

UNITED STATES of America,
Plaintiff–Appellee,

v.

P.H. GLATFELTER COMPANY and
NCR Corporation, Defendants–
Appellants.

Nos. 13–2436, 13–2441.

United States Court of Appeals,
Seventh Circuit.

Argued Feb. 28, 2014.

Decided Sept. 25, 2014.

Rehearing Denied Nov. 19, 2014.

Background: Potentially responsible parties (PRP) brought action challenging Environmental Protection Agency (EPA) and Wisconsin Department of Natural Resources' (WDNR) decision to dredge and cap contaminated sediment in a river bed. The EPA and WDNR moved for partial summary judgment. The United States District Court for the Eastern District of Wisconsin, William C. Griesbach, Chief Judge, 911 F.Supp.2d 767, granted motion. After bench trial, the District Court, Griesbach, Chief Judge, ruled in favor of the government and entered a declaratory judgment and permanent injunction requiring the PRPs to comply with EPA's order. PRPs appealed.

Holdings: The Court of Appeals, Tindler, Circuit Judge, held that:

- (1) district court properly considered documents pertaining to cooperative agreement between EPA and WDNR;
- (2) EPA's decision to dredge and cap, rather than merely cap was not arbitrary and capricious;
- (3) purported 62% cost increase did not require record of decision amendment;
- (4) remand was required to allow district court to reconsider whether harm was apportionable;

(5) PRP failed to prove it was not responsible for costs incurred at operable unit of site; and

(6) permanent injunctive relief is an inappropriate mechanism to enforce an administrative order under CERCLA.

Affirmed in part, vacated in part, and remanded.

1. Environmental Law ⇌667

Failure to include cooperative agreement between Environmental Protection Agency (EPA) and Wisconsin Department of Natural Resources (WDNR) in administrative record did not undermine EPA's selected remedy for environmental remediation work on a river; nothing in Comprehensive Environmental Resources, Compensation, and Liability Act (CERCLA) or the national contingency plan required that cooperative agreements be included in the administrative record. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 104(d)(1)(A), 42 U.S.C.A. § 9604(d)(1)(A); 40 C.F.R. § 300.810(a).

2. Administrative Law and Procedure ⇌676

A reviewing court may consider materials outside the administrative record when it is necessary to create a record without which the challenge to the agency's action cannot be evaluated.

3. Environmental Law ⇌686

In action under CERCLA challenging Environmental Protection Agency's (EPA) selected remedy for environmental remediation work on a river, district court properly considered documents that government contended made up a cooperative agreement between EPA and Wisconsin Department of Natural Resources (WDNR), which granted WDNR authority to conduct a remedial investigation and

feasibility study for river, where it would have been impossible to evaluate the challenge without considering such documents. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 106, 42 U.S.C.A. § 9606.

4. Environmental Law ⇐686

To determine whether Environmental Protection Agency's (EPA) decision was arbitrary or capricious under CERCLA, the reviewing court must go beyond EPA's procedures to include the substantive reasonableness of its decision; this is because reasonable procedures alone cannot absolve a court from making a thorough, probing, in-depth review to determine if the agency has considered the relevant factors or committed a clear error of judgment.

5. Environmental Law ⇐686

Reasonableness of Environmental Protection Agency's (EPA) procedures is relevant to the court's inquiry as to whether EPA acted arbitrarily and capriciously under CERCLA. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 106, 42 U.S.C.A. § 9606.

6. Administrative Law and Procedure ⇐763

Under the arbitrary-and-capricious standard of review, an agency's decision must be upheld unless it has relied on factors which Congress had not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

7. Environmental Law ⇐439

Environmental Protection Agency's (EPA) decision to dredge and remove con-

taminated sediment from river bed, rather than merely cap the sediment was not arbitrary and capricious under CERCLA, or national contingency plan (NCP) regulation, even though capping of riverbed sediment was less expensive, where dredging represented a more permanent solution, capping and sand covering required long-term monitoring to ensure their effectiveness, and capping and sand covering were susceptible to failure during catastrophic events like floods. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 113(j), 42 U.S.C.A. § 9613(j); 40 C.F.R. § 300.430(a).

8. Administrative Law and Procedure ⇐413

An agency's interpretation of its own regulation is controlling unless it is plainly erroneous or inconsistent with the regulation, or there is reason to suspect that the interpretation does not reflect the agency's fair and considered judgment on the matter in question; this might occur when the agency's interpretation conflicts with a prior interpretation, or when it appears that the interpretation is nothing more than a convenient litigating position or a post hoc rationalization advanced by an agency seeking to defend past agency action against attack.

9. Environmental Law ⇐439

Significant changes to a remedy are generally incremental changes to a component of a remedy that do not fundamentally alter the Environmental Protection Agency's (EPA) overall remedial approach, as would require an amendment to the record of decision (ROD) in a CERCLA action. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 106, 42 U.S.C.A. § 9606.

10. Environmental Law ⇐439

Record of decision (ROD) amendment was not necessary in Environmental Pro-

tection Agency's (EPA) decision under CERCLA to dredge and cap river bed, following a revised cost increase of 62% over the original estimate, where the 62% figure did not take into account a 50% budget overrun allowance included the original estimate, making the actual increase only 8% when compared to the figure with the 50% allowance, the agency issued an explanation of significant difference (ESD) for the 62% increase, and the increase was due only to the dredging of more material, rather than a fundamental change to the type or nature of remediation. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 113(j), 42 U.S.C.A. § 9613(j); 40 C.F.R. § 300.435.

11. Federal Courts ⇌3567, 3603(2)

Where issues before Court of Appeals were adjudicated pursuant to a full bench trial, Court of Appeals reviews the district court's conclusions of law de novo and its findings of fact for clear error.

12. Environmental Law ⇌445(3)

Courts in CERCLA cases should not apportion responsibility for a single harm among multiple sufficient causes. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 106, 42 U.S.C.A. § 9606.

13. Environmental Law ⇌698

Remand was required to allow district court to reconsider whether harm in CERCLA case, the pollution of a river, was capable of apportionment, so as to support potentially responsible party's (PRP) claim that it was not responsible for further remediation efforts, where harm would be theoretically capable of apportionment if PRP could show the extent to which it contributed to polychlorinated biphenyl (PCB) concentrations in operable unit of river. Comprehensive Environmental Response, Compensation, and Li-

bility Act of 1980, § 106, 42 U.S.C.A. § 9606.

14. Environmental Law ⇌445(3)

Potentially responsible party (PRP) whose predecessor released polychlorinated biphenyl (PCB) into river failed to prove that remediation costs of site that included river and bay were divisible, and that it was not responsible for costs as to an operable unit of the site, absent proof that the PCB discharges for which it was responsible were not a sufficient, or at least a necessary, cause of at least some of the contamination in the operable unit. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 107(a), 42 U.S.C.A. § 9607(a); 40 C.F.R. §§ 300.415, 300.435.

15. Environmental Law ⇌700

Permanent injunctive relief is an inappropriate mechanism to enforce an administrative order under CERCLA. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 106, 42 U.S.C.A. § 9606.

16. Environmental Law ⇌700

Under CERCLA, Environmental Protection Agency (EPA) may seek an injunction requiring potentially responsible parties (PRP) to take remedial action in an emergency situation, where the agency has not yet had time to compile a thorough record and to issue an administrative order. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, § 106, 42 U.S.C.A. § 9606.

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R. Hirsch, Attorney, Office of the Attorney General, Madison, WI, for appellee.

David G. Mandelbaum, Attorney, Greenberg Traurig LLP, Philadelphia, PA, for appellant.

Before WOOD, Chief Judge, and KANNE and TINDER, Circuit Judges.

