**ORAL ARGUMENT NOT YET SCHEDULED**

Nos. 16-1416 & 16-1418

IN THE

# United States Court of Appeals for the District of Columbia Circuit

AIMCO MICHIGAN MEADOWS HOLDINGS, LLC (in No. 16-1418)

and

GENUINE PARTS COMPANY (in No. 16-1416),

Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,

Respondent.

On Petitions for Review from the United States Environmental Protection Agency

## INITIAL OPENING BRIEF FOR PETITIONERS

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April 7, 2017

## CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

### A. PARTIES

1. The following are parties in this Court:

a. Petitioners: Aimco Michigan Meadows Holdings, LLC and Genuine Parts Company.

b. Respondent: United States Environmental Protection Agency.

2. a. Aimco Michigan Meadows Holdings, LLC was formed in 1999 for the purpose of acquiring and operating an apartment property and a shopping center in Indianapolis, Indiana. Aimco Michigan Meadows Holdings, LLC currently does not conduct any business other than overseeing the voluntary remediation of the Michigan Meadows Apartments and Michigan Plaza properties. Aimco Michigan Meadows Holdings, LLC is a wholly owned subsidiary of AIMCO Properties, L.P. AIMCO Properties, L.P. is a limited partnership which is owned as follows: AIMCO-GP, Inc. is the general partner of, and owns, 1.03% of AIMCO Properties, L.P.; AIMCO-LP Trust is a limited partner of, and owns, 94.2% of AIMCO Properties, L.P.; unrelated entities own the remaining 4.77% of AIMCO Properties, L.P. AIMCO-LP Trust and AIMCO-GP, Inc. are wholly owned by Apartment Investment and Management Company, which is a publicly held company.

b. Genuine Parts Company is a corporation engaged in the distribution of automotive replacement parts, industrial replacement parts, office products, and electrical and electronic materials. The U.S. Environmental Protection Agency (EPA) has alleged that a corporate predecessor of Genuine Parts Company contributed to environmental contamination at the 700 North Olin Avenue property in Indianapolis, Indiana. JA__ [Revised Documentation at 69]. Genuine Parts Company has no parent corporation. No publicly held corporation owns 10 percent or more of Genuine Parts Company's stock.

## B. RULING UNDER REVIEW

Aimco Michigan Meadows Holdings, LLC and Genuine Parts Company petition for review of a final rule issued by EPA on September 9, 2016, placing the "West Vermont National Drinking Water Contamination Site" on the National Priorities List pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9613(a). EPA published the final rule in the Federal Register at 81 Fed. Reg. 62,397–62,403 (Sept. 9, 2016).

## C. RELATED CASES

Aimco Michigan Meadows Holdings v. United States Environmental Protection Agency, No. 16-1418, is consolidated with Genuine Parts Company v. United States Environmental Protection Agency, No. 16-1416. The Court initially consolidated Sunnyside Gold Corporation v. United States Environmental

Protection Agency, No. 16-1417 with these petitions, but because Sunnyside Gold Corporation's petition pertains to the listing of a different site on the National Priorities List, EPA moved to unconsolidate that petition from these petitions, and this Court granted the motion.

There are no other related cases of which undersigned counsel is aware currently pending in this Court or in any other court involving substantially the same parties and the same or similar issues.

Respectfully submitted,

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Dated: April 7, 2017

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## GLOSSARY

| | |
|---|---|
| APA: | Administrative Procedure Act |
| AMMH: | Aimco Michigan Meadows Holdings, LLC |
| CERCLA: | Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. §§ 9601 *et seq.* |
| EPA: | Environmental Protection Agency |
| Genuine: | Genuine Parts Company |
| PCE: | perchloroethylene (also known as tetrachloroethene) |
| Site: | West Vermont Drinking Water Contamination Site |

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY,

Respondent,

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On Petitions for Review from the United States Environmental Protection Agency

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## INITIAL OPENING BRIEF FOR PETITIONERS

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## JURISDICTIONAL STATEMENT

This Court has jurisdiction under Section 113(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. § 9613(a), to review Petitioners' challenge to the final rule published by EPA placing the "West Vermont Drinking Water Contamination Site" (the Site) on CERCLA's National Priorities List. EPA promulgated the final rule on September 9, 2016, at 81 Fed. Reg. 62,397–62,403 (Final Rule). Petitioners timely filed their

petitions for review within 90 days of publication.

In challenging the Final Rule, Petitioners also challenge the application of EPA's Hazard Ranking System regulation, 40 C.F.R. Part 300, Appendix A, to the facts here. *See* JA__–__ [AMMH Comment at 12–13]. This Court has jurisdiction over that challenge. *See US Magnesium, LLC v. EPA*, 630 F.3d 188, 194 (D.C. Cir. 2011). As this Court has explained, "the statutory time limit restricting judicial review of [agency] action is applicable only to cut off review directly from the order promulgating a rule. It does not foreclose subsequent examination of a rule where properly brought before this court for review of further [agency] action applying it." *NLRB Union v. FLRA*, 834 F.2d 191, 195–197 (D.C. Cir. 1987) (alterations in original, internal quotation marks omitted); *see Nat'l Air Transp. Ass'n v. McArtor*, 866 F.2d 483, 486–487 (D.C. Cir. 1989) ("*NLRB Union* allows, outside statutory time limits, substantive claims that [a] rule '*conflicts with the statute* from which its authority derives.'"); *see also Mead Corp. v. Browner*, 100 F.3d 152, 153–157 (D.C. Cir. 1996) (permitting challenge to listing on the ground that EPA regulations conflict with statutory requirements).

## INTRODUCTION

CERCLA required EPA to create the National Priorities List, a list of high-priority sites in the United States contaminated with hazardous substances. 42 U.S.C. § 9605(a)(8)(B). EPA adds sites to the list based on their "relative risk or

danger to public health or welfare or the environment," *id.* § 9605(a)(8)(A), according to a set of rules called the Hazard Ranking System. 40 C.F.R. pt. 300 app. A. Sites receiving a score of 28.5 or above on the Hazard Ranking System become eligible for listing. *See* JA__ [Guidance Manual at 30].

EPA does not have free rein when it comes to scoring and listing contaminated sites; Congress specifically amended CERCLA years ago to require EPA to "assure, to the maximum extent feasible, that the hazard ranking system accurately assesses the relative degree of risk to human health and the environment posed by sites and facilities subject to review." 42 U.S.C. § 9605(c)(1).

In September 2016, EPA promulgated the Final Rule adding the Site to the National Priorities List. 81 Fed. Reg. at 62,397. According to EPA, the Site consists of groundwater contamination from properties formerly owned by Petitioner Aimco Michigan Meadows Holdings, LLC (AMMH) and a corporate predecessor of Petitioner Genuine Parts Company (Genuine). EPA based its Hazard Ranking System score for the Site—which placed the Site above the listing threshold—in part on two critical assumptions: (1) aquifers within a two-mile radius of the Site are "interconnected"; and (2) municipal wellfields up to four miles away from the Site could be affected by contamination present at the Site, even though Site groundwater flows *away* from those wellfields. JA__, __–__ [Support Document at 18, 28–29].

Both of EPA's assumptions are impermissible as a matter of law. Under EPA regulations, aquifers are *not* interconnected unless data are "adequate to *establish*" interconnections within two miles of the Site. 40 C.F.R. pt. 300 app. A, § 3.0.1.2.1 (emphasis added). Petitioners' comments identified multiple independent sources showing that aquifers within a two-mile radius of the Site are not interconnected. EPA ignored the evidence, the comments, and its own regulation, relying instead on selected sources that do not even support its position. EPA's listing decision should thus be vacated.

In addition, EPA acted contrary to the Administrative Procedure Act (APA) and CERCLA by scoring the Site based in part on the assumption that the municipal wellfields located one to three miles to the *east-northeast, northeast, and northwest* of the Site would be impacted by contamination at the Site, despite undisputed evidence—and EPA's concession—that groundwater flows *south*, away from the wells. If EPA had properly excluded those wellfields from consideration, the Site would not have qualified for listing. *See* JA__ [Ramboll Comment at 1].

EPA attempts to justify its refusal to consider groundwater flow by asserting that the Hazard Ranking System "does not consider ground water flow direction in determining the eligibility of wells subject to potential contamination." JA__ [Support Document at 53]. That again was error. CERCLA requires EPA to

"accurately" assess the risk posed by the Site before listing it, 42 U.S.C. § 9605(c)(1), and EPA's refusal to consider the direction of groundwater flow rendered that risk assessment completely inaccurate. EPA also asserts that "sufficient data are not available at this stage in the listing process to accurately assess the ground water flow directions" within a four-mile radius of the Site. JA__ [Support Document at 29]. EPA fails to explain why that alleged data gap matters, and given substantial record evidence documenting the direction of groundwater flow both at the Site and within a four-mile radius of the Site, EPA's conclusion is arbitrary and capricious, and contrary to CERCLA.

This Court should accordingly vacate the Final Rule as it relates to the Site.

## ISSUES PRESENTED FOR REVIEW

1. Whether EPA acted arbitrarily and capriciously, without substantial evidence, and contrary to law by scoring the Site under the Hazard Ranking System on the basis of interconnected aquifers, when EPA failed to follow its own regulations, respond to comments, and distinguish record evidence that the aquifers are *not* interconnected.

2. Whether EPA violated the APA and CERCLA by refusing to consider and otherwise deeming "insufficient" record evidence regarding the direction of groundwater flow when determining whether to list the Site.

## STATUTES AND REGULATIONS

Pertinent statutes and regulations are reprinted in the Addendum.

## STATEMENT OF THE CASE

**The National Priorities List.** CERCLA directs the President to create a list of sites—the National Priorities List—with "releases or threatened releases" of hazardous substances "for the purpose of taking remedial action." 42 U.S.C. § 9605(a)(8)(A); Exec. Order No. 12,580, 3 C.F.R. § 193 (1988), *reprinted in* 42 U.S.C. § 9615 app. at 893–896 (1988) (delegating authority to EPA).

Only the most contaminated sites in the country make the cut: EPA is required to prioritize sites based on the "relative risk or danger to public health or welfare or the environment," taking into account "to the extent possible the population at risk." 42 U.S.C. § 9605(a)(8)(A). As this Court has explained, "[p]ermitting the inclusion of low-risk sites on the [National Priorities List] would thwart rather than advance Congress's purpose of creating a priority list based on evidence of high risk levels." *Mead Corp.*, 100 F.3d at 156. State and federal authorities can still ensure cleanup under other programs for sites not placed on the National Priorities List. *See* JA__ [Support Document at v].

**The Hazard Ranking System.** EPA adopted the Hazard Ranking System to determine which sites are eligible for listing. 40 C.F.R. pt. 300 app. A. The Hazard Ranking System "serves as a screening device to evaluate the potential for

releases of uncontrolled hazardous substances to cause human health or environmental damage." *Id.* § 1.0. Its purpose is to provide "a measure of relative rather than absolute risk," *id.*, meaning that it measures the danger posed by a site compared to other contaminated sites.

After early experience with EPA's Hazard Ranking System, Congress was "troubled" with EPA's listing of "a disproportionate number of high volume, low toxicity hazardous waste sites." *Linemaster Switch Corp. v. EPA*, 938 F.2d 1299, 1303 (D.C. Cir. 1991). Congress thus "substantially revised CERCLA" to (among other things) direct the President to "make the [Hazard Ranking System] more accurate in assessing relative potential risk." 55 Fed. Reg. 51,532 (Dec. 14, 1990). Specifically, Congress amended Section 105 of CERCLA to require the President to revise "the [Hazard Ranking System] to 'assure, to the maximum extent feasible, that the hazard ranking system accurately assesses the relative degree of risk to human health and the environment.'" *Linemaster Switch Corp.*, 938 F.2d at 1302 (quoting 42 U.S.C. § 9605(c)(1)).

