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United States Court of Appeals,
District of Columbia Circuit.

GENUINE PARTS COMPANY, Petitioner
v.
ENVIRONMENTAL PROTECTION AGENCY, Respondent

No. 16-1416
|
Consolidated with 16-1418
|
Argued February 20, 2018
|
Decided May 18, 2018

Synopsis

Background: Owner of property associated with auto parts remanufacturing, degreasing, and industrial waste burial, and owner of a former shopping center where discharges of dry cleaning solvents entered a leaky sewer line petitioned for review of final agency action of the United States Environmental Protection Agency (EPA), challenging final rule placing drinking water contamination site on Comprehensive Environmental Resources, Compensation, and Liability Act's (CERCLA) National Priorities List (NPL).

Holdings: The Court of Appeals, Edwards, Senior Circuit Judge, held that:

[1] EPA acted arbitrarily and capriciously in relying upon portions of studies that supported its position, while ignoring cross sections in those studies that did not;

[2] substantial evidence did not support rule adding site to NPL;

[3] claim that Hazard Ranking System (HRS) regulation conflicted with CERCLA fell within narrow exception to 90-day statutory time limit for petitioning for review of an implementing regulation; and

[4] EPA "targets" calculation, which assigned values to wells located within four miles of drinking water contamination site's sources, without direct consideration of direction of ground water flow, was not so imprecise as to violate the Administrative Procedure Act (APA) or CERCLA.

Petitions granted in part, and denied in part.

On Petitions for Review of Final Agency Action of the United States Environmental Protection Agency

Attorneys and Law Firms

Catherine E. Stetson argued the cause for petitioner. With her on the briefs were Douglas E. Cloud, C. Max Zygmont, McLean, VA, Jennifer A. Simon, and Scott H. Reisch, Denver, CO.

Paul Cirino, Trial Attorney, U.S. Department of Justice, argued the cause for respondent. With him on the brief was Jeffrey H. Wood, Acting Assistant Attorney General.

Before: Henderson, Circuit Judge, and Edwards and Ginsburg, Senior Circuit Judges.

Opinion

Edwards, Senior Circuit Judge:

***1** Pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA"), 42 U.S.C. § 9601 *et seq.*, Environmental Protection Agency ("EPA") maintains a National Priorities List ("NPL") of hazardous waste sites that are high priorities for remedial action due to their "relative risk or danger to public health or welfare or the environment." *Id.* § 9605(a)(8)(A). The primary method EPA uses to determine which sites to add to the NPL is the Hazard Ranking System ("HRS"), *see* 40 C.F.R. Pt. 300, App. A, § 1.0, a comprehensive scientific methodology that quantifies site-specific risk-based criteria. In 2015, EPA conducted an HRS analysis of the West Vermont Drinking Water Contamination Site ("Site"), a site of ground water contamination beneath Indianapolis, Indiana. Because the final HRS

score exceeded the threshold required for listing a site, EPA added the Site to the NPL by regulation in 2016. National Priorities List, 81 Fed. Reg. 62,397 (Sept. 9, 2016). This case presents petitions for review of that final rule.

The Site includes a contaminated ground water plume located beneath a commercial and residential area. EPA believes that the Site's contamination emanates from polluted soil sources at two facilities: the Genuine Parts Company ("Genuine Parts") facility, an area associated with auto parts degreasing operations and waste burial activities, and Aimco Michigan Meadows Holdings, LLC ("Aimco")'s Michigan Plaza facility, a former shopping center where discharges of solvents from a dry cleaning business entered a leaky sewer line. In scoring the Site, EPA assessed the Site's aquifers—bodies of permeable rock, sediment, or soil that can contain or transmit ground water. EPA determined that a porous upper aquifer, consisting of sand and gravel, rested directly on top of a limestone bedrock aquifer within two miles of the Site. Because the two aquifers were considered to be interconnected such that contamination could migrate from one aquifer to the other, EPA treated both aquifers as a single hydrologic unit. Had EPA treated the aquifers separately, the final HRS score would not have qualified the Site for listing.

The studies that EPA relied on to support its conclusion that the aquifers interconnect included three different diagrams, as explained below. The problem is that the diagrams appear to contradict the agency's position. The cross sections on the diagrams show independent layers of sediment dividing the upper and lower aquifers throughout the relevant area. Petitioners pointed this out to EPA in their comments on the proposed rule. EPA, however, never addressed the cross sections in the rule making record. Because EPA "entirely failed to consider an important aspect of the problem" by failing to address evidence that runs counter to the agency's decision, we hold that the listing of the Site is arbitrary and capricious. *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).