TINDER, Circuit Judge.

Today we issue two decisions related to the cleanup of the Lower Fox River and Green Bay Superfund Site in northeastern Wisconsin. This decision addresses a claim brought by the United States to enforce a 2007 unilateral administrative order issued by the Environmental Protection Agency (EPA) under § 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. § 9606.¹ EPA's 2007 order directs several potentially responsible parties (PRPs) to clean up the portion of the Site downstream of Little Lake Butte des Morts. Some of the issues relevant to the government's claim to enforce EPA's order were resolved on summary judgment, then the district court held a bench trial. After trial, the court ruled in favor of the government and entered a declaratory judgment and permanent injunction requiring the PRPs to comply with EPA's order.

Four PRPs appealed—NCR Corporation, P.H. Glatfelter Company, Menasha Corporation, and WTM I Company—and their appeals were consolidated. However, shortly after oral argument, the government lodged in the district court a proposed consent decree that would resolve its claims against Menasha and WTM. Thus, we have deconsolidated the appeals of those two PRPs, and we will resolve

only the appeals of NCR and Glatfelter in this opinion. For the reasons that follow, we affirm in part and reverse in part.

I. BACKGROUND

The Superfund Site at issue encompasses both the Lower Fox River and Green Bay. The history of the Site is more fully described in our contemporaneously issued opinion in *NCR Corp. v. George A. Whiting Paper Co.*, No. 13–2447, 768 F.3d 682, 2014 WL 4755491 (7th Cir. Sept. 25, 2014). For now, suffice it to say that several paper mills discharged wastewater containing polychlorinated biphenyls (PCBs) into the River from the mid-1950s through the 1970s, and since 1998, the Site has been the subject of massive remedial efforts conducted pursuant to CERCLA.

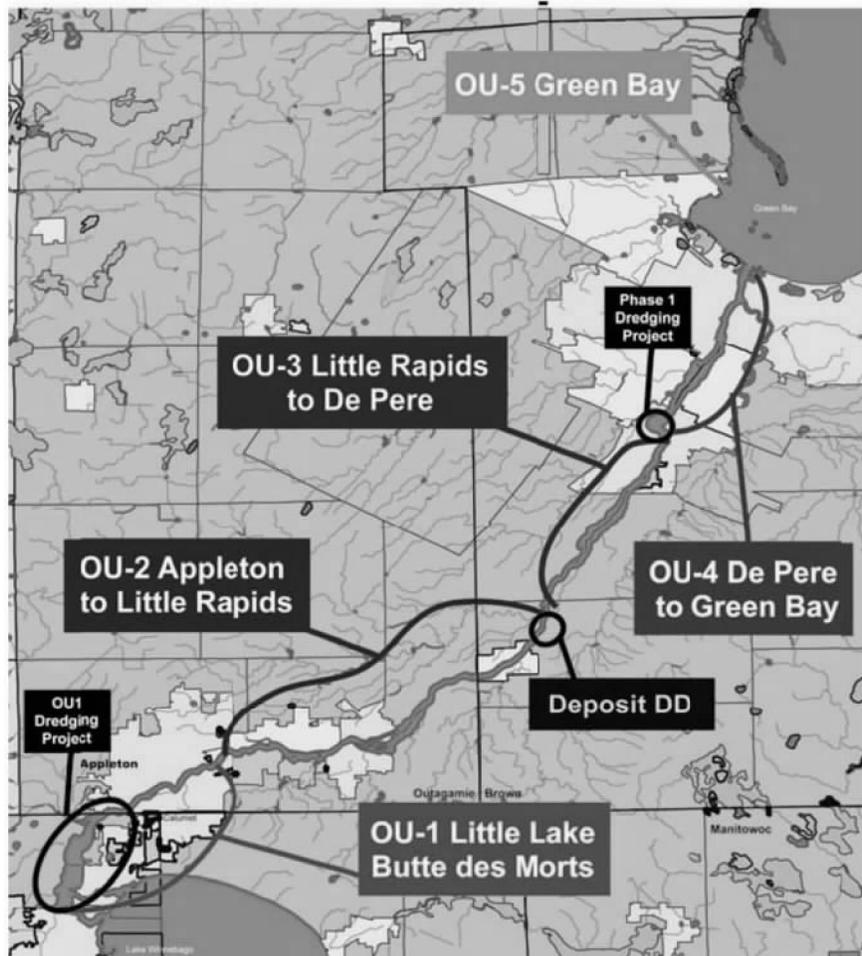
The Lower Fox River begins at the outlet of Lake Winnebago and flows northeast for approximately 39 miles before it enters Green Bay. In 1998, EPA began working with the Wisconsin Department of Natural Resources (WDNR) to develop a remedial plan for the Site. As part of that plan, the Site was divided into five geographic sections, or “operable units,” which are used “when phased analysis and response is necessary or appropriate given the size or complexity of the site.” 40 C.F.R. § 300.430(a)(1)(ii)(A). Operable Unit 1 or “OU1” runs from the outlet of Lake Winnebago to the Appleton Dam, a stretch of the River also known as Little Lake Butte des Morts; OU2 runs from the Appleton Dam to the Little Rapids Dam; OU3 runs from the Little Rapids Dam to the De Pere Dam; OU4 runs from the De Pere Dam to the mouth of the River at Green Bay; and OU5 is Green Bay itself. Only OU2–OU5 are at issue here, as the cleanup

1. In the same action, the United States and the State of Wisconsin have brought claims to recover response costs and natural resource

damages under § 107 of the CERCLA, 42 U.S.C. § 9607. Those claims are pending in the district court and are not at issue here.

of OU1 was litigated separately and carried out pursuant to a consent decree. The Site and its operable units are shown

in the figure below, which is taken from the agencies' 2007 record of decision amendment.



NCR and Glatfelter are PRPs under CERCLA § 107(a), 42 U.S.C. § 9607(a), because they or their corporate predecessors formerly owned and operated paper mills that discharged wastewater containing PCBs into the River. NCR is responsible for two mills that produced carbonless copy paper using an emulsion containing PCBs and then discharged PCB-contaminated wastewater into OU2. Glatfelter is responsible for a mill that recycled scraps of carbonless copy paper unusable by the original manufacturer

and then discharged PCB-contaminated wastewater into OU1.

In 2002, EPA and WDNR issued a record of decision (ROD) that selected a remedy for OU1–OU2. That remedy called for the dredging of approximately 784,000 cubic yards of sediment in OU1 but was limited to monitored natural recovery in OU2, with the exception of some dredging in Deposit DD at the downstream end of OU2 that would be undertaken as part of the OU3 remedy. In 2003, EPA and WDNR issued a second ROD, which se-

lected a remedy for OU3–OU5. That remedy called for the dredging of approximately 9,000 cubic yards of sediment in Deposit DD at the downstream end of OU2, approximately 586,800 cubic yards of sediment in OU3, and approximately 5,880,000 cubic yards of sediment in OU4. For OU5, the remedy was limited to monitored natural recovery, with the exception of some dredging near the mouth of the River.

In the years that followed, Glatfelter and other OU1 PRPs agreed to perform the necessary remedial design and action in OU1. Meanwhile, NCR and one other PRP agreed to perform the remedial design work for OU2–OU5. In 2007, based on information obtained during the full-scale remediation activities in OU1 and the remedial design work for OU2–OU5, the agencies decided to amend the ROD for OU2–OU5. The agencies determined that the all-dredging remedy they previously selected would not sufficiently reduce PCB concentrations in OU2–OU5 and that an approach that utilized capping or sand covering in some areas would cure that deficiency. The agencies also determined that capping and sand covering would be less expensive than dredging and that a remedy incorporating those methods would therefore be more cost effective. Ultimately, the agencies adopted a hybrid remedy, which maintained dredging as the default approach but allowed for capping and sand covering where certain design criteria were met.