The Hazard Ranking System evaluates risk through four "pathways": groundwater, surface water, soil, and air. 40 C.F.R. pt. 300 app. A, § 2.1. (In this case, EPA evaluated only the groundwater pathway.) For each pathway, EPA considers: (1) the likelihood a hazardous substance will be released into the environment; (2) the characteristics of the substances released, including their

quantity and toxicity; and (3) the target population and environmental resources that could be affected by a release. *Id.* §§ 2.3–2.5, 3.4. EPA determines a score for each factor, performs a series of calculations, and arrives at the Hazard Ranking System score. Sites that receive a score of at least 28.5 are eligible for inclusion on the National Priorities List. JA__ [Guidance Manual at 2].

The score for a site involving only the groundwater pathway—as here—is based on the site's "Aquifer Score." An aquifer is a layer of rock or sediment below ground that transmits a substantial amount of water. JA__ [*Id.* 116]. There are often multiple aquifers below ground, and those aquifers may or may not be interconnected. Two aquifers are interconnected if water can pass unimpeded from one aquifer to another. *See* JA__ [Guidance Manual at 116]. If aquifers within a two-mile radius of a site are interconnected, EPA must "combine the aquifers having interconnections in scoring the site." 40 C.F.R. pt. 300 app. A, § 3.0.1.2.1. "If data are not adequate to *establish* aquifer interconnections," however, EPA must "*evaluate the aquifers as separate aquifers*." *Id.* (emphases added).

The Aquifer Score's purpose is to take into account the target population that could be affected by contamination at a site. *See id.* § 2.5. EPA's approach under the Hazard Ranking System is to assume that a site could contaminate any wellfield within four miles—in any direction. EPA then calculates the target population based on the entire population served by those wells. *See id.* § 3.3.

This case raises an as-applied challenge to that approach. *See* JA__–__ [AMMH Comment at 12–13].

**The Site.** The Site is located in Marion County, Indiana. JA__ [Support Document at 1]. It consists of groundwater contamination allegedly originating from two areas: the Michigan Meadows apartment complex and the Michigan Plaza shopping center, both formerly owned by AMMH (collectively the Michigan Plaza properties); and the 700 North Olin property, which Genuine has been remediating. JA__–__ [*Id.* 1–2], __ [Genuine Comment at 1].[1]

Michigan Plaza. AMMH is an apartment company. It purchased the Michigan Plaza properties in 1999. JA__ [AMMH Comment at 2]. In 2001, in connection with a possible sale of both properties, AMMH discovered that a former dry cleaner operation—which closed before AMMH purchased the properties—had operated at the shopping center. *See id.*; JA__ [EPA Reference 40 at 21]. The dry cleaner had discharged wastewater containing perchloroethylene

[1] EPA initially proposed including two residential wells as part of the Site. *See* JA__ [Original Documentation at 73]. In 2016, EPA closed the residential wells and connected the residences to a municipal water supply. *See West Vermont Drinking Water Contamination Site Situation Report #7* (Mar. 2, 2016), https://response.epa.gov/site/sitrep_profile.aspx?site_id=6670&counter=26662.

(PCE) into a leaky sewer system, which permitted the PCE to migrate into the underlying groundwater.[2] *See* JA__ [AMMH Comment at 2].

Following the sale of the Michigan Plaza properties in 2008, AMMH continued to actively address environmental concerns at the properties. JA__–__ [*Id.* 2–3]; JA__ [Revised Documentation at 72]. In 2007, AMMH enrolled the properties in the Indiana Department of Environmental Management's Voluntary Remediation Program. JA__–__ [AMMH Comment at 2–3].[3] To date, AMMH has conducted more than twenty separate field investigations of the properties, and for ten years now it has sampled, on a quarterly basis, an extensive network that now consists of dozens of groundwater monitoring wells. *Id.* To remediate the contamination, under the Indiana Department of Environmental Management's oversight, AMMH injected bioremediation compounds into groundwater on three separate occasions. *Id.* As of December 2015, AMMH had incurred over a million dollars in voluntary investigation and remediation costs. *Id.*

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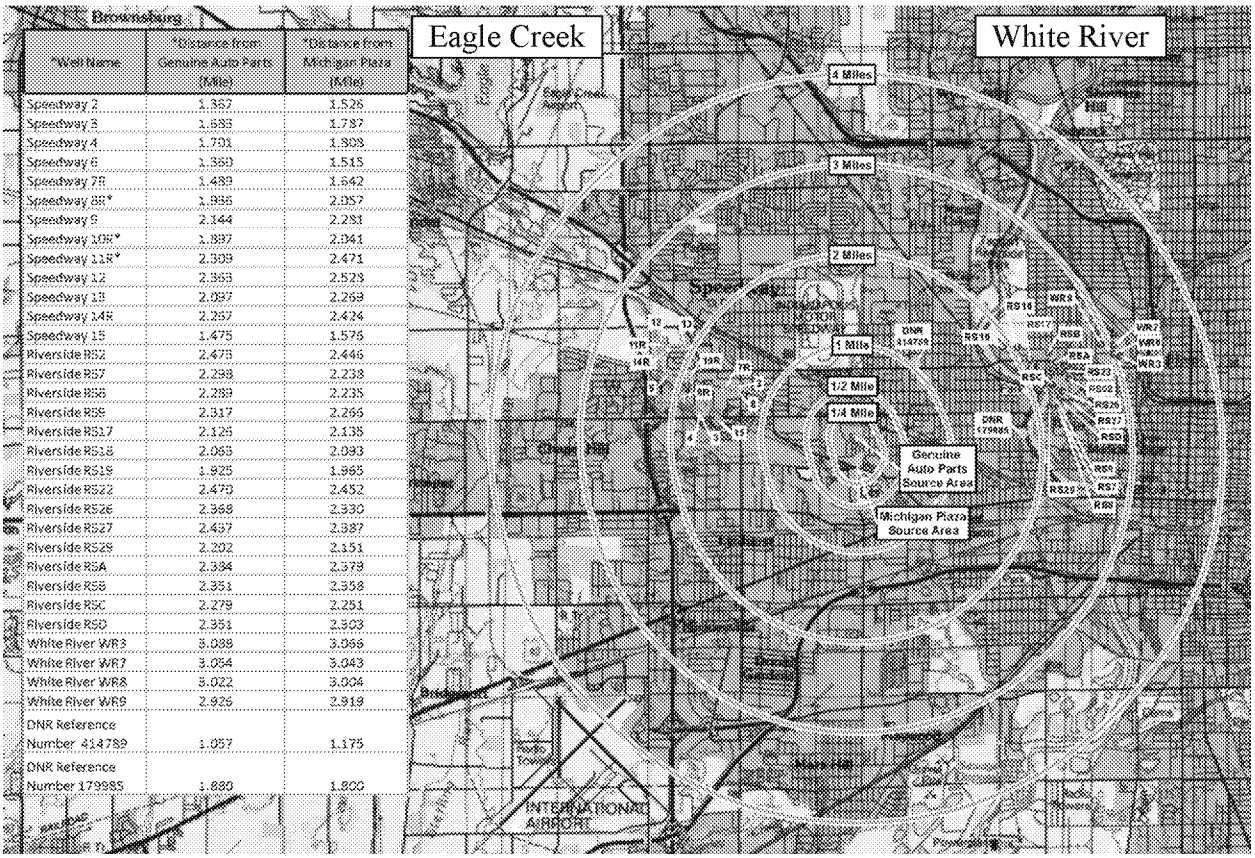
[2] Among other things, PCE is used in dry cleaning and as an industrial degreaser and cleaning agent. *See* JA__ [EPA Reference 64 at 1].

[3] On June 30, 2015, the Department issued a notice purporting to terminate AMMH's participation in the Voluntary Remediation Program. JA___ [Support Document at 2]. AMMH's appeal of the termination notice has been stayed by the Indiana Office of Environmental Adjudication.

700 North Olin Property. EPA alleges that soil contamination at 700 North Olin Avenue occurred over four decades ago and was caused by a corporate predecessor to Genuine. JA__ [Revised Documentation at 69]. Genuine has been voluntarily working with the State of Indiana to remediate the contamination at 700 North Olin for over seventeen years. *See* JA__ [Support Document at 2] ("The Genuine Parts facility was enrolled in the Voluntary Remediation Program (VRP) in an agreement signed January 11, 2000 (ID# 6991004)."). In that time Genuine has removed approximately 18,500 tons of hazardous and non-hazardous waste and performed groundwater remediation, resulting in significant decreases in contamination in on and off-site groundwater wells. *See* JA__–__ [EPA Reference 75 at 10–11].

**Municipal Wellfields**. The following Figure 1-5, *see* JA__ [Revised Documentation at 8], depicts the location of the Michigan Plaza and 700 North Olin properties and the three municipal wellfields at issue:




| *Well Name | *Distance from Genuine Auto Parts (Mile) | *Distance from Michigan Plaza (Mile) |
|---|---|---|
| Speedway 2 | 1.367 | 1.526 |
| Speedway 3 | 1.633 | 1.787 |
| Speedway 4 | 1.701 | 1.908 |
| Speedway 6 | 1.360 | 1.515 |
| Speedway 7R | 1.489 | 1.642 |
| Speedway 8R* | 1.936 | 2.057 |
| Speedway 9 | 2.144 | 2.281 |
| Speedway 10R* | 1.887 | 2.041 |
| Speedway 11R* | 2.309 | 2.471 |
| Speedway 12 | 2.368 | 2.523 |
| Speedway 13 | 2.087 | 2.269 |
| Speedway 14R | 2.267 | 2.424 |
| Speedway 15 | 1.475 | 1.575 |
| Riverside RS2 | 2.475 | 2.446 |
| Riverside RS7 | 2.298 | 2.238 |
| Riverside RS8 | 2.289 | 2.235 |
| Riverside RS9 | 2.317 | 2.266 |
| Riverside RS17 | 2.126 | 2.135 |
| Riverside RS18 | 2.065 | 2.093 |
| Riverside RS19 | 1.925 | 1.965 |
| Riverside RS22 | 2.479 | 2.452 |
| Riverside RS26 | 2.368 | 2.330 |
| Riverside RS27 | 2.497 | 2.387 |
| Riverside RS29 | 2.202 | 2.151 |
| Riverside RSA | 2.384 | 2.379 |
| Riverside RSB | 2.351 | 2.358 |
| Riverside RSC | 2.279 | 2.251 |
| Riverside RSD | 2.351 | 2.303 |
| White River WR3 | 3.089 | 3.066 |
| White River WR7 | 3.054 | 3.043 |
| White River WR8 | 3.022 | 3.004 |
| White River WR9 | 2.926 | 2.919 |
| DNR Reference Number 414789 | 1.057 | 1.175 |
| DNR Reference Number 179985 | 1.880 | 1.800 |

The wellfields are within a four-mile radius of the Site, all to the north: (1) the Riverside Wellfield, between two and three miles east-northeast (red dots); (2) the White River Wellfield, between three and four miles northeast (purple dots); and (3) the Speedway Wellfield, between one and three miles northwest (light blue dots). *See* JA__ [Revised Documentation at 23]. Crucially, both Petitioners and EPA agree that groundwater at the Site flows toward the south. *See* JA__ [*Id.* 45].

**The Listing**. In September 2015, EPA issued a proposed rule listing the Site on the National Priorities List. 80 Fed. Reg. 58,658 (proposed Sept. 30, 2015). The agency calculated a Hazard Ranking System score of 50.0 for the Site. JA__ [Original Documentation at 1]. It based that score in part on two assumptions:

(1) aquifers within a two-mile radius of the Site are interconnected; and (2) municipal wellfields up to four miles away from the Site could be affected by contamination present at the Site even though Site groundwater flows *away* from those wellfields. *See* JA__–__, __–__ [Original Documentation at 43–46, 73–80].