***2** EPA may be able to offer convincing scientific evidence to support a conclusion that the aquifers are hydraulically interconnected. That evidence has yet to be shown, however. Regarding the action before us, we are constrained to grant the petitions for review because EPA has failed to offer substantial evidence to support its finding of an interconnection, it has ignored evidence undercutting its conclusion, and it has failed to state a reasoned basis for overcoming the regulatory presumption of non-interconnection. *See* 40 C.F.R. Pt. 300, App. A, § 3.0.1.2.1.

Petitioners also claim that the rule should be vacated because EPA failed to take into account the direction of ground water flow beneath the Site when calculating the target population potentially subject to contamination. We reject this claim. EPA relied on established HRS instructions and reasonably took into account the distance between the sources of contamination and drinking water wells in computing the Site's "targets" score. We have no grounds to second guess EPA's decision on this point.

I. BACKGROUND

A. Statutory and Regulatory Background

Under CERCLA, EPA is authorized to establish and revise annually a National Priorities List of known hazardous waste sites considered high priorities for environmental remediation. *See* 42 U.S.C. § 9605(a)(8)(A). Sites listed on the NPL are eligible for CERCLA-funded remedial action through EPA's "Superfund program." *CTS Corp. v. EPA*, 759 F.3d 52, 56 (D.C. Cir. 2014). While placement on the NPL does not automatically render any party liable for cleanup costs, it "can have significant adverse consequences for the owner of a listed property" by, for example, damaging the business's reputation or property values. *Carus Chem. Co. v. EPA*, 395 F.3d 434, 437 (D.C. Cir. 2005); *see also US Magnesium, LLC v. EPA*, 630 F.3d 188, 190 (D.C. Cir. 2011).

Under the statute, listing criteria are based "upon relative risk or danger to public health or welfare or the environment" of actual or threatened releases of hazardous substances. 42 U.S.C. § 9605(a)(8)(A). Pursuant to this mandate, EPA promulgated the Hazard Ranking System, 40 C.F.R. Pt. 300, App. A, "a

comprehensive methodology and mathematical model the agency uses to ... quantify the environmental risks a site poses." *Carus Chem.*, 395 F.3d at 437. EPA is required by the statute 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).

The HRS measures the risk posed by migration of hazardous substances through four possible pathways: air, soil, surface water, and, relevant here, ground water. *See* 40 C.F.R. Pt. 300, App. A, § 2.1. Each potentially affected pathway receives a numerical score based on the "[l]ikelihood of release, waste characteristics, and targets" of the contamination associated with that pathway. *Id.* § 2.1.2. EPA must then "plug the resulting individual pathway scores into a formula to obtain the site score," *US Magnesium*, 630 F.3d at 189–90, which ranges from 0 to 100, 40 C.F.R. Pt. 300, App. A, § 2.1.1. Sites with scores at or above 28.50 are eligible for inclusion on the NPL. National Priorities List, 77 Fed. Reg. 15,276, 15,278 (Mar. 15, 2012).

In analyzing ground water migration pathways, EPA computes an individual pathway score for each aquifer located within a four-mile radius of a site's sources. *See* 40 C.F.R. Pt. 300, App. A, §§ 3.0, 3.0.1.1. EPA must "[a]ssign the highest ... score that results for any aquifer as the ground water migration pathway score for the site." *Id.* § 3.0. However, if two or more aquifers are interconnected "within 2 miles of the sources at the site," EPA must "combine the aquifers having interconnections in scoring the site." *Id.* § 3.0.1.2.1. EPA may not assume interconnection within the two-mile radius. "If data are not adequate to establish aquifer interconnections," the HRS instructs EPA to "evaluate the aquifers as separate aquifers." *Id.*

*3 EPA considers aquifers to be interconnected if their boundaries do not "impede the flow of ground water and hazardous substances between the aquifers." Hazard Ranking System Guidance Manual, EPA, at 116 (Nov. 1992), *available at* Joint Appendix ("J.A.") 434, 444, https://semspub.epa.gov/work/HQ/189159.pdf (hereinafter, "HRS Guidance"). Aquifers are *not* interconnected if they are separated by a "confining layer" of materials that serves as an aquifer boundary that water cannot easily move through. *Id.* A "confining layer" serves as such a boundary if it has lower "hydraulic conductivity"—a measure of the permeability of a geologic material—than adjacent geologic materials by "at least two orders of magnitude." *Id.*