In November 2007, EPA issued a unilateral administrative order pursuant to CERCLA § 106(a), 42 U.S.C. § 9606(a), directing the PRPs to conduct the cleanup required by the ROD amendment for

OU2–OU5. Thereafter, NCR led the remedial efforts in OU2 and OU3 and conducted a significant amount of remedial action in OU4. Even so, NCR maintained that it should not be responsible for all of the cleanup costs. Thus, in 2008, it filed an action seeking contribution from the other PRPs. In response, the other PRPs filed counterclaims seeking contribution from NCR. Near the end of 2009, the district court ruled against NCR on its claim for contribution, and in 2011, it ruled in favor of the other PRPs on their counterclaims, holding that NCR was required to reimburse them for their response costs.

Meanwhile, in 2010, the agencies determined that they had significantly underestimated the costs associated with the cleanup of OU2–OU5. Thus, they published an explanation of significant differences, which adjusted their estimated total project costs for OU2–OU5 by about 62 percent, from about \$432 million to about \$701 million.²

Shortly after the district court held that NCR was required to reimburse the other PRPs for their response costs, NCR decided that it would no longer comply with EPA's 2007 order. NCR cut its remediation work in half during 2011, and it refused to commit to perform any work in 2012. This action ensued, in which the United States sought preliminary and permanent injunctive relief, along with a declaratory judgment, requiring NCR and the other PRPs to comply with EPA's order.

In 2012, the district court entered a preliminary injunction against NCR, requiring it to complete the remediation work scheduled for that year, and we af-

2. The 2007 ROD amendment estimated total project costs at about \$390 million, in 2005 U.S. Dollars. In the 2010 explanation of significant differences, the agencies adjusted that

number to 2009 U.S. Dollars, resulting in an estimate of about \$432 million, so as to provide a proper basis for comparison with their revised cost estimates.

firmed. *United States v. NCR Corp.*, 688 F.3d 833 (7th Cir.2012). Thereafter, the district court resolved two issues on summary judgment. First, it upheld the remedy selected by EPA and WDNR. Second, it held that Glatfelter and the other OU1 PRPs were liable for downstream cleanup costs. Then, in December 2012, the district court held an eleven-day bench trial, and a few months later, it ruled in favor of the government and entered a declaratory judgment and permanent injunction requiring the nonsettling PRPs to comply with EPA's 2007 order.

On appeal, NCR and Glatfelter ask us to vacate the declaratory judgment and permanent injunction. They attack the district court's summary judgment rulings, as well as its findings of fact and conclusions of law following the bench trial. For the reasons that follow, we hold that the district court erred in its consideration of NCR's divisibility defense and in its decision to enter a permanent injunction but correctly resolved the other issues before it. Therefore, we affirm in part and reverse in part.

II. SUMMARY JUDGMENT RULINGS

The district court's summary judgment rulings came after the parties filed cross-motions for summary judgment on the propriety of the remedy, and the United States moved for summary judgment on the OU1 Defendants' liability. "As with any summary judgment motion, we review cross-motions for summary judgment 'construing all facts, and drawing all reasonable inferences from those facts, in favor of the non-moving party.'" *Laskin v. Siegel*, 728 F.3d 731, 734 (7th Cir.2013) (quoting *Wis. Cent., Ltd. v. Shannon*, 539 F.3d 751, 756 (7th Cir.2008)). Summary judgment is appropriate if "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).

A. PROPRIETY OF THE REMEDY

When the government brings an action under 42 U.S.C. § 9606 to enforce an administrative cleanup order, CERCLA allows for judicial review of EPA's decision in selecting the response action. 42 U.S.C. § 9613(h)(2). However, the court must "uphold [EPA's] decision in selecting the response action unless the objecting party can demonstrate, on the administrative record, that the decision was arbitrary and capricious or otherwise not in accordance with law." *Id.* § 9613(j)(2). EPA's remedy selection for the Site is reflected in the 2007 ROD amendment and the 2010 explanation of significant differences. For different reasons, both Glatfelter and NCR challenged that remedy on summary judgment, and they reassert their arguments on appeal.

1. EPA and WDNR's Cooperative Agreement

First, Glatfelter argues that EPA's decision in selecting the response action was not in accordance with law because EPA delegated the task of conducting a remedial investigation and feasibility study to WDNR without a valid cooperative agreement. CERCLA allows for the delegation of responsibility for remedial action as follows:

A State or political subdivision thereof or Indian tribe may apply to [EPA] to carry out actions authorized in this section. If [EPA] determines that the State or political subdivision or Indian tribe has the capability to carry out any or all of such actions in accordance with the criteria and priorities established pursuant to section 9605(a)(8) of this title and to carry out related enforcement actions, [EPA] may enter into a

contract or cooperative agreement with the State or political subdivision or Indian tribe to carry out such actions. [EPA] shall make a determination regarding such an application within 90 days after [EPA] receives the application.³

42 U.S.C. § 9604(d)(1)(A). Glatfelter argues that a state has no authority to “carry out the actions authorized” by CERCLA without a cooperative agreement and therefore the lack of a cooperative agreement between EPA and WDNR would undermine the selected remedy for the Site.

[1] Glatfelter’s argument is academic, however, because EPA and WDNR did in fact enter into a cooperative agreement regarding the remedial investigation and feasibility study for the Site, and the government filed authenticated copies of that agreement in the district court. Glatfelter complains that the cooperative agreement was not included in the administrative record, but nothing in CERCLA or the national contingency plan requires that cooperative agreements be included in the administrative record. The administrative record need only include “the documents that form the basis for the selection of a response action.” 40 C.F.R. § 300.800(a). Typically, that includes the following:

- (1) Documents containing factual information, data and analysis of the factual information, and data that may form a basis for the selection of a response action . . .
- (2) Guidance documents, technical literature, and site-specific policy memoranda that may form a basis for the selection of the response action . . .
- (3) Documents received, published, or made available to the public under

§ 300.815 for remedial actions, or § 300.820 for removal actions . . .

- (4) Decision documents . . .
- (5) Enforcement orders . . . ; and
- (6) An index of the documents included in the administrative record file . . .

Id. § 300.810(a). Notably, this list contains no mention of cooperative agreements. Instead, it emphasizes documentation of the substantive factors that play a role in the selection of a remedy. As a result, we find no support for Glatfelter’s argument that the failure to include the cooperative agreement in the administrative record undermines the selected remedy.

[2] It is true that as a general matter “judicial review of any issues concerning the adequacy of any response action taken or ordered by [EPA] shall be limited to the administrative record.” 42 U.S.C. § 9613(j)(1). But “[o]therwise applicable principles of administrative law shall govern whether any supplemental materials may be considered by the court.” *Id.* Those principles allow a reviewing court to consider materials outside the administrative record “when it is necessary to create a record without which the challenge to the agency’s action cannot be evaluated.” *USA Grp. Loan Servs., Inc. v. Riley*, 82 F.3d 708, 715 (7th Cir.1996).

[3] Here, it would be impossible to evaluate Glatfelter’s challenge to the selected remedy without considering the documents that the government contends make up the cooperative agreement between EPA and WDNR. Thus, the district court properly considered those documents. Moreover, those documents show that EPA and WDNR entered into a valid

3. The President has delegated to EPA the authority to undertake response action under CLERCLA; thus, where the statute refers to

the President, we substitute EPA. *See* Exec. Order No. 12,580, 52 Fed.Reg. 2923 (Jan. 23, 1987).

cooperative agreement, which granted WDNR authority to conduct a remedial investigation and feasibility study for the Site. As a result, EPA's reliance on WDNR to complete those tasks was in accordance with the national contingency plan and does not provide a basis for reversal.