AMMH, Genuine, and their respective environmental consultants submitted extensive comments on the proposed rule. *See, e.g.*, JA__ [AMMH Comment]; __ [Genuine Comment]; __ [EKI Comment]; __ [Minning Comment]; __ [Acuity Comment]; __ [Ramboll Comment]. Those comments explained that EPA's fundamental assumptions in scoring the Site were incorrect—and indeed ran counter to both the governing statute and EPA's implementing regulations. Among other things, Petitioners and their consultants pointed to compelling evidence in the record that the aquifers were *not* interconnected, and that hazardous substances from the Site are migrating away from the municipal wellfields due to the undisputed southerly direction of groundwater flow. *See id.*

EPA nevertheless issued the Final Rule listing the Site. 81 Fed. Reg. at 62,397. It continued to assume that the relevant aquifers are interconnected despite substantial record evidence to the contrary. And despite substantial record evidence that groundwater flows *away* from the wellfields, EPA determined that the Hazard Ranking System "does not consider ground water flow direction in determining the eligibility of wells subject to potential contamination." JA__

[Support Document at 53]. EPA also asserted that "sufficient data are not available at this stage in the listing process to accurately assess the ground water flow directions" within a four-mile radius of the Site. JA__ [*Id.* 29]. Based on those assumptions and assertions, EPA calculated a Hazard Ranking System score of 50.0 for the Site, and listed the Site on the National Priorities List.

These petitions followed.

## SUMMARY OF ARGUMENT

EPA's score for the Site rests on two assumptions, both of which are wrong—resulting in the wrong Hazard Ranking System score, and ultimately the wrong decision to list the Site on the National Priorities List.

*First*, EPA scored the Site based on the assumption that aquifers within a two-mile radius of the Site are interconnected. Two aquifers are interconnected when groundwater flows unimpeded from one aquifer to another. JA__ [Guidance Manual at 116]. If the aquifers within a two-mile radius of a site are interconnected, EPA must "combine the aquifers having interconnections in scoring the site." 40 C.F.R. pt. 300 app. A, § 3.0.1.2.1. "If data are not *adequate to establish* aquifer interconnections," however, EPA must "*evaluate the aquifers as separate aquifers*." *Id.* (emphases added). EPA's listing of the Site depends on the aquifers at the Site being interconnected: The Site receives a score of 50.0 on the Hazard Ranking System if the aquifers are interconnected, but if the data do not

establish interconnections, the Site receives a score of 20.0—below the listing threshold.

Record evidence demonstrates that the aquifers are not interconnected. Strikingly, however, EPA failed to discuss that evidence—even though Petitioners specifically pointed to it in their comments. In addition, the sources on which EPA relies to conclude that the aquifers are interconnected either fail to support the agency's position or flatly contradict it. To the extent there is any conflict in the record, moreover, EPA's own regulations require the agency to evaluate the aquifers as separate aquifers—which EPA failed to do. EPA's listing decision should thus be vacated.

*Second*, EPA scored the Site based on the assumption that contamination at the Site endangers municipal wellfields within a four-mile radius of the Site. EPA agreed with Petitioners, however, that groundwater at and in the vicinity of the Site flows south, *away* from the wellfields. *See* JA__ [Revised Documentation at 45]. EPA nevertheless refused to consider the direction of groundwater flow because the Hazard Ranking System purportedly "*does not consider ground water flow direction* in determining the eligibility of wells subject to potential contamination." JA__ [Support Document at 53] (emphasis added).

EPA's outright refusal to consider the well-documented and undisputed groundwater flow direction violates Congress's express directive requiring EPA to

assess the relative degree of risk at sites to the "maximum extent feasible." 42 U.S.C. § 9605(c). It also contradicts the long-standing admonition that agencies must "consider [the] important aspect[s] of the problem" in order to comply with the APA. *See Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

EPA also appears to assert that, regardless of the acknowledged direction of groundwater flow in the vicinity of the Site, "sufficient data are not available" to evaluate the direction of groundwater flow within a four-mile radius of the Site. JA__ [Support Document at 29]. But EPA's assertion is contrary to its own conclusions in the record—and the agency does not even attempt to explain why data from areas beyond the Site are necessary to evaluate whether contamination at the Site endangers the wellfields. *See supra* Figure 1-5 at p. 12 (depicting location of wellfields). EPA's conclusion that data are insufficient to evaluate the direction of groundwater flow is thus arbitrary and capricious, as well as contrary (again) to CERCLA's requirement that EPA accurately assess the risk posed by the Site.

For these reasons and as set forth below, EPA's listing decision should be vacated.

## STANDING

EPA has alleged that properties formerly owned by Petitioners or their corporate predecessors are the source of contaminated groundwater at the Site.

*See* JA__ [Revised Documentation at 23]. EPA also has identified Petitioners as "potentially responsible parties" liable for contamination at the Site. JA__–__ [AMMH app. G at 2–3]. The Final Rule thus leads to significant additional environmental investigation, remediation, and enforcement costs for Petitioners—and immediately provides EPA with bargaining leverage over them. *See* JA__ [AMMH Comment at 1]; __ [Genuine Comment at 10]; *see also* 42 U.S.C. §§ 9604, 9607 (authorizing EPA to incur cleanup costs at National Priorities List sites and seek recovery of those costs from responsible parties); *CTS Corp. v. EPA*, 759 F.3d 52, 58 (D.C. Cir. 2014) (listing on the National Priorities List permits EPA "to exert increased leverage" over a former property owner "by expending appropriations on remediation while potentially constraining efforts by" the former owner "to cabin the scope of the cleanup action financially attributed to it"); *Mead Corp.*, 100 F.3d at 155 ("listing drastically increases the chances of costly activity" and gives EPA "bargaining leverage" over potentially responsible parties); *Kent Cty., Del. Levy Ct. v. EPA*, 963 F.2d 391, 394 (D.C. Cir. 1992) ("placement on the NPL has serious consequences").

For example, once EPA lists a site, it has authority to require responsible parties to conduct or pay for long-term "remedial actions." *See* 42 U.S.C. §§ 9604, 9606, 9607. Those remedial actions must comply with complex procedural and substantive federal requirements that do not apply to voluntary cleanups under

Indiana law or to federal cleanups of sites not on the National Priorities List—including requirements to prepare a formal Remedial Investigation and Feasibility Study, solicit extensive public involvement, and complete five-year reviews. *See* 40 C.F.R. pt. 300, § 300.430. Because CERCLA permits EPA to conduct costly long-term remedial actions only at sites on the National Priorities List, the Final Rule also exposes Petitioners, as potentially responsible parties, to liability for such costs. *See* 42 U.S.C. §§ 9604, 9607(a), 9611; *New York v. Shore Realty Corp.*, 759 F.2d 1032, 1046–47 (2d Cir. 1985).

Additionally, the stigma of association with a site on the National Priorities List—which EPA considers to be a list of the most contaminated sites in the country—has caused AMMH and Genuine reputational harm. *See* JA__ [AMMH Comment at 1]; *see also Mead Corp.*, 100 F.3d at 155 (recognizing "damage to business reputation" caused by listing). EPA's listing of the Site also has injured Petitioners by linking them to a new and expanded area of potential contamination that includes each other's properties and the municipal wellfields. *See* JA__ [AMMH Comment at 1]; __ [Genuine Comment at 8]; __, __–__ [Revised Documentation at 23, 77–83]; *see also CTS Corp.*, 759 F.3d at 58 (finding standing based on "an increase in the expected geographic scope" of "remediation activity").

Moreover, although both Petitioners have been conducting voluntary

cleanup actions for years, as a result of the Final Rule, EPA asserts that Petitioners must now receive EPA approval before conducting further remediation. *See* JA__ [Support Document at 15] ("If any PRP wishes to undertake cleanup efforts, such as those discussed by [Genuine] and AMMH, it may do so under EPA supervision pursuant to appropriate agreements."). Obtaining EPA approval is itself costly and time-consuming; that increased compliance cost is an(other) injury in fact. *See, e.g.*, *State Nat'l Bank of Big Spring v. Lew*, 795 F.3d 48, 54 (D.C. Cir. 2015) (finding standing where plaintiff incurred costs to comply with agency regulations); *Ass'n of Private Sector Colls. & Univs. v. Duncan*, 681 F.3d 427, 458 (D.C. Cir. 2012) (recognizing standing on the basis of "'greater compliance costs'").

## STANDARD OF REVIEW

This Court will set aside a listing on the National Priorities List under both the APA and CERCLA if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A); *see Kent Cty.*, 963 F.2d at 393. "When this court reviews the EPA's decision to include a particular site on the [National Priorities List], it must determine whether the decision is consistent with CERCLA and with the policies underlying" the National Priorities List and the Hazard Ranking System. *Anne Arundel Cty. v. EPA*, 963 F.2d 412, 415 (D.C. Cir. 1992). In addition, EPA's attempt to list a site is invalid if not

supported by "substantial evidence." *CTS Corp.*, 759 F.3d at 59 n.1.

"In contrast to traditional rulemaking under the APA, the procedure for placing a hazardous waste site on the NPL consists of the application of a detailed scoring system to particular facts." *Anne Arundel Cty.*, 963 F.2d at 418. Although EPA's scientific determinations are entitled to deference, this Court's review of listing decisions is not "of the rubber-stamp variety." *Bd. of Regents of the Univ. of Wash. v. EPA*, 86 F.3d 1214, 1217–18 (D.C. Cir. 1996). Rather, the Court must review the record to ensure that EPA has examined relevant data, explained the scientific basis for its decisions, offered substantial evidence in support of those decisions, and followed its own regulations. *See Carus Chem. Co. v. EPA*, 395 F.3d 434, 441 (D.C. Cir. 2005); *Nat'l Gypsum Co. v. EPA*, 968 F.2d 40, 41 (D.C. Cir. 1992); *Algonquin Gas Transmission Co. v. FERC*, 948 F.2d 1305, 1315–16 (D.C. Cir. 1991). "[I]nquiry into the facts is to be searching and careful." *Bowman Transp., Inc. v. Ark.-Best Freight Sys., Inc.*, 419 U.S. 281, 285 (1974) (internal quotation marks omitted). EPA's listing decision should be vacated if EPA fails to meet any of those requirements. *See Nat'l Gypsum*, 968 F.2d at 47; *Anne Arundel Cty.*, 963 F.2d at 419; *Kent Cty.*, 963 F.2d at 393; *see also Tex Tin Corp. v. EPA*, 992 F.2d 353, 355–356 (D.C. Cir. 1993).

## ARGUMENT

### I. EPA IGNORED KEY EVIDENCE AND FAILED TO COMPLY WITH ITS OWN REGULATIONS IN SCORING THE SITE BASED UPON INTERCONNECTED AQUIFERS.

This case involves complex technical matters—but the legal arguments are straightforward. EPA failed to comply with the APA, CERCLA, and its own regulations in scoring the Site for inclusion on the National Priorities List, because it ignored or refused to consider clear record evidence contradicting the agency's central assumptions.

In scoring the Site, EPA assumed that the aquifers within two miles of the Site are interconnected. EPA calculated a Hazard Ranking System score of 50.0 for the Site based on the Site's "Aquifer Score." JA__ [Revised Documentation at 3]. The Aquifer Score in turn depends on three factors: (1) the "likelihood that a site has released or has the potential to release hazardous substances into the environment," (2) the "characteristics of the waste" released into the environment, and (3) the "people or sensitive environments (targets) affected by the release." JA__ [Support Document at v].