B. Factual Background

In September 2015, EPA performed an HRS analysis of the West Vermont Drinking Water Contamination Site. *See* HRS Documentation Record, West Vermont Drinking Water Contamination (Sept. 2015), *available at* J.A. 14–29, https://semspub.epa.gov/work/05/921199.pdf. The Site consists of a plume of ground water contamination, primarily vinyl chloride, extending more than twenty acres beneath Indianapolis, Indiana. As noted above, EPA believes the hazardous waste emanates from two sources: a Genuine Parts property associated with auto parts remanufacturing, degreasing, and industrial waste burial, and a former shopping center owned by Aimco where discharges of solvents from a dry cleaning business entered a leaky sewer line.

Because EPA scored the Site on the basis of the ground water pathway, the agency considered each aquifer layer located beneath the Site. It is undisputed that the shallowest aquifer, the "Glacial Outwash Aquifer," consists of unconsolidated sand, gravel, and clay immediately below ground and stretching throughout the entire two-mile radius of the Site's sources. The deepest aquifer, the "Limestone Bedrock Aquifer," is made of crystalline limestone and also extends two miles in every direction beneath the Site. The parties also agree that the aquifers are separated by a middle layer of New Albany Shale that begins west of the two-mile radius and ends before reaching its eastern edge.

EPA determined that where the shale is absent, the Glacial Outwash Aquifer sits directly on top of the Limestone Bedrock Aquifer for a portion of the two-mile radius. HRS Documentation Record, West Vermont Drinking Water Contamination, at 44 (modified Sept. 2016), *available at* J.A. 73, https://semspub.epa.gov/work/05/929575.pdf. As support for that conclusion, EPA cited three studies. First, EPA referenced an Indiana University geological survey showing the New Albany

Shale layer ending within two miles of the Site's sources. *See id.* (citing Ref. 120, p. 10, *available at* J.A. 593).

Second, EPA pointed to well log data—obtained by boring vertically down through wells into the earth—showing layers of sand, clay, and "sandy clay" resting on top of the limestone bedrock within two miles east of the Site. *See id.* (citing Ref. 116, pp. 51–55, *available at* J.A. 578–82).

Third, EPA cited an Indianapolis Water Company report containing two cross sections of the study area. *See id.* (citing Ref. 129, pp. 10, 23, *available at* J.A. 612, 625). Cross sections are visual depictions of subsurface geological features derived from well log data. Cross section B-B', one of the diagrams on page 23 of Reference 129, shows a thin white layer labeled "till"—a term meaning a mixture of clay, sand, and gravel—running from the shale in the west to the eastern boundary of the two-mile radius. The diagram displays the till layer separately from both the outwash and limestone layers. Nonetheless, EPA's Documentation Record does not explain why it considered this diagram to support, rather than contradict, its contention that the Glacial Outwash Aquifer rests on top of the Limestone Bedrock Aquifer, undivided by a confining layer of till meeting shale.

***4** Having concluded that the two aquifers are in physical contact, EPA further found that the hydraulic conductivities of the upper and lower aquifers are within two orders of magnitude of each other. *Id.* Therefore, EPA concluded that the aquifers were interconnected, and accordingly combined the two aquifers in its calculation of the ground water migration pathway score. As a result, for the purposes of the HRS calculations, EPA treated the Glacial Outwash Aquifer and Limestone Bedrock Aquifer as one aquifer, receiving one ground water migration pathway score under the HRS, rather than separate, individualized pathway scores.

In calculating the ground water migration pathway score for the interconnected aquifers, EPA considered the "targets" of the contamination at issue. 40 C.F.R. Pt. 300, App. A, § 2.1.2. This included the human and environmental populations at risk of exposure to the hazardous waste. *Id.* § 2.5. EPA arrived at a "targets" value after following the process established in the HRS: it assigned values to subfactors that included the size and location of the relevant populations, *id.* § 3.3, the location of the nearest wells, *id.*, and "whether the target is subject to actual or potential contamination," *id.* § 2.5. Following the HRS formula, EPA "distance weighted" those subfactors: wells more than four miles from the Site's sources were not assigned any value in the equation, while those within four miles received greater weight the closer they were to the Site's sources. *See id.* § 3.3.1 & Table 3–12. Within four miles of the Site, EPA identified three wellfields serving a population of over 96,000 people. *See* HRS Documentation Record 2016 at 81–83, J.A. 110–12. Those facts, once plugged into the formula from Table 3–12 of the HRS, produced a "targets" value of 929. *Id.* at 3, 36, J.A. 32, 115.