2. Substantive Review of the Remedy

[4, 5] Next, Glatfelter argues that the district court failed to undertake any substantive review of the selected remedy, instead focusing on the process by which the selection was made. We agree that to determine whether an agency's decision was arbitrary or capricious, the reviewing court "must go beyond the agency's procedures to include the substantive reasonableness of its decision." *James Madison Ltd. v. Ludwig*, 82 F.3d 1085, 1098 (D.C.Cir.1996). This is because "reasonable procedures alone cannot absolve a court from making a 'thorough, probing, in-depth review' to determine if the agency has considered the relevant factors or committed a clear error of judgment." *Id.* (quoting *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 416, 91 S.Ct. 814, 28 L.Ed.2d 136 (1971)). But "the reasonableness of the agency's procedures is relevant to the court's inquiry," *James Madison Ltd.*, 82 F.3d at 1098, and although the district court stated that "arbitrary and capricious are terms that describe the *manner* of remedy selection more than they do the result," it did in fact engage in substantive review of the selected remedy. Moreover, "[e]ven if the district court here based its decision on the strength of the process alone—which we do not believe is the case—our *de novo* review of the record satisfies us that the agency's conclusions were not arbitrary." *Id.*

[6] Under the arbitrary-and-capricious standard of review, an agency's decision must be upheld unless it

has relied on factors which Congress had not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

Nat'l Ass'n of Home Builders v. Defenders of Wildlife, 551 U.S. 644, 658, 127 S.Ct. 2518, 168 L.Ed.2d 467 (2007) (quoting *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43, 103 S.Ct. 2856, 77 L.Ed.2d 443 (1983)) (internal quotation marks omitted).

[7] The district court concluded that the agencies' decision to maintain a preference for dredging in the amended remedy was rationally related to the facts before them. In particular, the court noted that dredging represents a more permanent solution because it actually removes PCBs from the Site, while capping and sand covering merely contain PCB-contaminated sediment. Moreover, capping and sand covering require long-term monitoring to ensure their effectiveness, and they are susceptible to failure during catastrophic events like floods. Ultimately, the district court concluded that the agencies acted rationally by adopting "a mild preference for the benefits of dredging and viewed these as being worth their added expense." We agree.

Most of the attacks Glatfelter levies against the agencies' remedy selection have to do with the 2003 all-dredging remedy, which of course has been abandoned. Glatfelter argues that the problems with that remedy also infect the amended remedy, because in 2007 the agencies failed to reconsider all of the alternatives they had

considered in 2003, even though by 2007 they had obtained more accurate information on the cost and effectiveness of the various remedial approaches. More specifically, Glatfelter contends that the agencies should have reconsidered an all-capping remedy, which would have been shown to be more cost-effective.

However, as the government points out, an all-capping remedy was never on the table. In the 2003 ROD, the agencies explained that capping is limited by “Site-specific conditions such as water depth, average river current, river current under flood conditions, wave energy, ice scour, and boat traffic.” Thus, the agencies never considered an *all*-capping alternative, as Glatfelter suggests. Instead, they considered an alternative that would involve “capping to the maximum extent practicable with dredging in areas where capping is not appropriate.” Under the criteria developed for the 2003 ROD, this would have resulted in capping only about 2.25 million cubic yards of contaminated sediment and dredging the rest of the contaminated sediment. In contrast, the 2007 ROD amendment called for capping (or sand covering) about 3.5 million cubic yards of contaminated sediment.

In other words, the alternative that Glatfelter contends the agencies should have reconsidered in 2007 actually called for *less* capping and *more* dredging than the remedy the agencies adopted. There is no indication that Glatfelter wanted the agencies to reconsider a more expensive remedy, so its argument makes little sense. Moreover, it was not arbitrary or capricious for the agencies to refuse to consider a pure capping remedy, because such a remedy was infeasible. As a result, Glatfelter has failed to show that the selected remedy should be overturned.

3. The 2010 Explanation of Significant Differences

NCR argues that the selected remedy is not in accordance with law because the agencies failed to amend the ROD when their cost estimates increased dramatically in 2010. The district court rejected this argument, holding that the agencies complied with the national contingency plan in publishing an explanation of significant differences rather than amending the ROD in 2010.

Sometimes new information arises during the remedial design or action phases of a CERCLA cleanup, and the remedy selected in the ROD must be altered. Under such circumstances, the national contingency plan gives the lead agency two options. 40 C.F.R. § 300.435(c)(2). If “the differences in the remedial or enforcement action . . . significantly change but do not fundamentally alter the remedy selected in the ROD with respect to scope, performance, or cost,” then the lead agency may simply publish “an explanation of significant differences.” *Id.* § 300.435(c)(2)(i). However, “if the differences in the remedial or enforcement action . . . fundamentally alter the basic features of the selected remedy with respect to scope, performance, or cost,” then the lead agency must propose an amendment to the ROD. *Id.* § 300.435(c)(2)(ii). Amending the ROD is a more cumbersome process that involves receiving and responding to public comments on the proposed changes. *Id.*

The explanation of significant differences that EPA and WDNR published in 2010 left intact the remedial approach outlined in the 2007 ROD amendment but revised the cost estimates associated with that approach. Specifically, the total cost of the remedial action in OU2–OU5, which was originally estimated at about \$432 million, was now expected to be about \$701

million, an increase of roughly 62 percent. NCR argues that such a drastic increase in cost “fundamentally alter[s] the basic features of the selected remedy with respect to . . . cost” and that as a result, EPA and WDNR were required to propose an amendment to the ROD.

In the 2010 explanation of significant differences, EPA and WDNR explained their decision to forgo another ROD amendment as follows:

As set forth in the EPA guidance document entitled, “*A Guide to Developing and Documenting Cost Estimates During the Feasibility Study*,” EPA 540-R-00-002 OSWER 9355.0-75 (July 2000), the expected accuracy range of a cost estimate for a detailed analysis of remedial action alternatives is -30% to +50%. As the current estimated cost of the OU 2-5 remedial action is 62% greater than the original estimate, it is nearly within EPA’s expected accuracy range for the cost of a remedial action and represents a “significant” but not “fundamental” change from the 2007 ROD Amendment.

As NCR points out, however, the guidance document cited by the agencies contemplates that a “detailed analysis of alternatives” will be completed without the benefit of remedial design work. This was the case with the 2003 ROD, which explicitly cited the -30% to +50% accuracy range for its cost estimates. But the 2007 ROD amendment was issued after substantial remedial design work had been completed. Thus, we might expect its cost estimates to be more accurate.

In fact, EPA also thought the 2007 ROD amendment’s cost estimates would be more accurate. Its response to comments questioning the accuracy of those estimates included the following statement:

The cost estimates for the ROD Amendment should be more reliable than the

cost estimates in the 2003 ROD because new estimates are based on substantially more engineering analysis and a much larger number of sediment samples (i.e., 10,000 sediment samples versus 1,700 sediment samples prior to the 2003 ROD).

Thus, EPA represented to the public that the 2007 ROD amendment would be more accurate than the 2003 ROD, which identified a cost uncertainty range of -30% to +50%. We do not know how accurate the 2007 cost estimates were expected to be, because neither the 2007 ROD amendment nor the basis of design report on which it relied identified a range of uncertainty for total project costs. However, we would expect the range to be smaller than -30% to +50% but larger than -10% to +15%, which, according to the EPA guidance document cited by the agencies, is the range expected to be achieved after the remedial design process is complete.