Under EPA regulations, if the aquifers within a two-mile radius of a site are *interconnected*, a single Aquifer Score is assigned to all of the interconnected aquifers. 40 C.F.R. pt. 300 app. A, § 3.0.1.2.1. If the aquifers are *not* interconnected, however, each aquifer receives a separate score, and the site's

overall Aquifer Score is the highest score for any one aquifer. *Id.*; JA__ [Revised Documentation at 3]; __–__ [Guidance Manual at 197–202].

The theory behind this approach is that when aquifers are interconnected, contamination present in any of the aquifers can more easily flow to other aquifers (and populations that draw water from them). Conversely, if the aquifers are not interconnected, it is more difficult for contamination in a particular aquifer to flow to other aquifers, making it less likely that contamination in one aquifer will impact populations served by other aquifers.

EPA's regulations describe how the agency is to determine whether two aquifers are interconnected: EPA must "[e]valuate whether aquifer interconnections occur within 2 miles of the sources at the site," and if "data are not *adequate to establish* aquifer interconnections," EPA must "*evaluate the aquifers as separate aquifers.*" 40 C.F.R. pt. 300 app. A, § 3.0.1.2.1 (emphases added). As EPA itself has explained, "[a]quifer interconnections cannot be assumed, but must be supported by evidence." JA__ [Guidance Manual at 135].

EPA acted arbitrarily and capriciously, without substantial evidence, and contrary to law when it calculated the Aquifer Score for the Site without adhering to these requirements, the APA, and its statutory mandate to accurately assess risk. The agency concluded that aquifers within two miles of the Site are interconnected, and it scored the Site on that basis. It did so without distinguishing or even

considering numerous record sources demonstrating that the aquifers are *not* interconnected. Had it properly applied its regulations and considered all of the evidence, EPA would have scored the aquifers as separate aquifers—resulting in a Hazard Ranking System score *below* the listing threshold. *See* JA__ [EKI Comment at Table 2].

### A. EPA Ignored Substantial Record Evidence Demonstrating That The Aquifers Are Not Interconnected.

"[A]n agency's refusal to consider evidence bearing on the issue before it constitutes arbitrary agency action within the meaning of § 706." *Butte Cty. v. Hogen*, 613 F.3d 190, 194 (D.C. Cir. 2010). In addition, it "is certainly incumbent upon the EPA" to respond "in a reasoned manner to significant comments received." *Northside Sanitary Landfill, Inc. v. Thomas*, 849 F.2d 1516, 1520 (D.C. Cir. 1988) (internal quotation marks omitted); *see Ass'n of Private Sector Colls.*, 681 F.3d at 441. Here, EPA ignored substantial record evidence—including evidence explicitly discussed in Petitioners' (and their consultants') comments—demonstrating that aquifers within a two-mile radius of the Site are *not* interconnected.

An aquifer is defined as "[o]ne or more strata of rock or sediment that is saturated and sufficiently permeable to yield economically significant quantities of water to wells or springs." JA__ [Guidance Manual at 116]. For example, layers of sand, gravel, or limestone below ground may transmit substantial volumes of

water and act as aquifers. Two aquifers may be separated by a "confining layer," which is a "layer of low hydraulic conductivity (relative to adjacent geologic materials) that is not expected to be used as an aquifer." *Id.* Hydraulic conductivity measures the "overall ability of water to flow through a geologic material." *Id.* Layers of shale or clay (also called "till" or "fine-grained units")[4] have a low hydraulic conductivity (they do not transmit much water) and may serve as confining layers. Below ground, aquifers and confining layers may be stacked on top of each other like Legos®, with confining layers separating aquifer layers.

Aquifers are interconnected when subsurface conditions "allow two or more aquifers . . . to be combined into a single aquifer." *Id.* If aquifers are interconnected, EPA must "combine the aquifers having interconnections in scoring the site." 40 C.F.R. pt. 300 app. A, § 3.0.1.2.1. "If data are not adequate to establish aquifer interconnections," however, EPA must "evaluate the aquifers as separate aquifers." *Id.*

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[4] As a general matter, references to "clay," "till," and "fine-grained units" describe geologic materials with low hydraulic conductivity that may serve as a confining layer. *See* JA__ [55 Fed. Reg. at 51,601] (listing hydraulic conductivity of clay, till, and fine-grained units); *see, e.g.*, JA__ [EKI Comment at 4] (referring to "clay till and other fine-grained units"); __ [EPA Reference 129 at 24] (referring to "clay till"); __ [Revised Documentation at 43] (referring to "fine-grained units"). For ease of reference, Petitioners use the word "clay" to refer to clay, till, and fine-grained units.

Aquifers are *not* interconnected if they are separated by a confining layer with a "difference in hydraulic conductivity" of "at least two orders of magnitude." JA__ [Guidance Manual at 116]. In other words, aquifers are not interconnected if there is a confining layer between the aquifers that water cannot easily flow through.

EPA and Petitioners agree that there is a sand and gravel "outwash" aquifer (which Petitioners refer to as the Glacial Outwash Aquifer) directly below ground within a two-mile radius of the Site. JA__ [Revised Documentation at 43].[5] The issue in this case has to do with what exists beneath that Glacial Outwash Aquifer: a confining layer, or another aquifer. If a confining layer of shale or clay separates the upper Glacial Outwash Aquifer from the lower aquifers within a two-mile radius of the Site, the aquifers are *not* interconnected.

To determine whether aquifers are interconnected, EPA's Guidance Manual instructs the agency to consult "scientific journals on geology or ground water resources in the area published by Federal agencies" and "publications, circulars, bulletins or any other reports from state agencies responsible for geologic or ground water resource information." JA__ [Guidance Manual at 118]. Next, EPA

[5] EPA refers to this aquifer as the "Sand and Gravel Outwash Overburden." JA__ [Revised Documentation at 43]. The geologic cross sections in the record depict this aquifer as a layer of sand and gravel. *See infra* pp. 27–31.

must examine "site-specific information." *Id.* Finally, EPA may engage in additional data collection, including examining "well logs" and "[c]ross-sections generated from well log data." JA__–__ [*Id.* 118–119].

Geological Surveys. At least *three* geological surveys in the record all support the existence of a confining layer of shale or clay in the general area of the Site. First, a geological survey of Marion County, Indiana states that upper "sand and gravel units" form "a coherent shallow aquifer system" that "is, for the most part, distinct from deeper sand and gravel or bedrock aquifers." JA__, __ [EKI Ex. C at AMMH2195, 2231]. The same geological survey also explains that "a thick, persistent sequence of" clay "creates a low-permeability confining unit that, in most places, effectively separates the shallow system from deeper aquifers." JA__ [*Id.* AMMH2231]. Second, a study of Marion County by the Indiana Department of Natural Resources states that "[i]n places, particularly where it lies beneath a cover of till, the aquifer is divided into two units by a relatively thick and extensive till layer." JA__ [EPA Reference 127 at 4]. Third, a groundwater survey of Marion County based on U.S. Geological Survey data describes "an extensive confined aquifer in the northeastern portion" of the county and "laterally extensive clay layers in the central part of the county," and states that "clay layers locally separate the aquifer into an upper and lower zone." JA__, __ [EPA Reference 129 at 22, 26].

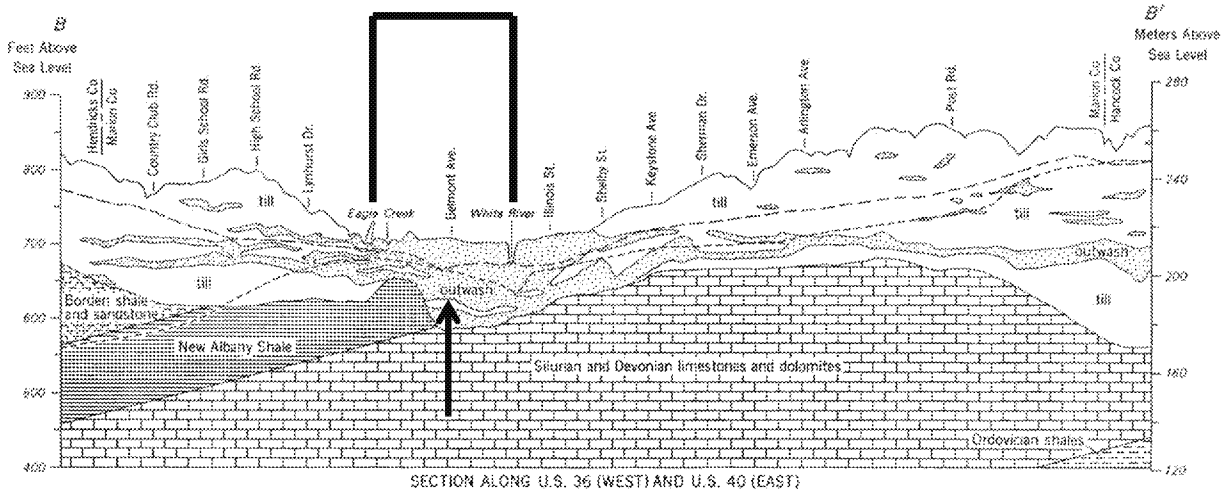
Each of these geological surveys suggests that the upper Glacial Outwash Aquifer is *not* interconnected with lower aquifers. But EPA did not even discuss these statements in the geological surveys—even though the first and third surveys were specifically cited by AMMH's consultant EKI, EPA cited the *previous page* of the second survey, and EPA cited the *following page* of the third survey. *See* JA__ [EKI Comment at 4]; __ [Revised Documentation at 44] (citing JA__ [EPA Reference 127 at 3]; __ [EPA Reference 129 at 23]).

Site-Specific Cross Sections. In addition to these geological surveys, site-specific evidence—including three cross sections of the geology within a two-mile radius of the Site—demonstrates that the upper Glacial Outwash Aquifer is *not* interconnected with the lower aquifers. These cross sections depict the geology below ground within a certain distance of the Site. To identify the relevant portion of these cross sections, it is helpful to locate landmarks within a two-mile radius of the Site. Figure 1-5, reproduced above, depicts the relevant two-mile radius. *See supra* p. 12. Figure 1-5 depicts that radius beginning roughly at Eagle Creek in the west and extending roughly to the White River in the east. The relevant two-mile radius on the cross sections reproduced below thus stretches from approximately the area labeled "Eagle Creek" in the west to the area labeled "White River" in the east.