Finally, EPA calculated scores for the "likelihood of release" and "waste characteristics" factors, and entered those figures, along with the "targets" value, into the ground water migration pathway equation. The result was the highest possible ground water migration pathway score of 100 for the interconnected aquifers and, ultimately, a final HRS Site Score of 50. *See id.* at 2–3, J.A. 31–32. Because the HRS Site Score exceeded the listing threshold of 28.50, EPA issued a proposed rule listing the Site on the NPL and invited public comment. *See* National Priorities List, 80 Fed. Reg. 58,658, 58,662 (Sept. 30, 2015).

In response, Petitioners and their consultants submitted comments raising two objections that are relevant here. First, they argued that EPA lacked substantial evidence of hydraulic interconnection between the Glacial Outwash Aquifer and Limestone Bedrock Aquifer. They noted language in a geological survey report that described the upper aquifer as, "for the most part, distinct from deeper sand and gravel or bedrock aquifers," and that referenced "a thick, persistent sequence of pre-Wisconsin till units [that] create[ ] a low-permeability confining unit." Anthony H. Fleming et al., *The Hydrogeologic Framework of Marion County, Indiana*, at 37 (2000), *available at* J.A. 266, 310. EPA separately relied on a chart from the same geological survey in support of its interconnectivity conclusion. *See* HRS Documentation Record 2016, at 44, J.A. 73 (citing Ref. 120, p. 10, J.A. 593). Petitioners also submitted a cross section derived from well log data that

showed a layer of "clay/till" dividing the Glacial Outwash Aquifer from the Limestone Bedrock Aquifer.

In addition, Petitioners argued that EPA overstated the population affected by potential contamination of drinking water wells by failing to take into account ground water flow direction. According to Petitioners, the "targets" factor score should not have assigned any weight to the fact that three well fields are located within four miles of the Site's sources because record evidence and the agency's own statements suggested that the ground water contaminated by the Site flows away from the wells.

***5** On September 9, 2016, EPA published a final rule adding the Site to the NPL, *see* National Priorities List, 81 Fed. Reg. 62,397, 62,401 (Sept. 9, 2016), and a support document responding to comments, Support Document for the Revised National Priorities List Final Rule—West Vermont Drinking Water Contamination, U.S. EPA, at 24 (Sept. 2016), *available at* J.A. 126, https://semspub.epa.gov/work/05/633727.pdf. With respect to the interconnection issue, EPA did not directly address the cross sections in the diagrams showing a separate layer of clay or till beginning where the shale ends and stretching across the rest of the two-mile radius. Instead, EPA cited data from two well logs that it claimed show "no clay layer being present above the limestone aquifer." Support Document at 24, J.A. 157. Further, EPA maintained that well log data "identified clay layers throughout the [Glacial Outwash] aquifer but did not identify a clay layer that was consistently present to separate the [Glacial Outwash] aquifer from the limestone aquifer." *Id.* Reiterating that, in its view, the upper aquifer physically touches the lower aquifer within two miles of the Site's sources, EPA reaffirmed its conclusion that the two aquifers are interconnected. *Id.* at 22–24, J.A. 155–57.

As for its calculation of the "targets" factor, EPA explained that it had not evaluated ground water flow direction because it lacked "sufficient data ... at this stage in the listing process to accurately assess the ground water flow directions" near the Site. *Id.* at 29, J.A. 162. Therefore, the agency found that "it cannot be determined that contaminated ground water cannot reach the municipal well fields." *Id.*

Genuine Parts and Aimco petitioned this court for review of the final rule.