As a result, we reject the government’s argument that a cost increase of 62 percent is only marginally outside the range of uncertainty associated with the cost estimates in the 2007 ROD amendment. But even so, another ROD amendment was not necessarily required. We must still determine whether “the differences in the remedial or enforcement action . . . fundamentally alter[ed] the basic features of the selected remedy with respect to scope, performance, or cost.” 40 C.F.R. § 300.435(c)(2)(ii). This standard is ambiguous as it relates to the change at issue, i.e., an increase in cost unaccompanied by any change in the remedial approach. As a result, EPA’s interpretation of the regulation, which it promulgated, is relevant.

[8] Indeed, an agency’s interpretation of its own regulation is controlling unless it is “plainly erroneous or inconsistent with the regulation,” or there is “reason to sus-

pect that the interpretation does not reflect the agency's fair and considered judgment on the matter in question." *Auer v. Robbins*, 519 U.S. 452, 461–62, 117 S.Ct. 905, 137 L.Ed.2d 79 (1997) (citation and internal quotation marks omitted). "This might occur when the agency's interpretation conflicts with a prior interpretation, or when it appears that the interpretation is nothing more than a convenient litigating position or a post hoc rationalizatio[n] advanced by an agency seeking to defend past agency action against attack." *Christopher v. SmithKline Beecham Corp.*, — U.S. —, 132 S.Ct. 2156, 2166–67, 183 L.Ed.2d 153 (2012) (citations and internal quotation marks omitted).

[9] The preamble to the national contingency plan makes EPA's position clear: "EPA believes that the appropriate threshold for amending a ROD is when a fundamentally different approach to managing hazardous wastes at a site is proposed." 55 Fed.Reg. 8666, 8771 (March 8, 1990). In contrast, "[s]ignificant changes to a remedy are generally incremental changes to a component of a remedy that do not fundamentally alter the overall remedial approach." *Id.* at 8772. Moreover, EPA's position is that a change in cost alone does not fundamentally alter the remedial approach and thus does not require a ROD amendment. *See id.* ("Where [a] new requirement would affect a basic feature of the remedy, such as timing or cost, but not fundamentally alter the remedy specified in the ROD (i.e., change the selected technology), the lead agency would need to issue an explanation of significant differences announcing the change.").

[10] In other words, EPA takes the view that to "fundamentally alter the basic features of the selected remedy with respect to . . . cost" is to choose a *different* remedial approach that costs more, not to stick with the *same* remedial approach but

decide that it will cost more than previously thought. Because of the national contingency plan's emphasis on "fundamentally alter[ing] the basic features of the selected remedy," we cannot say that this interpretation is "plainly erroneous or inconsistent with the regulation." *Auer*, 519 U.S. at 461, 117 S.Ct. 905 (internal quotation marks omitted).

Moreover, EPA adopted this interpretation in an attempt "to develop an administrative process which balances the public's continuing need for information about, and input into, post-ROD remedial action decisions, with the lead agency's need to move forward expeditiously with design and implementation of the remedy after fundamental decisions have been made in the ROD." 55 Fed.Reg. at 8773. And EPA's approach seems to us an eminently reasonable way to balance these competing interests. Thus, we have no "reason to suspect that the interpretation does not reflect the agency's fair and considered judgment on the matter in question." *Auer*, 519 U.S. at 462, 117 S.Ct. 905. Consequently, EPA's interpretation of its regulation is binding, and the agencies were not required to amend the ROD in 2010.

Having disposed of each of Appellants' arguments on the propriety of the remedy, we will affirm the district court's entry of summary judgment in favor of the government on that issue.

B. GLATFELTER'S LIABILITY

Next, Glatfelter challenges the district court's entry of summary judgment on the issue of its liability for response costs in OU4, where remediation work is ongoing. Section 107(a) of CERCLA imposes strict liability for response costs upon four classes of responsible parties. 42 U.S.C. § 9607(a). With respect to Glatfelter, the relevant class is any former owner or operator of a facility at which hazardous sub-

stances were disposed of and “from which there is a release, or a threatened release which causes the incurrence of response costs, of a hazardous substance.” *Id.* This is because Glatfelter is the corporate successor to Bergstrom Paper Company, which formerly operated a paper recycling mill in Neenah, Wisconsin, and discharged PCB-contaminated wastewater into Little Lake Butte des Morts.

The question we must decide is whether the government established Glatfelter’s liability for response costs in OU4, even though the Bergstrom Mill was located at the upstream end of OU1. In this regard, Glatfelter argues that the government should have been required to prove that PCB discharges from the Bergstrom Mill made their way into OU4 in sufficient quantities to “cause[] the incurrence of response costs” there. The district court disagreed, holding that

there need be no “nexus” between a given defendant’s release and a specific response cost incurred—it is enough that (a) the defendant released a pollutant and (b) response costs were incurred to clean up “a” release. If the defendant truly released a minimal amount, that speaks not to its own liability (for which there is no *de minimis* defense) but to whether that liability is divisible.

On appeal, Glatfelter argues that the district court improperly relieved the government of its burden of proof on causation by instead requiring Glatfelter to disprove causation in relation to its divisibility defense.

Section 107(a) of CERCLA is ambiguous as to whether proof of a causal relationship between the incurrence of response costs and an actual (as opposed to threatened) release of a hazardous substance is required to establish liability. Again, the statute imposes liability upon those re-

sponsible for a facility “from which there is a release, or a threatened release which causes the incurrence of response costs, of a hazardous substance.” *Id.* § 9607(a).

[T]he phrase “from which there is a release . . .” omits a comma after “threatened release”—suggesting that the clause is restrictive—while simultaneously using the word “which”—suggesting that the clause is nonrestrictive. That is, the missing comma implies that a person can be held liable for an actual release even when that release does not “cause the incurrence of response costs,” while the word “which” suggests just the opposite.

Asarco LLC v. Cemex, Inc., No. EP-12-CV-155-PRM, 21 F.Supp.3d 784, 801, 2014 WL 2112121, at *11 n. 19 (W.D.Tex. Mar. 31, 2014). However, we need not resolve this ambiguity today, because even if the government were required to establish a causal relationship between the incurrence of response costs and the actual release of PCBs from the Bergstrom Mill, it has satisfied that burden.

Where Glatfelter’s argument goes astray is in its assumption that the government must prove all of the elements of liability in relation to each operable unit of the Site. Such a requirement is nowhere to be found in the statute. Instead, once it is established that a party is responsible for a facility “from which there is a release, or a threatened release which causes the incurrence of response costs, of a hazardous substance,” that party “shall be liable for . . . all costs of removal or remedial action incurred by the United States Government or a State or an Indian tribe not inconsistent with the national contingency plan.” 42 U.S.C. § 9607(a).

In short, even assuming that a release for which the defendant is responsible must have caused the incurrence of response costs, nothing in the statute limits

the defendant's liability to the response costs its release caused. Instead, the defendant is liable for all response costs "not inconsistent with the national contingency plan." *Id.* The national contingency plan authorizes removal or remedial action at the "site," 40 C.F.R. §§ 300.415, 300.435, and it defines "on-site" to mean "the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action," *id.* § 300.5. Where, as here, releases from multiple facilities contaminate an interconnected environmental system like a river, the entire system falls within this definition. Thus, in this case, the Site was properly defined to include the entire Lower Fox River and Green Bay, and so long as PCBs released from the Bergstrom Mill caused the incurrence of *some* response costs within the Site, Glatfelter may be held liable for *all* response costs within the Site.