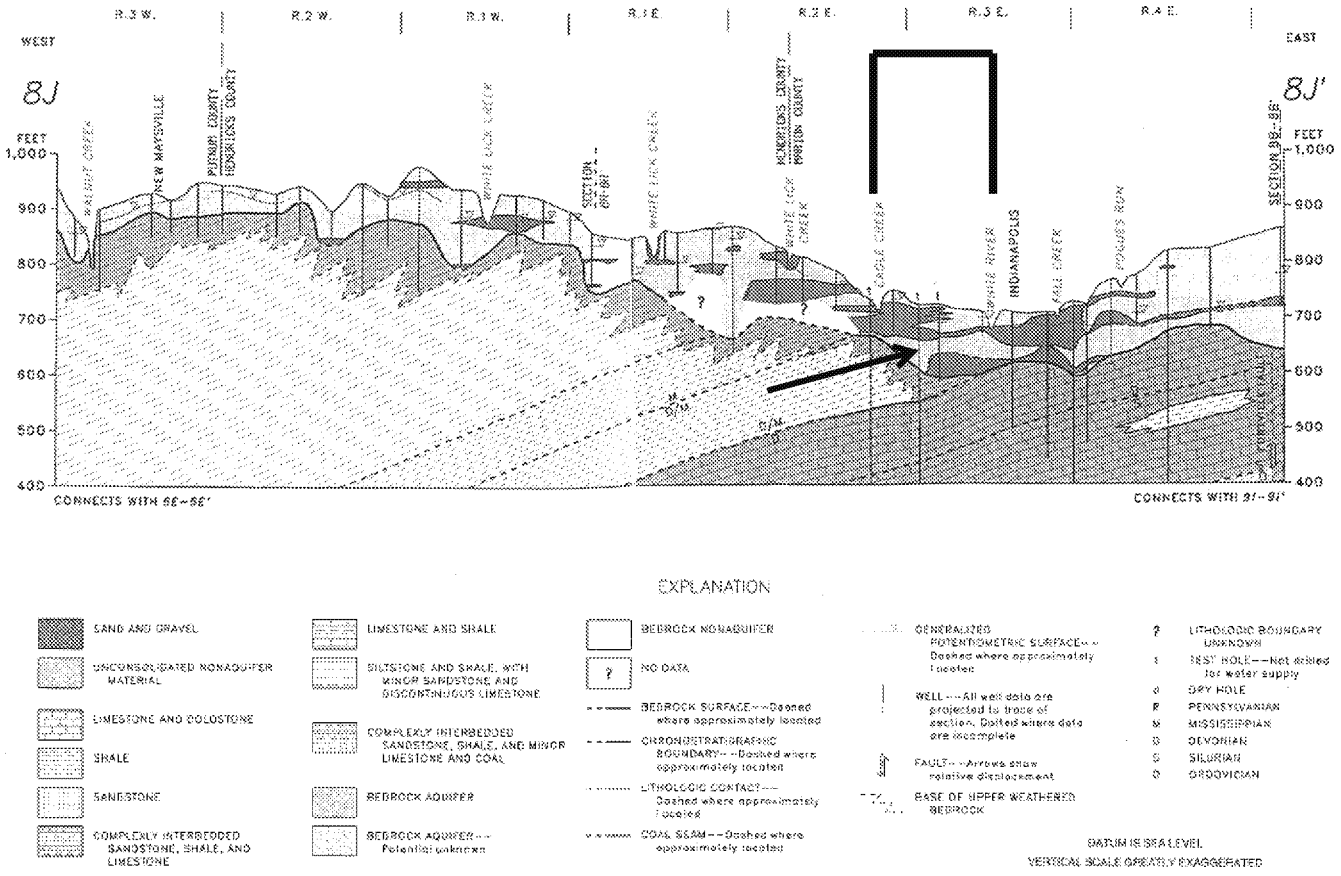
The first cross section, B-B' (pronounced "B, B prime"), is based upon

groundwater modeling of the Glacial Outwash Aquifer along the White River. JA__ [EPA Reference 129 at 22]. This cross section is included in the record and cited by EPA. *See* JA__ [Revised Documentation at 44] (citing JA__ [EPA Reference 129 at 23]). The cross section depicts four principal geologic layers, from top to bottom: (1) an upper sand and gravel aquifer (small dots) (i.e., the Glacial Outwash Aquifer); (2) a confining layer of shale (dark thatching) beginning to the west of Eagle Creek and touching a confining layer of clay (a white, finger-like layer) extending past the White River to the east;[6] (3) a middle sand and gravel aquifer below the clay layer (small dots); and (4) a lower limestone bedrock aquifer (bricks). Aquifers (1) and (3) are not connected except *beyond* the White River, at the location where the finger of clay ends. The aquifers are *not* interconnected within the relevant two-mile radius. An annotated version of the cross section, with a horseshoe indicating the two-mile radius and an arrow indicating the clay layer, is shown below:

[6] The white formations in cross section B-B' are identified as "till," which is equivalent to clay for present purposes. *See supra* n.4. This same finger-like layer is described in cross section 8J-8J' and Plate R-5 as clay or "nonaquifer material." *See infra* pp. 29–31.



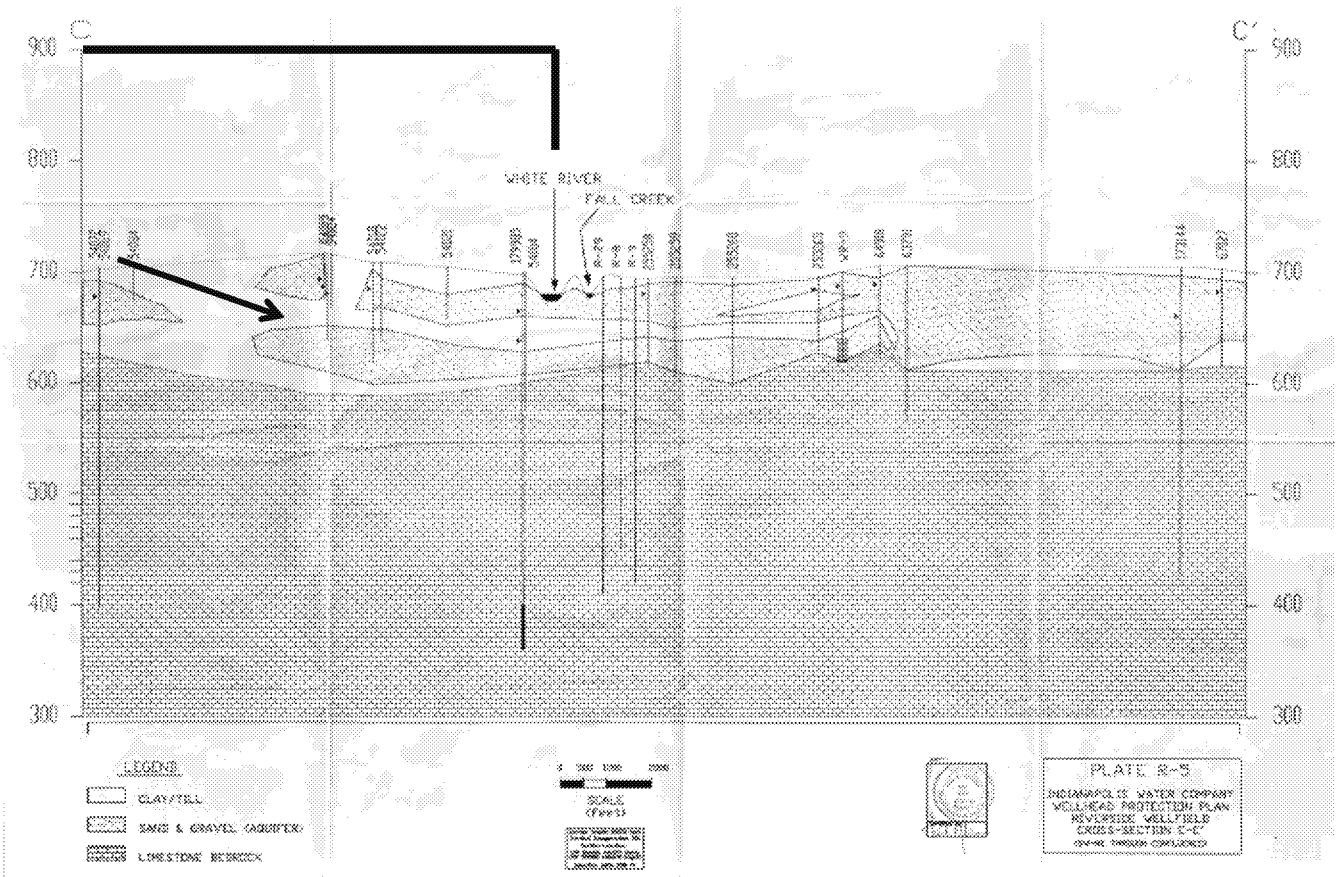

The second cross section, 8J-8J', is from the Hydrogeologic Atlas of Aquifers in Indiana. This cross section is included in the record, and this source is repeatedly cited by EPA. *See* JA__ [EPA Reference 130 at 16]; __–__ [Revised Documentation at 43–45] (citing JA__ [EPA Reference 130]). In the area between Eagle Creek and the White River, this cross section once again shows four principal geologic layers: (1) an upper sand and gravel aquifer (i.e., the Glacial Outwash Aquifer) (a darker color); (2) a confining layer of shale (dashed lines) touching a confining layer of "unconsolidated nonaquifer material" (a lighter color); (3) a middle sand and gravel aquifer (a darker color); and (4) a lower limestone bedrock aquifer (bricks). As in cross section B-B', the nonaquifer layer is shaped like a finger (annotated below with an arrow):




The third cross section, Plate R-5, was prepared as part of an "ongoing wellhead protection planning effort being conducted by the Indianapolis Water Company (IWC) for the well fields serving the city of Indianapolis." JA__ [EPA Reference 129 at 17]. This cross section is also included in the record. JA__ [Minning Comment at Plate R-5]; __ [EPA Reference 129 at 273]. EPA repeatedly references the source containing the cross section. JA__, __ [Revised Documentation at 27, 44] (citing JA__ [EPA Reference 129]). In addition, AMMH's consultant EKI cited Plate R-5 to support its conclusion that there is a confining clay layer separating the upper and lower aquifers, and AMMH's

consultant R.C. Minning included Plate R-5 in its comments to EPA. JA__ & n.22 [EKI Comment at 4 & n.22]; __ [Minning Comment at Plate R-5].

Plate R-5 displays the aquifers near the White River, which is the eastern boundary of the two-mile radius; Eagle Creek is not depicted. The cross section plainly shows the same principal geologic layers: (1) an upper sand and gravel aquifer (small dots) (i.e., the Glacial Outwash Aquifer); (2) a confining layer of clay (a white, finger-like layer); (3) a middle sand and gravel aquifer (small dots); and (4) a lower limestone bedrock aquifer (bricks). The clay layer is annotated with an arrow:



Well Logs. Data from well logs also confirm the existence of a confining layer of clay. Well log DNR 179985 lists a blue clay layer from 65 to 70 feet below ground, and a sandy clay layer from 93 to 100 feet below ground—the same general area where the cross sections depict a clay layer:

GROUND ELEVATION: 700.0

| TOP | BOTTOM | FORMATION |
|---|---|---|
| 0.0 | 3.0 | FILL |
| 3.0 | 10.0 | CLAY YELLOW |
| 10.0 | 25.0 | GRAVEL DRY |
| 25.0 | 40.0 | SAND WATER BEARING |
| 40.0 | 65.0 | GRAVEL CLAY BLUE |
| 65.0 | 70.0 | CLAY BLUE |
| 70.0 | 72.0 | SAND & GRAVEL MUDDY |
| 72.0 | 85.0 | CEMENTED GRAVEL |
| 85.0 | 93.0 | WATER GRAVEL & SAND |
| 93.0 | 100.0 | CLAY SANDY |
| 100.0 | 105.0 | LIME BROKEN |

Well log DNR 414789 similarly depicts a sandy gray clay layer from 45 to 82 feet below ground, and a second layer of sandy gray clay from 85 to 94 feet below ground—again, the same area where the cross sections depict a clay layer:

GROUND ELEVATION: 733.0

| TOP | BOTTOM | FORMATION |
|---|---|---|
| 0.0 | 2.0 | BROWN CLAY |
| 2.0 | 25.0 | M-C SAND AND GRAVEL W/ BOULDERS |
| 25.0 | 30.0 | SANDY GRAY CLAY |
| 30.0 | 45.0 | M-C SAND AND GRAVEL W/ COBBLES |
| 45.0 | 82.0 | SANDY GRAY CLAY |
| 82.0 | 85.0 | F-M SAND AND GRAVEL |
| 85.0 | 94.0 | SANDY GRAY CLAY |

| | | |
|---|---|---|
| 94.0 | 100.0 | F-M SAND AND GRAVEL W/ CLAY |
| 100.0 | 130.0 | F-M SAND AND GRAVEL |
| 130.0 | | LIMESTONE |

Both well logs are included in the record, cited by EPA, and depicted on EPA Figure 1-5. JA__ –__ [EPA Reference 116 at 51–54]; __ [Revised Documentation at 44] (citing JA__ [EPA Reference 116]); *supra* Figure 1-5 at p. 12 (depicting location of well logs).