II. ANALYSIS

A. Standard of Review

[1] **[2]** CERCLA does not specify a standard of review applicable to EPA's NPL listing decisions. *See Carus Chem.*, 395 F.3d at 441. We have accordingly reviewed the agency's decisions under the Administrative Procedure Act ("APA")'s substantial evidence and arbitrary and capricious standards. *See CTS Corp.*, 759 F.3d at 59 n.1, 63; *Nat'l Gypsum Co. v. EPA*, 968 F.2d 40, 41, 44 (D.C. Cir. 1992). Applying these standards, we will vacate an EPA listing action if the agency has failed to "examine[ ] [the] the relevant data" or failed to "articulate[ ] a rational explanation for its actions." *Carus Chem.*, 395 F.3d at 441.

[3] **[4]** When reviewing for substantial evidence, we must consider the whole record upon which an agency's factual findings are based, including "whatever in the record fairly detracts" from the evidence supporting the agency's decision. *Universal Camera Corp. v. NLRB*, 340 U.S. 474, 487–88, 71 S.Ct. 456, 95 L.Ed. 456 (1951); *see also* 5 U.S.C. § 706(2)(E). "[E]vidence that is substantial viewed in isolation may become insubstantial when contradictory evidence is taken into account." *Landry v. Fed. Deposit Ins. Corp.*, 204 F.3d 1125, 1140 (D.C. Cir. 2000). Therefore, an agency cannot ignore evidence that undercuts its judgment; and it may not minimize such evidence without adequate explanation. *See Morall v. DEA*, 412 F.3d 165, 179–80 (D.C. Cir. 2005); *see also, e.g., Bellagio, LLC v. NLRB*, 863 F.3d 839, 849–52 (D.C. Cir. 2017); *Lakeland Bus Lines, Inc. v. NLRB*, 347 F.3d 955, 963 (D.C. Cir. 2003) (holding that the agency could not rely on a "clipped view of the record" to support its conclusion).

[5] **[6]** **[7]** We also review EPA's action to determine whether it passes muster under the APA's arbitrary and capricious standard of review. *See* 5 U.S.C. § 706(2)(A); *Carus Chem.*, 395 F.3d at 441. An agency action is arbitrary and capricious when, *inter alia*, the agency has "entirely failed to consider an important aspect of the problem [or] offered an explanation for its decision that

runs counter to the evidence before the agency." *State Farm*, 463 U.S. at 43, 103 S.Ct. 2856. "Given the highly technical issues involved," the EPA's listing decisions are entitled to "significant deference." *Bradley Mining Co. v. EPA*, 972 F.2d 1356, 1359 (D.C. Cir. 1992). But "our reviews of listing decisions" are not "of the rubber-stamp variety." *Bd. of Regents of the Univ. of Wash. v. EPA*, 86 F.3d 1214, 1218 (D.C. Cir. 1996). The agency still "must examine the relevant data." *State Farm*, 463 U.S. at 43, 103 S.Ct. 2856. "Conclusory explanations for matters involving a central factual dispute where there is considerable evidence in conflict do not suffice to meet the deferential standards of our review." *Int'l Union, United Mine Workers v. Mine Safety & Health Admin.*, 626 F.3d 84, 94 (D.C. Cir. 2010).

*6 **[8]** Ultimately, "in their application to the requirement of factual support[,] the substantial evidence test and the arbitrary or capricious test are one and the same." *Butte Cty. v. Hogen*, 613 F.3d 190, 194 (D.C. Cir. 2010); *see also Ctr. for Auto Safety v. Fed. Highway Admin.*, 956 F.2d 309, 314 (D.C. Cir. 1992) ("An agency action is arbitrary and capricious if it rests upon a factual premise that is unsupported by substantial evidence."). Under both standards, "an agency cannot ignore evidence contradicting its position." *Butte Cty.*, 613 F.3d at 194.

B. Record Evidence of a Confining Layer

Petitioners claim that the cross section diagrams and geological survey statements in the record demonstrate that a layer of clay and till stretches from the New Albany Shale throughout the rest of the two-mile radius, forming an uninterrupted confining layer that divides the Glacial Outwash Aquifer from the Limestone Bedrock Aquifer for two miles surrounding the Site. This evidence, which Petitioners raised in their comments on EPA's proposed rule, appears in the very reports relied on by EPA. And tellingly, it appears to refute the agency's conclusion that the aquifers are interconnected. While EPA may be able to explain how the evidence is consistent with its original conclusion, it has not done so in the record under review.