Glatfelter does not dispute that PCB discharges from the Bergstrom Mill caused the incurrence of response costs in Little Lake Butte des Morts, which is within the Site. Yet it insists that its liability should not extend to OU4, where discharges from the Bergstrom Mill may not have caused the incurrence of response costs. In essence, Glatfelter wants us to treat OU4 as a separate site for which the government must establish liability. But this is inconsistent with the national contingency plan, which defines an operable unit as "a discrete action that comprises an incremental step toward comprehensively addressing site problems." *Id.* To put it simply, operable units are not separate sites; thus, they do not determine the extent of a party's liability.

Of course, an operable unit "may address geographical portions of a site," *id.*, and in some cases, a divisibility defense may prevail based upon those same geo-

graphic portions. However, the burden to prove divisibility rests on the defendant. The government need not prove each party's liability in relation to each geographic unit of a site the first instance. It need only prove each party's liability as to the site as a whole. In this case, the undisputed facts establish Glatfelter's liability as to the Lower Fox River and Green Bay Site.

Glatfelter protests that holding it liable for response costs in OU4 is like holding it liable for "the Sheboygan River or the Hudson River, two other, unrelated, sediment PCB sites." But of course, OU4 is not unrelated to OU1, nor is it a separate site; rather, OU1 and OU4 are part of the same site. Glatfelter cannot be held liable for cleanup in the Sheboygan River or the Hudson River because EPA could not define the Site to include those rivers, which are not part of "the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action." *Id.* However, as Glatfelter concedes, EPA properly defined the Site to include the entire Lower Fox River. Therefore, Glatfelter may be held liable for cleanup costs there, and the district court properly granted summary judgment to the government on the issue of Glatfelter's liability.

III. TRIAL RULINGS

[11] In December 2012, the district court held an eleven-day bench trial on the government's claim to enforce EPA's 2007 cleanup order. The trial focused on the defendants' divisibility defenses as to OU4, the only operable unit where active remediation work is ongoing. Ultimately, the district court rejected the defendants' divisibility defenses and entered a declaratory judgment and permanent injunction requiring the defendants to comply with EPA's order. On appeal, NCR and Glatfelter argue that the district court wrongly

rejected their divisibility defenses and that, even apart from those defenses, injunctive relief was improper. “Because the issues before this Court were adjudicated pursuant to a full bench trial, we review the district court’s conclusions of law *de novo* and its findings of fact for clear error.” *Carpet Serv. Int’l, Inc. v. Chi. Reg’l Council of Carpenters*, 698 F.3d 394, 397 (7th Cir.2012), *cert. denied*, — U.S. —, 133 S.Ct. 1856, 185 L.Ed.2d 815 (2013).

A. DIVISIBILITY

NCR and Glatfelter each presented a divisibility defense at trial, but the theories were quite different. NCR conceded that it contributed to the contamination in OU4 but argued that the harm was capable of apportionment. Glatfelter, on the other hand, maintained that it did not cause any of the contamination in OU4 and that it should therefore not be liable for any of the cleanup costs in OU4. We address each argument in turn.

1. NCR

[12] In NCR’s prior appeal, we affirmed the district court’s entry of a preliminary injunction because, at that stage, NCR had failed to show that the harm was capable of apportionment. In doing so, we relied on the principle that courts should not apportion responsibility for a single harm among multiple sufficient causes. *United States v. NCR Corp.*, 688 F.3d at 839. In applying this principle, we agreed with the Ninth Circuit that the harm in CERCLA cases is properly characterized as the “contamination traceable to each defendant.” *Id.* at 841 (quoting *United States v. Burlington N. & Santa Fe Ry. Co.*, 520 F.3d 918, 939 (9th Cir.2008)) (internal quotation marks omitted). We fur-

ther noted that while “cleanup costs, on their own, are not exactly equal to harm,” *United States v. NCR Corp.*, 688 F.3d at 840, they “may sometimes be a relevant factor for courts to use to determine the level of contamination, and thus the level of harm, caused by each polluter,” *id.* at 841.

The sparse record before us in the prior appeal indicated that the contamination (and consequently the harm) in the Lower Fox River was binary in nature: PCB concentrations above 1.0 ppm were harmful, but PCB concentrations below 1.0 ppm were not. *See id.* at 839 (“EPA has set a maximum safety threshold of 1.0 ppm of PCB. Anything above that amount is dangerous to human life and requires remediation.”); *id.* at 841 (“[C]ontamination occurs whenever PCBs pass a threshold level (thereby triggering remedial requirements).”). Because NCR failed to refute the proposition that its discharges were sufficient by themselves to cause the contamination in OU4 (i.e., to cause PCB concentrations in OU4 to surpass the 1.0 ppm threshold), we agreed with the district court that the harm was not capable of apportionment. *Id.* at 839.

[13] After the case was tried, the district court continued to treat the harm as binary, but the evidence presented at trial shows that this was an oversimplification. The 1.0 ppm remedial action level is not quite the line of demarcation it previously appeared to be. Indeed, it is not even EPA’s remedial goal. Instead, EPA seeks to achieve a surface-weighted average concentration (SWAC) of 0.25 ppm throughout OU4,⁴ and it has determined that this can be achieved by undertaking some form of remediation wherever PCB concentrations exceed 1.0 ppm. Thus, sediment with a

4. Surface-weighted average concentration measures the average concentration of PCBs

in the top 10 centimeters of sediment over the surface area of an entire operable unit.

PCB concentration of 0.99 ppm will be left alone, not because it is uncontaminated, but because it is insufficiently contaminated to push the SWAC for the operable unit as a whole above 0.25 ppm, at least after other areas with higher concentrations have undergone remediation.

EPA has identified SWAC as the relevant metric for remedial purposes because SWAC drives the ultimate harm with which EPA is concerned, i.e., the harm to human health and the environment. A particular SWAC leads to a particular concentration of PCBs in fish tissue, which presents a particular risk that humans or piscivorous animals will contract a disease or experience other adverse health effects. And because SWAC drives the ultimate harm, it is also the appropriate measure of contamination for our purpose, i.e., determining whether the harm is divisible.

But even EPA's target SWAC of 0.25 ppm does not amount to a boundary between harmfulness and geniality. EPA's "sediment quality thresholds," which identify SWAC levels that pose acceptable risks, are typically lower than 0.25 ppm. Consequently, those thresholds will not be achieved through active remediation efforts. Instead, they will be achieved through a process of natural recovery that will take many years after the active remediation work is complete. For example, EPA estimates that 20 years of natural recovery will be required to achieve acceptable noncancerous health risks to recreational anglers from walleye consumption. The corresponding time required to achieve an acceptable cancer risk is estimated at 45 years. And even then, some risk of harm will remain. EPA estimates that more than 100 years of natural recovery will be required to achieve PCB concentrations at which no adverse health effects have been observed.

As a result, the harm resulting from PCB contamination in the Lower Fox River cannot be characterized as binary. PCB concentrations below the 1.0 ppm remedial action level and even the 0.25 ppm target SWAC still pose a threat to human health and the environment. Even in areas where no remediation is required, higher PCB concentrations contribute more to the risk of harm and require a longer period of natural recovery to achieve an acceptable risk. Moreover, not all concentrations above EPA's remedial thresholds are equally harmful; the risk of harm increases with concentration even at high levels.

The continuous (as opposed to binary) nature of PCB contamination in the Lower Fox River leads us to reexamine EPA's remediation rules to determine whether remediation costs are still a useful approximation of the contamination caused by each party. As with the contamination, the district court thought that remediation costs resembled an on/off switch: sediment with PCB concentrations below 1.0 ppm would impose no remediation costs, while sediment with PCB concentrations above 1.0 ppm would always impose about the same remediation costs. We think the district court got this wrong as well. In fact, remediation costs increase with the degree of contamination above 1.0 ppm. As a result, remediation costs are still a useful approximation of the degree of contamination caused by each party.