In addition to those well logs, AMMH's consultant R.C. Minning created a cross section of well log data that is included in the record and referenced by both R.C. Minning and AMMH's consultant EKI. JA__ [Minning Comment at cross section A-A']; __ –__ [EKI Comment at 5–6]. The cross section covers roughly the same area as Plate R-5, and it once again shows a confining layer of clay extending from the western side of the cross section through the White River in the middle of the cross section.

All of these geological surveys, cross sections, and well logs point to the same conclusion: A continuous layer of shale or clay stretches across the relevant two-mile radius.

Under EPA's regulations, this layer is considered a confining layer if there is a "difference in hydraulic conductivity" of "at least two orders of magnitude" (a difference of 100 times) between the shale or clay layer and surrounding aquifers. JA__ [Guidance Manual at 116]. EPA's regulations also explain that shale and

some kinds of clay have a low hydraulic conductivity of $10^{-8}$ cm/sec. 55 Fed. Reg. at 51,601.[7] Other kinds of clay also have a low hydraulic conductivity of $10^{-6}$ cm/sec. *Id.* In contrast, sand has a higher hydraulic conductivity of $10^{-4}$ cm/sec; gravel, clean sand, and limestone have an even higher hydraulic conductivity of $10^{-2}$ cm/sec. *Id.*[8] Laboratory testing confirms that clay at the Site has a hydraulic conductivity between $2.8 \times 10^{-8}$ and $4.2 \times 10^{-8}$ cm/sec. JA__ [EPA Reference 40 at 33].

As AMMH's consultant EKI stated in its comments to EPA, these "measurements are *five* orders of magnitude lower than the average hydraulic conductivity value of $2.5 \times 10^{-2}$ [cm/sec] reported for aquifer sediments" at the Site. JA__ n.28 [EKI Comment at 5 n.28] (emphasis added). Because there is a "difference in hydraulic conductivity" of "at least two orders of magnitude" between the shale or clay layer and surrounding aquifers, the continuous layer of shale or clay within a two-mile radius of the Site serves as a confining layer, and the upper and lower aquifers are *not* interconnected.

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[7] Hydraulic conductivity measures the "overall ability of water to flow through a geologic material." JA__ [Guidance Manual at 116]. It is measured in centimeters per second (cm/sec). Because the measurements are small, it is helpful to use exponents. $10^{-8}$ cm/sec, for example, corresponds to 0.00000001. $10^{-6}$ cm/sec corresponds to 0.000001.

[8] A hydraulic conductivity of $10^{-4}$ is two orders of magnitude lower than a hydraulic conductivity of $10^{-2}$.

EPA did not discuss the relevant statements in the geological surveys. It did not discuss the cross sections depicting the clay layer. It did not discuss the clay layer plainly shown on the well logs. It even failed to discuss the low hydraulic conductivity of clay at the Site. And EPA failed to address all this evidence despite the fact that Petitioners and their consultants highlighted the evidence in their comments, and despite the fact that EPA relied on some of the same references to support *other* propositions. EPA's failure to acknowledge the existence of a confining layer of shale or clay separating the upper Glacial Outwash Aquifer from the lower aquifers is not a minor issue. It is a crucial factor in scoring the Site. *See infra* pp. 43–44. EPA acted arbitrarily and capriciously, and without substantial evidence, by failing to discuss or address this evidence, and by failing to respond to Petitioners' (and their consultants') comments about this evidence. *See Butte Cty.*, 613 F.3d at 194; *Northside Sanitary Landfill*, 849 F.2d at 1520.

### B. EPA Failed To Adequately Explain The Basis For Its Decision Or Offer Substantial Evidence To Establish That The Aquifers Are Interconnected.

An EPA listing decision also should be vacated if EPA fails "to explain adequately the scientific basis for its decision" or "offer substantial evidence in support of its decision." *Nat'l Gypsum*, 968 F.2d at 41. EPA's conclusion that the aquifers within a two mile radius of the Site are interconnected again fails

Administrative Law 101. EPA relied on several references that do not support—and in some cases, flatly contradict—its conclusion. And to the extent the record evidence is unclear with respect to whether the aquifers are interconnected, EPA's own regulations required EPA to determine that the aquifers are *not* interconnected. EPA's conclusion that the aquifers are interconnected is thus arbitrary and capricious, unsupported by the evidence, and contrary to law.

First, EPA acknowledged the existence of a shale layer with low hydraulic conductivity both beneath and to the west of the Site. *See* JA__–__ [Revised Documentation at 44–45]. But EPA then proceeded to conclude that because the shale layer is absent on the eastern side of the relevant two-mile radius, the upper Glacial Outwash Aquifer is interconnected with the lower aquifers in this area. To support that conclusion, EPA explained that the shale layer "is not present throughout the study area and is specifically not present within 2 miles east of the study area where unconsolidated materials (the sand and gravel outwash overburden) sit directly on the carbonate Muskatatuck group," and that within "the Riverside wellfield, the outwash aquifer is directly on the bedrock." *See* JA__ [*Id.* 44]. EPA cited cross section B-B' and well logs DNR 179985 and 414789—both depicted above—as well as page 10 of an Indiana Geological Survey, which displays areas with and without shale near the Site. *See id.* (citing JA__ [EPA Reference 129 at 23]; __–__ [EPA Reference 116 at 51–55]; __ [EPA Reference

120 at 10]).

EPA's conclusion is not supported by those sources. It is true that *shale* is missing from part of the two-mile radius. What EPA failed to mention, however—and what is clearly depicted in the cross sections and well logs—is that *clay* is present as a confining layer below the Glacial Outwash Aquifer even when shale is not. *See, e.g.*, *supra* cross sections B-B', 8J-8J', Plate R-5; well logs DNR 179985 and 414789. EPA was also correct that on the eastern side of the two-mile radius, a sand and gravel aquifer sits directly on top of the lower limestone bedrock aquifer. Once again, however, EPA missed the point. The cross sections and well logs—including well logs DNR 179985 and 414789—plainly show that on the eastern side of the two-mile radius, a confining layer of clay sits *above* the lower aquifers and separates the Glacial Outwash Aquifer from those aquifers. *See, e.g.*, *supra* cross section B-B' (depicting white finger-like layer of clay separating the Glacial Outwash Aquifer from the lower aquifers). The key point is that there is a confining clay layer between the Glacial Outwash Aquifer and the lower aquifers; geologic conditions beneath the confining clay layer are immaterial. EPA's conclusion that the Glacial Outwash Aquifer and lower aquifers are interconnected thus lacks a scientific basis and is unsupported by the evidence.

Second, EPA cites Reference 129 for the proposition that "'the limestone aquifer is hydraulically connected to the outwash sand and gravel aquifer.'" JA__

[Revised Documentation at 44] (citing JA__ [EPA Reference 129 at 27]). Once again, EPA misses the point. Reference 129 states that in some areas, it is "likely that the limestone aquifer is hydraulically connected to the outwash sand and gravel aquifer." JA__ [EPA Reference 129 at 27]. EPA should have continued to the very next sentence, however, which states that in other areas, "the limestone aquifer is hydraulically isolated from the upper intertill aquifer system." *Id.* Cross section B-B', which is cited just a few pages earlier in the same source, shows where the aquifers are interconnected, and where they are not: In the relevant two-mile radius between Eagle Creek and the White River, the limestone aquifer is not interconnected with the upper Glacial Outwash Aquifer. Further to the east of the White River—and outside the relevant two-mile radius—the limestone aquifer is interconnected with the upper Glacial Outwash Aquifer. JA__ [*Id.* 23]. Ditto for cross sections 8J-8J' and Plate R-5. *See supra* pp. 29–31. Because Reference 129 fails to support EPA's position, the agency's conclusion lacks a scientific basis and is not supported by substantial evidence.

Third, EPA states that the "thickness and extent of the finer grained material in the project area are insufficient to form a barrier to vertical contaminant migration. The finer grained unit from 35-50 ft [below ground surface] is not present in parts of the project area." JA__ [Revised Documentation at 44]. In laymen's terms, EPA is arguing that there is no confining layer of clay within the

relevant two-mile radius because clay is absent between 35 and 50 feet below ground in some parts of the Site. Everything EPA says is true. It is also irrelevant.

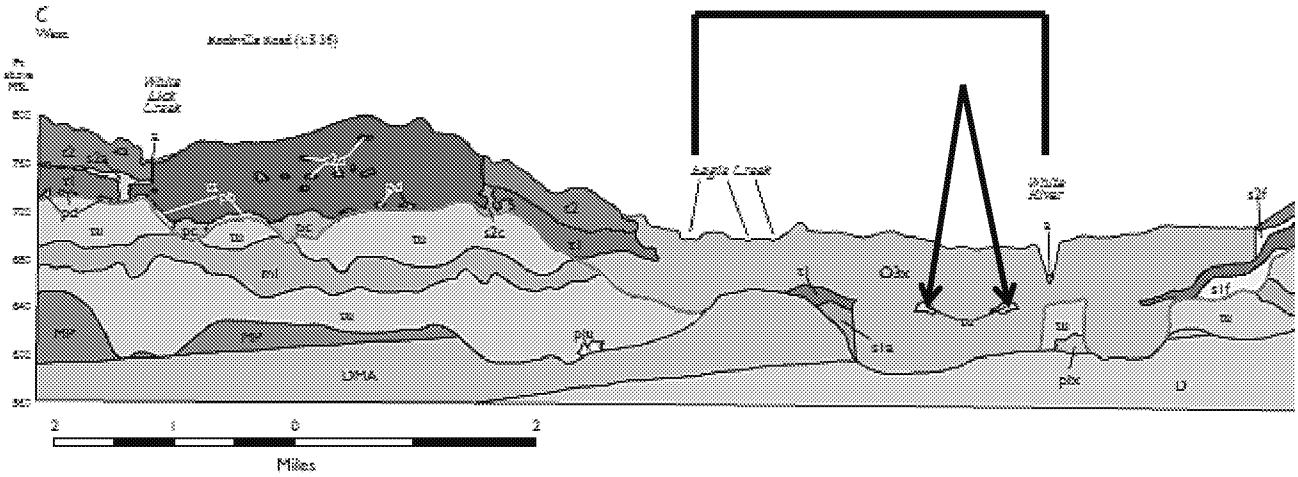
Petitioners *agree* that there is no confining clay layer within the upper Glacial Outwash Aquifer between 35 and 50 feet below the ground surface. *See* JA__–__ [Minning Comment at 6–7] (describing location where there is no confining clay layer within this *upper* Glacial Outwash Aquifer); __ [EPA Reference 16] (cross sections depicting no confining clay layer in some areas of the *upper* Glacial Outwash Aquifer). But the agency is focused on the wrong elevation. The cross sections and well logs depicted above show a confining clay layer between about 600 and 640 feet above sea level, which is at least 70 feet below the ground surface—far deeper than the 35 to 50 feet below ground surface EPA discusses. *See* JA__ [EPA Reference 16] (noting that the Site is between 710 and 720 feet above sea level); *supra* pp. 27–33. Moreover, the cross sections EPA cited as representing the geology underlying the Site show a confining clay layer at 640 feet above sea level. *See id.* (depicting brown clay layer at bottom of cross sections). AMMH's consultant EKI specifically pointed this out to EPA, explaining that the confining clay layer is *distinct* from other clay areas in the upper Glacial Outwash Aquifer, and that the relevant clay layer "generally corresponds to elevations of 630 to 640 feet" above sea level. JA__ & n.22 [EKI Comment at 4 & n.22] (citing Plate R-5). EPA's statement that there is no

confining clay layer at 35 to 50 feet below the ground surface thus is of no consequence. Yet again, EPA's conclusion lacks a scientific basis and is not supported by substantial evidence.

