining issues; the impact individual proceedings may have upon one another, including whether remedies are indivisible such that granting or not granting relief to any claimant as a practical matter determines the claims of others; and the kind of evidence presented on the issue(s) certified and potentially presented on the remaining issues, including the risk subsequent triers

of fact will need to reexamine evidence and findings from resolution of the common issue(s). *See* Principles of the Law of Aggregate Litigation §§ 2.02-05 (2010); *Hohider*, 574 F.3d at 201. This non-exclusive list of factors should guide courts as they apply Fed. R. Civ. P. 23(c)(4) “to ‘treat common things in common and to distinguish the distinguishable.’” *Chiang*, 385 F.3d at 256 (quoting *Jenkins*, 400 F.2d at 35).

When certifying an issue class the court should clearly enumerate the issue(s) to be tried as a class as required by Fed. R. Civ. P. 23(c)(1)(B). *See Wachtel v. Guardian Life Ins. Co. of Am.*, 453 F.3d 179, 184-85 (3d Cir. 2006). It should also explain how class resolution of the issue(s) will fairly and efficiently advance the resolution of class members’ claims, including resolution of remaining issues. *See* Principles of the Law of Aggregate Litigation §§ 2.02(e) (2010).

The trial court here did not abuse its discretion by declining to certify a liability-only issue class when it found liability inseverable from other issues that would be left for follow-up proceedings. Nor did the court err in finding no marked division between damages and liability.

Plaintiffs have neither defined the scope of the liability-only trial nor proposed what common proof would be presented.²² The claims and issues here are complex and

²²Plaintiffs appear to rely on the same purported common proof used for the medical monitoring class. But the common evidence presented for the medical monitoring class shows present levels of contamination to be very low, undercutting the claims of the class seeking damages for present contamination of their property.

common issues do not easily separate from individual issues. A trial on whether the defendants discharged vinylidine chloride into the lagoon that seeped in the shallow aquifer and whether the vinyl chloride evaporated from the air from the shallow aquifer is unlikely to substantially aid resolution of the substantial issues on liability and causation.

Certification of a liability-only issue class may unfairly impact defendants and absent class members. Plaintiffs' bald assertion that class members claims share "the same nucleus of operative facts" is a mere "assurance to the court that it intends or plans to meet the requirements." *Hydrogen Peroxide*, 552 F.3d at 318 (citing *Newton*, 259 F.3d at 191). Plaintiffs appear to rely on the same "common" evidence used for the medical monitoring class, but fail to explain how their estimates of exposure to residents over substantial periods of time corresponds to the level of contamination currently present at each home. It may prejudice absent class members whose properties may be shown to have suffered greater contamination.²³

Given the inability to separate common issues from issues where individual characteristics may be determinative,

²³*Cf. Boughton*, 65 F.3d at 827 n.1 ("[W]here, as here, there are multiple types of claims, more than one form of relief sought and the parties disagree about the number of models necessary to deal with the various ways in which properties may have become contaminated it may not be so simple as to err on the side of certification just to keep the option open because there may be mutually exclusive ways of defining subclasses and any attempt to certify subclasses before it is clear what the common issues are carries with it the potential for making the case less manageable.")

the District Court did not abuse its discretion in refusing to certify a liability-only property damage class.

III.

For the foregoing reasons the District Court did not abuse its discretion in denying the plaintiffs' motion for class certification under Fed. R. Civ. P. 23(b)(2) and (b)(3). We will affirm its judgment.