1. EPA Ignored Evidence That Is At Odds With Its Conclusion

[9] As noted above, three cross sections of the Site's subsurface geology depict a thin, continuous layer of geological material in approximately the same location, running from the shale in the west to the end of the two-mile radius. *See* J.A. 625 (cross section B-B'); *id.* at 649 (cross section 8J-8J'); *id.* at 378 (cross section Plate R-5). Each cross section appears in the record. Petitioners' consultant cited one of these cross sections in commenting on the proposed rule, and EPA cited to the sources containing each of the diagrams in its Documentation Record. Each diagram visually represents the layer in question as an independent stratum, separate from and dividing the Glacial Outwash Aquifer and Limestone Bedrock Aquifer. These three cross sections clearly call into question EPA's conclusion that, within two miles of the Site, the Glacial Outwash Aquifer sits on top of the Limestone Bedrock Aquifer without any dividing layer separating the two aquifers.

Furthermore, the dividing layer does not appear to merely represent a constituent part of the Glacial Outwash Aquifer, as EPA now argues. Not only do the cross sections portray the dividing layer as visually distinct from the aquifers in question, but the diagrams also indicate that the layer consists of different materials from the aquifers: Plate R-5 labels the dividing layer "clay/till," *id.* at 378; cross section B-B' likewise terms this layer "till," *id.* at 625; and in cross section 8J-8J', the layer is called "unconsolidated nonaquifer material," *id.* at 649. Meanwhile, the upper aquifer is labeled "outwash," *id.* at 625, "sand & gravel (aquifer)," *id.* at 378, and "sand and gravel," *id.* at 645. Thus, three independent cross sections all appear to indicate that the Glacial Outwash Aquifer consists of sand and gravel, but sits on top of an independent layer of "nonaquifer material" consisting of clay or till.

There is no dispute that clay and till would serve as a confining layer if their hydraulic conductivities are more than two orders of magnitude lower than that of the upper aquifer's sand and gravel. *See* HRS Guidance at 116, J.A. 444. The HRS also makes clear that certain types of clay and till have hydraulic conductivities as low as 10^{-8} cm/sec while some types of gravel and sand are assigned conductivities as high as 10^{-2} cm/sec, a difference of six orders of magnitude. *See* 40 C.F.R. Pt. 300, App. A, Table

3-6. In the record below, however, EPA does not suggest that the hydraulic conductivity of the separate clay or till layer is within two orders of magnitude of the aquifers that surround it. EPA simply ignores the presence of the clay/till dividing layer in the three cross sections in the record.

*7 **[10]** It was arbitrary and capricious for EPA to rely on portions of studies in the record that support its position, while ignoring cross sections in those studies that do not. *See Butte Cty.*, 613 F.3d at 194. Furthermore, if Petitioners are correct in claiming that a confining layer of clay or till separates the aquifers, then EPA may not combine the upper and lower aquifers in computing the Site's HRS score. *See* 40 C.F.R. Pt. 300, App. A, § 3.0.1.2.1. Although EPA "is not required to discuss every item of fact or opinion included in the submissions it receives in response to a Notice of Proposed Rulemaking, it must respond to those comments which, if true, would require a change in the proposed rule." *La. Fed. Land Bank Ass'n v. Farm Credit Admin.*, 336 F.3d 1075, 1080 (D.C. Cir. 2003).

[11] In response to these petitions for review, EPA's counsel offered arguments as to why the diagrams are consistent with the agency's conclusion that there is no continuously confining layer of sediment between the aquifers. These arguments come too late. We may only uphold a rule "on the basis articulated by the agency" in the rule making record. *State Farm*, 463 U.S. at 50, 103 S.Ct. 2856 (*citing SEC v. Chenery Corp.*, 332 U.S. 194, 196–97, 67 S.Ct. 1760, 91 L.Ed. 1995 (1947)). Counsel's "*post hoc* rationalizations for agency action" carry no weight with the court. *Id.*

2. EPA Lacked Substantial Evidence of Interconnection

[12] In its brief to this court, EPA offers several arguments why its interconnection conclusion is supported by substantial evidence despite Petitioners' confining layer evidence. First, it argues that Petitioners err by treating "till," "nonaquifer material," and "clay"—the three separate labels assigned to the layer at issue by the three different cross sections—as if each term had one meaning, that of "pure clay." Respondent's Br. 34–36. According to EPA, "till" may "refer[ ] to a mixture of clay, sand, and loam," *id.* at 34, or "silty sand, sandy clay, gravelly clay," *id.* at 35–36. Since the Glacial Outwash Aquifer consists of an unconsolidated mix of the same or similar materials, EPA argues that the "till" indicated in two of the cross sections is just a component layer of the upper aquifer. Nevertheless, the fact remains that three different cross sections portrayed this particular layer of till (or clay) individually, separate from their portrayal of the Glacial Outwash Aquifer. EPA offered no explanation for this, either in its brief to the court or during oral argument.