Fourth, EPA apparently concludes that there is no confining clay layer because five wells purportedly "show vinyl chloride contamination migrating below the fine-grained sediments down to a depth of 70 feet." JA__ [Revised Documentation at 43]. EPA again fails to acknowledge that the relevant clay layer is *deeper* than 70 feet below ground. *See* JA__ [EKI Comment at 4]; *supra* cross sections B-B', 8J-8J', and Plate R-5. The fact that vinyl chloride has migrated to an area *on top* of the relevant clay layer does not establish that vinyl chloride has traveled *through* that layer. EPA does not cite evidence of vinyl chloride *below* the confining clay layer that begins at about 640 feet above sea level, 70 feet or more below ground. EPA's conclusion therefore lacks a scientific basis and is unsupported by substantial evidence.

Fifth, although EPA does not appear to rely on it, a cross section from an Indiana Geological Survey lends some support to the agency's conclusion that a confining clay layer is not present within a two-mile radius of the Site. Unlike the cross sections and well logs cited above, cross section C-C' does not depict a confining clay layer separating the upper and lower aquifers. *See* JA__ [EPA Reference 120 at 8]. Instead, it shows two non-continuous clay areas (the two

small areas labeled "tu" below and to the right of the word "O3x"):




In its discussion of aquifer interconnections, EPA cites this cross section only for the general proposition that a "continuous sand and gravel outwash plain" stretches across the relevant two-mile radius. *See* JA__ [Revised Documentation at 43]. Petitioners agree with that basic point. But it is (again) simply immaterial to the question whether there is a confining clay layer *below* the upper Glacial Outwash Aquifer. *See State Farm*, 463 U.S. at 50 ("It is well established that an agency's action must be upheld, if at all, on the basis articulated by the agency itself."). Even if EPA had relied on this cross section to support its conclusion, moreover, EPA was required under the APA to explain why cross section C-C' is *more* accurate than the other cross sections and well logs contained in the record. *See Clark Cty. v. FAA*, 522 F.3d 437, 442 (D.C. Cir. 2008) (agency does "not satisfy the APA's reasoned decisionmaking requirement" if its conclusions "do not address the seemingly contrary findings" in the record). EPA did not do so.

In sum, substantial record evidence demonstrates that the aquifers within a two-mile radius of the Site are *not* interconnected. EPA's conclusions to the contrary lack a sound evidentiary basis, and EPA's listing decision should thus be vacated. *See Nat'l Gypsum*, 968 F.2d at 41.

### C. EPA Failed To Follow Its Own Regulations, Which Require The Agency To Treat Two Aquifers As Separate If The Data Do Not Establish Interconnection.

Even if the evidence in the record is unclear (and it is not), EPA's own regulations state that "[i]f data are not *adequate to establish* aquifer interconnections, *evaluate the aquifers as separate aquifers*." 40 C.F.R. pt. 300 app. A, § 3.0.1.2.1 (emphases added). It is thus EPA's burden to "establish" aquifer interconnections—not just to surmise that they may exist. In other words, a tie goes to Petitioners. This approach aligns with EPA's congressional mandate to accurately assess risk under the Hazard Ranking System, which in turn ensures that the National Priority List is truly populated with only high-priority sites. Given the geological surveys, cross sections, and well logs in the record all depicting a confining layer of shale or clay separating the Glacial Outwash Aquifer from the lower aquifers, EPA cannot credibly contend that the data is "adequate to establish aquifer interconnections." *Id.* EPA thus acted contrary to its own regulations when it scored the aquifers as interconnected. *See Algonquin Gas*, 948 F.2d at 1315–16 (reversing order where agency failed to follow its own regulations).

### D. The Correct Score For The Site Is Below The Listing Threshold.

Because EPA incorrectly concluded that the aquifers are interconnected, it improperly scored the Site. The Site's Hazard Ranking System score is based on the "Aquifer Score." JA__–__ [Revised Documentation at 2–3]. If the aquifers are interconnected, the Aquifer Score reflects the combined score for all aquifers. *See* 40 C.F.R. pt. 300 app. A, § 3.0.1.2.1. If the aquifers are not interconnected, however, each aquifer is scored separately, and the Aquifer Score is the "highest value" for any single aquifer. JA__ [Revised Documentation at 3] (line 13).

EPA scored the aquifers as interconnected, so it assigned an Aquifer Score of 100.0 to the Site, resulting in a Hazard Ranking System score of 50.0. JA__–__ [Revised Documentation at 2–3].[9] Because the aquifers are not interconnected, however, they must be scored separately. The Glacial Outwash Aquifer is scored based on an observed release of hazardous substances into that aquifer, whereas the lower aquifers are scored based only on a potential to release into those aquifers. JA__ [EKI Comment at 8]. Because an observed release is scored much higher than a potential to release, the Glacial Outwash Aquifer receives an Aquifer Score

[9] Line 12 of the score sheet lists the Aquifer Score as 550 x 32 x 989 = 17,406,400/82,500 = 210.9. JA__ [Revised Documentation at 3]. This is an error. In response to comments from Petitioners, EPA revised the Waste Characteristics Score to 18 and the Targets score to 929, but failed to update line 12 of the score sheet. *See* JA___ [Support Document at 58].

of 40.0, whereas the two lower aquifers receive Aquifer Scores of 4.6 and 5.2, respectively. *See* JA__ –__ [EKI Comment at Tables 2–4]. The Aquifer Score for the Site is thus 40.0, resulting in a Hazard Ranking System Score of 20.0—well *below* the listing threshold. *See id.*

Bottom line: If EPA had properly determined that the aquifers are *not* interconnected, it would have scored the Site appropriately—resulting in a decision not to list the Site. Because EPA acted arbitrarily and capriciously, without substantial evidence, and contrary to law when it concluded that the aquifers are interconnected, EPA's listing decision should be vacated.

## II. EPA VIOLATED CERCLA AND THE APA BY REFUSING TO CONSIDER AND IGNORING EVIDENCE OF THE DIRECTION OF GROUNDWATER FLOW WHEN SCORING THE SITE.

CERCLA requires EPA to ensure, "to the maximum extent feasible," that the Hazard Ranking System "accurately assesses the relative degree of risk to human health and the environment" posed by contaminants at a site. 42 U.S.C. § 9605(c); *see Mead Corp.*, 100 F.3d at 156. In this case, EPA scored the Site based on the assumption that contaminants at the Site pose a risk to the municipal wellfields—merely because those wellfields are located within four miles of the Site. *See* JA__, __–__ [Revised Documentation at 3, 77–83]; __ [Support Document at 9]. As EPA itself acknowledges, however, groundwater at the Site flows to the south, which is *away* from those wellfields. *See* JA__ [Revised

Documentation at 45]. EPA nevertheless refused to consider the direction of groundwater flow when scoring the Site. Correcting for that error renders the Site ineligible for listing, because it lowers the Hazard Ranking System score below the listing threshold.

In EPA's view, the Hazard Ranking System "does not consider ground water flow direction in determining the eligibility of wells subject to potential contamination," allowing the agency to simply assume that any wellfields within four miles of the Site are endangered. JA__ [Support Document at 53]. EPA also asserts that "sufficient data are not available at this stage in the listing process to accurately assess the ground water flow directions throughout the [target distance limit]," up to four miles away from the Site. JA__ [*Id.* 29].[10]

In this case, EPA's refusal to even consider groundwater flow direction in the face of definitive record evidence runs afoul of CERCLA's requirement to accurately assess risk "to the maximum extent feasible"—not to mention the APA's mandates to consider all important aspects of a problem and to reach rational conclusions consistent with the record. 42 U.S.C. § 9605(c); *see Mead*

[10] For groundwater contamination, EPA evaluates wellfields within a four-mile radius of the site, which EPA calls the "target distance limit." *See* 40 C.F.R. pt. 300 app. A, § 3.0.1.1.

*Corp.*, 100 F.3d at 156; *State Farm*, 463 U.S. at 43.[11]

EPA's second statement, declaring that evidence of groundwater flow is "insufficient" in any event, ignores substantial record evidence, conflicts with EPA's own conclusions, and is based on the unexplained (and inexplicable) assumption that groundwater flow direction at or beyond the wellfields, miles *away* from the Site, is relevant to the question whether contamination at the Site poses a risk to the wellfields. Because EPA failed to consider that important aspect of the Site, and failed to use available data to accurately assess risk, EPA acted arbitrarily, capriciously, and contrary to law, and its listing decision should be vacated.

### A. EPA Violated CERCLA By Refusing To Consider The Direction Of Groundwater Flow.

EPA's Hazard Ranking System must "be based upon relative risk or danger to public health or welfare or the environment," taking into account "to the extent possible the population at risk." 42 U.S.C. § 9605(a)(8). Following early overuse of the Hazard Ranking System—which resulted in EPA listing too many low-

[11] The Hazard Ranking System does not suspend the operation of either CERCLA or the APA and cannot excuse the agency's failure to satisfy those statutes in this as-applied challenge. *See, e.g.*, *Mead Corp.*, 101 F.3d at 155–156 (concluding in as-applied challenge that EPA regulation violates CERCLA); *Texas v. EPA*, 726 F.3d 180, 195 (D.C. Cir. 2013) (A "'valid statute always prevails over a conflicting regulation.'").

priority sites, *see supra* p. 7—Congress mandated that the Hazard Ranking System must "to the maximum extent feasible . . . accurately assess[] the relative degree of risk to human health and the environment posed by sites and facilities subject to review." 42 U.S.C. § 9605(c). Thus, this Court has interpreted CERCLA to prohibit EPA from listing sites without an accurate assessment of risk. *See Mead Corp.*, 100 F.3d at 156. By refusing to consider the direction of groundwater flow under the facts of this case, EPA acted contrary to those statutory requirements.

In situations where a contaminated site is newly identified, substantial data about groundwater flow may not yet have been collected. That is not the case here. Petitioners and their consultants cited voluminous record evidence demonstrating that groundwater flows south from the Site, away from the wellfields. *See, e.g.*, JA__–__ [Genuine Comment at 2–3]; JA__–__ [AMMH Comment at 11–12]; JA__ [Ramboll Comment at 2]; JA__–__ [Minning Comment at 3–4].

In fact, in documentation supporting the Final Rule, EPA specifically *agreed* that groundwater at the Site flows to the south, which is away from the wellfields: "[G]round water flow is in a southern direction for the shallow monitoring wells and a southern to southwestern direction for the deep monitoring wells," and "[t]he ground water flow direction in the project area is generally towards the south with some components of flow to the southeast and southwest." JA__, __ [Revised Documentation at 45, 71]. EPA similarly concluded that "[r]egional ground water

flow" between the Speedway Wellfield and the White River Valley (where the Riverside and White River Wellfields are located) is to the "southeast." JA__ [*Id.* 45]; *see supra* Figure 1-5 at p. 12 (depicting location of wellfields).