The default remedial approach is dredging, but if certain criteria are met, an alternative approach such as capping (with various cap thicknesses) or sand covering may be used. Dredging is the most expensive approach, sand covering is the cheapest, and capping lies somewhere in between (with thicker caps being more costly). Location-specific design requirements do come into play; for example, a

cap cannot be used if the required depth of the navigation channel cannot be maintained. But all else being equal, higher PCB concentrations nearer the surface are more likely to require dredging, while lower concentrations at greater depths are more likely to be eligible for capping or even sand covering. Thus, the cost of the remedial approach in a particular area is positively correlated with the level of contamination near the surface of that area, which contributes to the operable unit's SWAC, and consequently, the harm.

In sum, neither the PCB contamination in OU4 nor the associated remediation costs are binary in nature. However, remediation costs are still a useful approximation of the degree of contamination, because both remediation costs and the relevant measure of contamination (SWAC) are positively correlated with the concentration of PCBs near the surface, even for concentrations that exceed the remedial action level of 1.0 ppm. As a result, we think the harm would be theoretically capable of apportionment if NCR could show the extent to which it contributed to PCB concentrations in OU4. And if NCR cleared that hurdle, we think a reasonable basis for apportionment could be found in the remediation costs necessitated by each party.

Two of NCR's experts, Dr. John Connolly and Philip Simon, estimated the percentages of PCB mass attributable to each party in OU4. A third expert, John Butler, took these mass percentages and multiplied them by the actual concentrations of PCBs in OU4, which he obtained from a database of core samples, to determine the concentrations of PCBs attributable to each party. Butler then used these concentrations to calculate the remediation costs caused by each party using EPA's remediation rules.

The district court thoroughly critiqued the mass-percentage estimates provided by Simon and Dr. Connolly, and we agree that those estimates likely understated NCR's contribution to the PCBs in OU4. However, Butler also ran his analysis using the higher estimates provided by Georgia-Pacific's expert, Dr. John Wolfe. The district court failed to explain why Dr. Wolfe's mass-percentage estimates were unreliable. Moreover, apart from its assumption that the PCB contamination in the Lower Fox River is binary in nature, the district court levied no criticism at Butler's application of the mass-percentage estimates he used. There may be reasons to find that Dr. Wolfe's mass-percentage estimates are unreliable, and there may be reasons to find that Butler's use of those estimates was unsound, but we will not undertake such factfinding in the first instance. Therefore, we will reverse the district court's decision on NCR's divisibility defense and remand for further proceedings.

2. Glatfelter

[14] Although PCB discharges from the Bergstrom Mill undisputedly made their way into OU4, Glatfelter has made no attempt to quantify what percentage of the contamination in OU4 it may have caused. Instead, even in relation to its divisibility defense, Glatfelter insists that it caused *none* of the contamination in OU4. Because the burden to prove divisibility rests on the defendant, Glatfelter is playing an all-or-nothing game, and we agree with the district court that it has lost.

Glatfelter's theory of divisibility relied almost entirely upon the expert opinion of Dr. Victor Magar. As part of his analysis, Dr. Magar estimated that only 14,000 kg were discharged into the river from the Bergstrom Mill. In contrast, government estimates ranged from roughly 58,000 to

85,000 kg. To reach his much lower estimate, Dr. Magar first measured the mass of the sludge in the mill's adjacent landfill, as well as the PCB concentrations in that sludge. He then used company records to establish the efficiency with which solids were removed from Bergstrom's wastewater and deposited in the landfill, which allowed him to estimate the mass of solids that remained in Bergstrom's wastewater and were discharged into the river. Then, assuming that the discharged solids had the same concentration of PCBs as the solids deposited in the landfill, he calculated the mass of PCBs discharged into the river.

Relying on other experts, the district court soundly criticized Dr. Magar's PCB mass estimate for the Bergstrom Mill. As the court noted, the clarifier used to remove solids from Bergstrom's wastewater would have allowed larger solids to settle out and be removed while leaving smaller particles suspended in the wastewater. Because PCBs adsorb (attach) to the surface of solids, and because smaller particles have higher surface-to-mass ratios, PCB concentrations in masses of smaller particles tend to be higher. Thus, Dr. Magar's assumption that the PCB concentrations in Bergstrom's landfill were equal to the concentrations in the solids it discharged into the River was unsound. The district court's finding on this point was not clearly erroneous. Therefore, we accept the fact that Dr. Magar greatly understated the mass of PCBs discharged into river by Bergstrom, for which Glatfelter is now responsible.

Next, Dr. Magar opined that PCBs from the Bergstrom Mill would not have reached OU4 in concentrations above the 1.0 ppm threshold because (1) PCBs that deposited in the downstream part of OU1 generally did so in concentrations below 1.0 ppm, (2) the downstream part of OU1

was similar to OU4 in terms of its depositional properties, and (3) PCB concentrations decline as contaminated sediment moves downstream and mixes with clean sediment. Thus, Dr. Magar thought that PCBs from the Bergstrom Mill would have been diluted to concentrations far below 1.0 ppm by the time they reached OU4.

However, the district court soundly criticized this aspect of Dr. Magar's opinion as well. Relying on other experts, the court found that lower OU1 was not nearly as depositional as Dr. Magar claimed. Thus, in the district court's words, "high-concentration PCB deposits were absent in lower OU1 not because PCB concentrations had already petered out, but because the PCBs simply were not permanently depositing in that part of the river." This finding was not clearly erroneous. Thus, we accept the fact that Dr. Magar greatly underestimated the concentrations at which PCBs from the Bergstrom Mill would have entered OU4.

Consequently, Glatfelter failed to prove that it was not a sufficient cause of at least some of the contamination in OU4, and this alone is enough for us to affirm the district court's decision on its divisibility defense. But the district court did not stop there. The court also found that even if Glatfelter had proved that it was not a *sufficient* cause of contamination in OU4, it failed to prove that it was not a *necessary* cause of such contamination. Glatfelter argues that it could not possibly have been a necessary but insufficient cause of contamination in OU4 and that the district court only reached this conclusion because it failed to grasp how PCB concentrations are calculated. We disagree.

Dr. Magar opined that if PCBs from the Bergstrom Mill made their way into OU4 in concentrations less than the remedial action level of 1.0 ppm, they could not have been a necessary cause of the cleanup in

OU4 because, as he put it, "This is not an additive process. This would be an averaging process."

For example, if 30 mg PCBs in 1 kg of suspended solids (30 mg/kg PCBs) were mixed with 1 mg PCBs in 1 kg of suspended solids (1 mg/kg PCBs). The resulting mixture would contain 31 mg PCBs and 2 kg of suspended solids. The mixture concentration, which is equal to the mass of PCBs divided by the mass of suspended solids, would be equal to 31 mg PCB/ 2 kg suspended solids or 15.5 mg/kg. Thus, the concentration is the weighted average of the two sources.

Expert Report of Victor Magar, PhD, PE, at 18-19, Sep. 28, 2012. In Dr. Magar's opinion, this averaging process means that PCBs entering OU4 at a concentration below 1.0 ppm and mixing with other PCB-contaminated solids could never push the combined PCB concentration above 1.0 ppm.

We have no qualms with the general proposition that when two masses of PCB-contaminated solids mix, their combined concentration is the mass-weighted average of their separate concentrations. It does not follow, however, that removing the PCBs that came in at a lower concentration increases the average concentration. This is because the solids to which that lower concentration of PCBs would have attached still join the mix, only now they are PCB-free, resulting in a lower average concentration. Dr. Magar's mistake was ignoring the clean solids that would remain after removing the lower concentration of PCBs.