"Till" may consist of enough clay mixed in with sand to produce a substantially lower hydraulic conductivity than that of the geology that surrounds it. *See* 40 C.F.R. Pt. 300, App. A, Table 3–6. Further, cross section 8J-8J' terms the layer "unconsolidated *nonaquifer* material." J.A. 645. The plain meaning of the "nonaquifer" designation is that this layer is *not* part of the upper aquifer, and therefore it may very well be a confining layer dividing the two aquifers. Given these facts, EPA counsel's belated definition of "till" is not substantial evidence of interconnection.

Second, in its argument to the court, EPA also downplays the reliability of cross sections in "mapping discrete geological units or areas that are not uniform along multiple well locations." Respondent's Br. 33. Because cross sections extrapolate data from well log to well log, EPA claims that they are prone to showing uniformity in otherwise discrete geological units. In EPA's view, well log data more accurately indicate the presence or absence of a confining layer separating the two aquifers. Indeed, data from two well logs within two miles of the Site show a mix of sand, gravel, and clay—the component materials of the Glacial Outwash Aquifer—from the surface down to the Limestone Bedrock Aquifer. *See* J.A. 578–81.

*8 The problem with EPA's reliance on the well log data is that it does not respond to Petitioners' argument. Petitioners allege the existence of a horizontal layer of sediment. Well log data, however, which is obtained by boring straight down into the earth through a well, necessarily reflect a narrow, vertical measurement of the makeup of subsurface geology. To be sure, well logs would cast doubt on the presence of a continuously present confining layer of clay or till if they failed to find those materials in the approximate locations that Petitioners claim they exist. But, to the contrary, the well logs cited

by EPA indicate the presence of clay and till at the approximate elevations indicated on the cross sections. And these layers of clay line up fairly closely between the wells, which are more than a mile apart from each other.

Third, EPA found that there was no confining layer in part because it observed that vinyl chloride contamination had migrated "through the fine-grained sediments ... throughout the [upper] aquifer to a depth of at least 70 feet." HRS Documentation Record 2016 at 43–44, J.A. 72–73. This, too, is unresponsive to Petitioners' comments that a confining layer of clay or till exists more than 70 feet below ground. Petitioners' Br. 38–40.

Finally, EPA has failed to explain how the other sources it relied on provide substantial evidence of interconnection. EPA cites a geological survey prepared by Indiana University, which shows that the confining layer of *shale* is not present in eastern portions of the Site. HRS Documentation Record 2016 at 44, J.A. 73 (citing Ref. 120, p. 10, *available at* J.A. 593). As far as we can tell, this survey does not show layering of sediment in sufficient detail to be able to determine whether a confining layer of clay or till rests between the upper and lower aquifers where the shale ends.

EPA also cites a ground water modeling report that states: "Based on available hydrogeologic data in the area (including DNR well log records) and the bedrock topography, it is likely that the limestone aquifer is hydraulically connected to the outwash sand and gravel aquifer." J.A. 629. But the very next sentence of that report reads: "Further from the streams in the till deposits, water levels recorded in residential wells indicate that the limestone aquifer is hydraulically isolated from the upper intertill aquifer system." *Id.* It is not clear which statement, if either, refers to the two miles at issue here. These equivocal reports do not relieve EPA of its obligation "to address significant comments raised during the rulemaking." *Ass'n of Private Sector Colls. & Univs. v. Duncan*, 681 F.3d 427, 441 (D.C. Cir. 2012).

In scoring the Site based on interconnected aquifers, EPA "ignore[d] evidence contradicting its position," *Butte Cty.*, 613 F.3d at 194, and failed to support its conclusion with substantial evidence. Therefore the rule adding the Site to the NPL cannot stand and the case must be remanded for further consideration.