The record is compelling on this issue. Consider: Over twenty-five years, beginning in 1992, EPA, the Indiana Department of Environmental Management, General Motors, Genuine, and AMMH conducted groundwater studies including more than 7,000 groundwater measurements at the Site. *See* JA__–__ [Genuine Comment at 2–3]; __–__ [Revised Documentation at 69–70]. At least six different environmental consulting firms have analyzed that data, and all have concluded, in reports, figures, and maps in the record, that groundwater flow from the Site is in a southern direction. *See, e.g.*, JA__, __–__ [EPA Reference 21 at 3, 79–84]; __, __, __–__, __–__ [EPA Reference 23 at 27, 169, 176–179, 1585–95]; __ [EPA Reference 28 at 6]; __ [EPA Reference 40 at 36]. Groundwater maps from EPA's and Petitioners' consultants, U.S. Geological Survey, Indiana Geological Survey, Marion County Department of Health, and Indiana Department of Natural Resources show the same. *See, e.g.*, JA__–__ [EPA Reference 38 at 51–52]; __–__ [EPA Reference 75 at 80–83]; __–__, __–__ [EPA Reference 120 at 2–3, 5–7]; __ [EPA Reference 127 at 4]; __, __ [Ramboll References 7, 8]; __, __–__ [Ramboll Reference 1-2 at Drawings 3, 9–11]. And numerous additional sources in the record support the conclusion that groundwater flows to the south, including:

- "[G]roundwater flows in a general southeasterly direction." JA__ [EPA Reference 36 at 33].
- The "predominant" groundwater flow direction is "south-southwest." JA__ [EPA Reference 38 at 21].
- "[S]urface maps indicate that ground water flow is in a southern direction." JA__ [EPA Reference 53 at 8].
- "The ground water flow direction in the project area is generally towards the south with some components of flow to the southeast and southwest. Regional ground water flow near the Speedway wellfield is nearly parallel to Eagle Creek or northwest to southeast." JA__, __ [EPA Reference 53 at 14, 4223]; __ [EPA Reference 74 at 3].
- "[G]round water from the east flows regionally toward Big Eagle Creek" (i.e., to the south). JA__ [EPA Reference 74 at 3]; __ [EPA Reference 107 at 3].
- "[G]roundwater in the Site area predominantly flows south to southwest." JA__ [Ramboll Reference 14-1 at 11].

Despite substantial record evidence—and EPA's own conclusions about the direction of groundwater flow—EPA nevertheless refused to even consider the direction of groundwater flow in listing the Site, asserting that "the ground water flow direction between the sources and the municipal well fields *was not evaluated as part of the* [*Hazard Ranking System*] *evaluation* and thus it cannot be determined that contaminated ground water cannot reach the municipal well fields." JA__ [Support Document at 29] (emphasis added). EPA attempted to justify this approach with the conclusory statement that "determining the direction of ground water flow throughout the [target distance limit] is not consistent with a screening level evaluation such as the [Hazard Ranking System], and the ground

water flow direction is more accurately determined during a later stage of the superfund listing process." JA__, __ [Support Document at 29, 53].

EPA's refusal to consider the direction of groundwater flow is contrary to law. Under CERCLA, EPA is not permitted to list a site without accurately assessing risk. As this Court explained in *Mead Corp.*, an EPA regulation is "unreasonable as applied" to the facts of a particular listing if it results in "the inclusion of low-risk sites" on the National Priorities List. 100 F.3d at 155–156. Here, substantial data establishing the direction of groundwater flow shows that the Site does not endanger the wellfields. By refusing to even consider the direction of groundwater flow under the facts of this listing, EPA impermissibly included a low-risk site on the National Priorities List.

### B. EPA Acted Arbitrarily And Capriciously By Refusing To Consider The Direction Of Groundwater Flow.

An agency acts arbitrarily and capriciously in violation of the APA if it fails "to consider an important aspect of the problem" or offer "an explanation for its decision that runs counter to the evidence before the agency." *State Farm*, 463 U.S. at 43. In this case, EPA's refusal to even consider substantial record evidence regarding the direction of groundwater flow—an essential aspect of evaluating whether the wellfields are subject to potential contamination from the Site—renders its listing decision arbitrary and capricious.

This Court's precedents confirm EPA's error. In *National Gypsum*, for

example, this Court held that EPA's refusal to consider important aspects of the toxicity of waste at a site was arbitrary and capricious. 968 F.2d at 47. In that case, EPA had scored a site above the listing threshold based on the conclusion that boron was present at the site. As petitioners pointed out, however, there are several different types of boron—some that pose a high risk of harm, and others that pose a low risk. *Id.* at 42. EPA claimed that "given the preliminary nature" of a listing, "it is entitled to *infer*" that the more toxic form of boron was present at the site. *Id.* at 43. This Court rejected that claim, stressing that EPA is not entitled "to base a listing decision on unsupported assumptions" and "must at least give a reasoned explanation" for its conclusions. *Id.* at 44.

In *Kent County*, this Court similarly held that EPA acted arbitrarily and capriciously when it failed to accurately assess the risk posed by a site. *See* 963 F.2d at 392–393. In that case, EPA had tested groundwater at the site using an unfiltered sample. *Id.* at 392. EPA was aware, however, that testing using both filtered and unfiltered samples led to more accurate results. *See id.* at 395. EPA claimed that it was not required to collect a filtered sample because "'filtering of samples is not a regulatory requirement.'" *Id.* This Court rejected that argument. *See id.* at 396–397. In part because EPA "failed to offer any reason why it would have been infeasible" to collect both kinds of samples, this Court concluded that EPA's listing decision was arbitrary and capricious. *Id.* at 397.

This Court also has held more generally that agencies may not ignore real-world data that contradict the agency's assumptions. *See W. Va. v. EPA*, 362 F.3d 861, 867 (D.C. Cir. 2004) (remand appropriate where EPA failed to explain its assumptions "in the face of contrary real-world data"); *Appalachian Power Co. v. EPA*, 249 F.3d 1032, 1050–55 (D.C. Cir. 2001) (per curiam) (remanding EPA decision for failure to address "stark disparities between [EPA] projections and real world observations"); *Chem. Mfrs. Ass'n v. EPA*, 28 F.3d 1259, 1266 (D.C. Cir. 1994) ("EPA's reliance upon generic studies in face of conflicting detailed and specific scientific evidence" is "arbitrary and capricious.") (quoting *Tex Tin Corp.*, 992 F.2d at 354–355); *NRDC, Inc. v. Herrington*, 768 F.2d 1355, 1391 (D.C. Cir. 1985) (an agency "may not tolerate needless uncertainties in its central assumptions when the evidence fairly allows investigation and solution of those uncertainties"); *see also Am. Radio Relay League, Inc. v. FCC*, 524 F.3d 227, 241 (D.C. Cir. 2008) (remanding where agency relied on modeling and "offered no reasoned explanation for its dismissal of empirical data").

Here, EPA claims that given the preliminary nature of the listing, it is not required to consider the direction of groundwater flow. This Court held in *National Gypsum*, however, that the preliminary nature of a listing does not permit EPA to make unwarranted inferences. *See* 968 F.2d at 43–44. Given the record evidence, and EPA's acknowledgment, that groundwater at the Site flows to the

south *away* from the wellfields, EPA's assumption that contaminants at the Site endanger those wellfields is unwarranted.

EPA also claims that it may ignore groundwater flow data and simply assume that the wellfields are at risk because collecting such data is not a regulatory requirement. In *Kent County*, however, this Court rejected that very argument. *See* 963 F.2d at 396–397. Here, EPA has already collected the relevant data. *See, e.g.*, JA__ [Revised Documentation at 45]. EPA simply may not ignore the real-world data undercutting its central assumptions. *See supra* pp. 50–52.

### C. EPA Acted Arbitrarily And Capriciously, And Contrary To CERCLA, By Determining That Data Are Insufficient To Accurately Assess Groundwater Flow.

EPA asserts that it could not consider the direction of groundwater flow when listing the Site because "sufficient data are not available at this stage in the listing process to accurately assess the ground water flow directions throughout the [target distance limit]," up to four miles *away* from the Site. JA__ [Support Document at 29]. Despite EPA's protestation that it is "not ignoring data," *id.*, the agency once again ignores substantial record evidence and its own conclusions.

To begin with, EPA concedes that groundwater at the Site flows to the south. *See* JA__ [Revised Documentation at 45]. EPA also concedes that groundwater in the one to three miles between the Site and the wellfields flows to the south. *See id.* ("Regional ground water flow near the Speedway wellfield [flows] southeast

from the Eagle Creek valley toward the White River valley.")[12] Record evidence similarly demonstrates that groundwater up to four miles away from the Site flows to the south. *See, e.g.*, JA__–__ [Minning Comment at 3–4] (citing JA__ [EPA Reference 120 at 11]); __ [EPA Reference 127 at 4]; __, __ [Ramboll References 7, 8].

Despite EPA's protestations of insufficiency, EPA itself relies on groundwater data for other aspects of its Hazard Ranking System score. For example, EPA determined the "background" level of contamination at the Michigan Plaza and 700 North Olin properties based on data that groundwater in the area north of the Site flows in a southerly direction.[13] *See, e.g.*, JA__ [Revised Documentation at 47] ("The background level for the [Genuine] facility is established using samples that are located *upgradient (north) of the* [*Genuine*] *facility.*") (emphasis added). EPA's use of groundwater data in this context

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[12] EPA has proposed listing the Riverside and White River Wellfields on the National Priorities List. *See Hazard Ranking System Documentation Record – Riverside Ground Water Contamination* (Apr. 2016), at 16, https://www.regulations.gov/document?D=EPA-HQ-OLEM-2016-0153-0004. In that proceeding, EPA similarly stated that "ground water flow in the immediate area is primarily toward the White River," which is to the south. JA__ [*Id.* 22]; *see supra* Figure 1-5 at p. 12.

[13] The "background" level of contamination measures contamination present in the environment apart from a potential or observed release of contamination at a site. *See* JA__ [Guidance Manual at 55].

demonstrates that EPA not only has access to data documenting the direction of groundwater flow both at the Site and within its immediate vicinity, but that the agency views such data as reliable.

Moreover, even if the record somehow lacked sufficient data on groundwater flow miles *away* from the Site, EPA has not explained why such data is necessary to assess whether the Site endangers the wellfields. CERCLA and the APA simply require EPA to evaluate whether the record evidence shows that the Site endangers the wellfields—in CERCLA's words, to accurately assess the relative degree of risk a site poses. *See* 42 U.S.C. § 9605. EPA never explained why the data it has are insufficient to make that assessment. And EPA's refusal to consider the direction of groundwater flow because "sufficient data are not available" is contrary to the record.

### D. The Site Does Not Qualify For Listing On The National Priorities List.

If EPA had properly concluded that the wellfields were not subject to potential contamination from the Site, the Site would have scored *below* the listing threshold. *See* JA__ [Genuine Comment at 5]; __–__ [Ramboll Comment at 1–2]. The purpose of the Hazard Ranking System is to ensure that only high-risk sites are included on the National Priorities List. *See Linemaster Switch*, 938 F.2d at 1302–03. EPA's listing of the Site thwarts that statutory purpose.

## CONCLUSION

For the foregoing reasons, this Court should grant the petitions for review and vacate the portion of the Final Rule listing the Site on the National Priorities List.

Respectfully submitted,

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Dated: April 7, 2017

## CERTIFICATE OF COMPLIANCE

1. This document complies with the type-volume limits of Fed. R. App. P. 32(a)(7) because, excluding the parts of the document exempted by Fed. R. App. P. 32(f), this document contains 12,997 words.

2. This document complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type-style requirements of Fed. R. App. P. 32(a)(6) because this document has been prepared in a proportionally spaced typeface using Microsoft Word 2010 in 14-point Times New Roman.

/s/ Catherine E. Stetson
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## CERTIFICATE OF SERVICE

I certify that on April 7, 2017, the foregoing Initial Opening Brief For Petitioners was electronically filed through this Court's CM/ECF system, which will send a notice of filing to all registered users.

/s/ Catherine E. Stetson
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