Perhaps this is best illustrated through an example. In his expert report, Dr. Magar expressed the averaging concept through the following formula, where C is PCB concentration in mg/kg and TS is the total solid mass in kg:

$$\text{Downstream Concentration} = \frac{(C_1 \times TS_1) + (C_2 \times TS_2)}{TS_1 + TS_2}$$

Let us suppose that Party 1 discharges enough PCBs to create a concentration of 1.5 ppm (mg/kg) in 1.0 kg of sediment, and Party 2 discharges enough PCBs to create

a concentration of 0.5 ppm (mg/kg) in 1.0 kg of sediment. When these two masses combine, Dr. Magar's formula yields the following concentration:

$$\frac{(C_1 \times TS_1) + (C_2 \times TS_2)}{TS_1 + TS_2} = \frac{(1.5 \times 1.0) + (0.5 \times 1.0)}{1.0 + 1.0} = 1.0 \text{ ppm}$$

Thus, there are just enough PCBs to require remedial action. Now, let us assume that Party 2 discharged no PCBs, but the sediment to which Party 2's PCBs would

have attached still combines with the sediment to which Party 1's PCBs have attached. Dr. Magar's formula then yields the following concentration:

$$\frac{(C_1 \times TS_1) + (C_2 \times TS_2)}{TS_1 + TS_2} = \frac{(1.5 \times 1.0) + (0.0 \times 1.0)}{1.0 + 1.0} = 0.75 \text{ ppm}$$

Thus, remediation is required if Party 2's PCBs are included, but remediation is not required if Party 2's PCBs are excluded, even though Party 2's PCBs entered the mix at a concentration below the 1.0 ppm

remedial action level. This goes to show that Dr. Magar's conclusion that it is impossible to have necessary but insufficient causes does not follow from the principle

on which he relied, i.e., that concentrations average rather than add.

In sum, Glatfelter failed to prove that the PCB discharges for which it is responsible were not a sufficient, or at least a necessary, cause of at least some of the contamination in OU4. Therefore, the district court correctly ruled against Glatfelter on its all-or-nothing divisibility defense.

B. INJUNCTIVE RELIEF

[15] Finally, NCR and Glatfelter attack the district court's decision to enter a permanent injunction. We are persuaded by Glatfelter's argument that permanent injunctive relief is an inappropriate mechanism to enforce an administrative order under § 106(b) of CERCLA, 42 U.S.C. § 9606(b). Therefore, we vacate the permanent injunction.

[16] In *United States v. Ottati & Goss, Inc.*, 900 F.2d 429, 433 (1st Cir.1990), then-Judge Breyer explained that there are four statutory paths EPA might pursue to achieve a CERCLA cleanup. Two of those paths warrant discussion here, and both arise under § 106 of CERCLA, 42 U.S.C. § 9606. The first is found in the first sentence of § 106(a), which provides as follows:

[W]hen [EPA] determines that there may be an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance from a facility, [it] may require the Attorney General of the United States to secure such relief as may be necessary to abate such danger or threat, and the district court of the United States in the district in which the threat occurs shall have jurisdiction to grant such relief as the public interest and the equities of the case may require.

42 U.S.C. § 9606(a). This provision allows EPA to seek an injunction requiring PRPs to take remedial action in "an emergency situation, where the agency has not yet had time to compile a thorough record and to issue an" administrative order. *Ottati & Goss*, 900 F.2d at 433. And it explicitly makes relevant "the public interest and the equities," which indicates that the traditional elements of injunctive relief must be established. *See Old Republic Ins. Co. v. Emp'rs Reinsurance Corp.*, 144 F.3d 1077, 1081 (7th Cir.1998) (listing the elements that must be proved to obtain permanent injunctive relief, which include considerations of equity and the public interest).

In less urgent situations, EPA may proceed under the second sentence of § 106(a), which allows it to follow the necessary administrative procedures and issue "such orders as may be necessary to protect public health and welfare and the environment." 42 U.S.C. § 9606(a). Then, if the PRPs fail to comply with such an order, the government may bring an action under § 106(b)(1), which provides as follows:

Any person who, without sufficient cause, willfully violates, or fails or refuses to comply with, any order of [EPA] under subsection (a) of this section may, in an action brought in the appropriate United States district court to enforce such order, be fined not more than \$25,000 for each day in which such violation occurs or such failure to comply continues.

Id. § 9606(b)(1). In such an action, the court may review the selected remedy. *Id.* § 9613(h)(2). However, its review is limited to the administrative record, and EPA's decision must be upheld unless it "was arbitrary and capricious or otherwise not in accordance with law." *Id.* § 9613(j). Thus, unlike an action under the first sen-

tence of § 106(a), equitable considerations play no part in an action to enforce an administrative order under § 106(b). Instead, “[w]hen the EPA asks a court . . . to enforce a lawful (nonarbitrary) EPA order, the court must enforce it.” *Ottati & Goss*, 900 F.2d at 434.

As a result, if courts were to undertake the traditional analysis for injunctive relief in deciding whether to enforce an EPA order, they would inject equitable considerations where they do not belong. Moreover, as Glatfelter points out, the entry of an injunction that simply orders PRPs to comply with a complex cleanup order issued by EPA may run afoul of Federal Rule of Civil Procedure 65(d)(1)(C), which requires that every injunction “describe in reasonable detail—and not by referring to the complaint or other document—the act or acts restrained or required.” Accordingly, permanent injunctive relief is incongruous with the nature and purpose of an action to enforce an administrative cleanup order under CERCLA § 106(b).⁵

Further, permanent injunctive relief is unnecessary as a means of enforcing an administrative cleanup order, as the statute already provides for civil penalties of \$25,000 per day that a PRP fails to comply with such an order “without sufficient cause.” Nothing we have said prevents the government from seeking declaratory relief to establish that a PRP lacks sufficient cause for noncompliance, such as the arbitrariness of the selected remedy or a defense to liability. And if the government obtains such declaratory relief, the PRP’s obligation to comply with the administrative order or face civil penalties will be established. In such circumstances, adding an injunction to the mix does little more than enjoin the defendant

5. In contrast, preliminary injunctive relief may be appropriate in an action to enforce an EPA cleanup order, as it was in this case. Equitable principles are an appropriate con-

to obey the law, a practice we have criticized. *See, e.g., EEOC v. AutoZone, Inc.*, 707 F.3d 824, 841–42 (7th Cir.2013). For all of these reasons, we hold that the permanent injunction entered by the district court in this case was improper and must be vacated.

IV. CONCLUSION

The district court’s summary judgment rulings on the propriety of the remedy and Glatfelter’s liability are **AFFIRMED**. The permanent injunction entered by the district court is **VACATED**. The declaratory judgment entered by the district court is **AFFIRMED** as to Glatfelter, but **VACATED** as to NCR, and Case No. 13–2441 is **REMANDED** for the district court to reconsider NCR’s divisibility defense consistent with this opinion. Circuit Rule 36 shall not apply on remand.



**NCR CORPORATION, et al.,
Plaintiffs–Appellants,**

v.

**GEORGE A. WHITING PAPER
COMPANY, et al., Defendants–
Appellees.**

**Nos. 13–2447, 13–2522, 13–2568, 13–2570,
13–2572, 13–2605, 13–2606, 13–2607,
13–2631, 13–2645, 13–2866.**

United States Court of Appeals,
Seventh Circuit.

Argued Feb. 28, 2014.

Decided Sept. 25, 2014.

Rehearing Denied Nov. 5, 2014.

Background: Manufacturer of carbonless copy paper and its former subsidiary

sideration when deciding whether to require PRPs to undertake remedial action pending review of an EPA cleanup order.