C. Ground Water Flow Direction

Petitioners raise a second, independent objection to the HRS scoring of the Site. They claim that, in computing the ground water migration pathway score, EPA should not have enhanced the "targets" value based on the existence of three municipal wellfields less than four miles away. Evidence in the record suggests that ground water beneath the Site area generally flows to the south, away from the wells, which are to the north of the Site. On the record here, Petitioners claim that EPA acted beyond its statutory authority in treating the wells as potentially subject to ground water contamination from the Site's sources.

As a threshold matter, EPA argues that this challenge is procedurally barred. CERCLA requires any petition for review of an implementing regulation to "be made within ninety days from the date of promulgation of such regulation[ ]." 42 U.S.C. § 9613(a). According to the government, Petitioners' claim amounts to a substantive challenge to the HRS regulation, which does not require EPA to consider ground water flow direction in determining the target population. Because the HRS was promulgated in 1990, EPA maintains that this objection is untimely. *See Carus Chem.*, 395 F.3d at 441. We disagree.

*9 **[13]** Petitioners' ground-water-flow-direction argument falls within an established, narrow exception to the statutory time limit. *See US Magnesium*, 630 F.3d at 194 (explaining that "even under § 9613 there may be some room to challenge a regulation when litigating its application"). Our case law makes it clear that "[a]n agency's regulations may be attacked ... once the statutory limitations period has expired ... on the ground that the issuing agency acted in excess of its statutory authority in promulgating them." *NLRB Union v. Fed. Labor Relations Auth.*, 834 F.2d 191, 195 (D.C. Cir. 1987); *see also, e.g.*, *Nat'l Air Transp. Ass'n v. McArtor*, 866 F.2d 483, 487 (D.C. Cir. 1989) ("*NLRB Union* allows, outside statutory time limits, substantive claims that the rule 'conflicts with the statute from which its authority derives' " (quoting *NLRB Union*, 834 F.2d at 196)). Petitioners bring just

such a claim here; their argument, at bottom, is that the HRS conflicts with CERCLA because it is "feasible" to examine ground water flow direction and 42 U.S.C. § 9605(c) requires that the HRS, "to the maximum extent feasible, ... accurately assess[ ] the relative degree of risk to human health and the environment." Therefore, Petitioners' claim is not procedurally barred.

[14] On the merits, however, Petitioners' argument fails. As noted above, EPA calculated the "targets" factor value pursuant to the HRS's instructions. The HRS requires EPA to assign values to wells located within four miles of the Site's sources, without requiring EPA to directly consider the direction of ground water flow. *See* 40 C.F.R. Pt. 300, App. A, § 3.0.1.1; *id.* § 3.3.1 & Table 3–12. EPA followed those instructions to a tee. "Our case law endorses the Hazard Ranking System's preference for using formulas," even when application of the formula results in a degree of "Agency imprecision in calculating the target population." *B&B Tritech, Inc. v. EPA*, 957 F.2d 882, 884–85 (D.C. Cir. 1992).

There is no basis in this record for concluding that the "targets" calculation was so imprecise as to violate the APA or CERCLA. "Congress intended that the [NPL] would serve simply as a tool for identifying quickly and inexpensively those sites meriting closer environmental scrutiny." *CTS Corp.*, 759 F.3d at 56. In EPA's view, the cost required to accurately measure ground water flow direction would outweigh the utility achieved by improving the accuracy of the listing decision, "because this level of accuracy is not required for a screening tool that is intended to assess relative risk." Hazard Ranking System, 55 Fed. Reg. 51,532, 51,553 (Dec. 14, 1990). The decision to instead "distance weight[ ]" populations subject to potential contamination, *id.*, reflects a reasonable interpretation of CERCLA's mandate that EPA "accurately" assess risk "to the maximum extent feasible" given the NPL's purposes, 42 U.S.C. § 9605(c)(1).

The fact that EPA acknowledged a southerly ground water flow direction for other purposes did not render its decisionmaking arbitrary and capricious. Ground water flow direction "may be different in each aquifer at the site" and "is not always the same as the direction of" the flow of contaminants. 55 Fed. Reg. at 51,553. While EPA evaluated flow direction in the immediate area of the Genuine Parts and Michigan Plaza facilities, it lacked data "to accurately assess the ground water flow directions throughout the" entire four-mile area surrounding the Site. Support Document for Final Rule at 29, J.A. 162. The HRS regulation does not foreclose EPA from evaluating ground water flow direction at future stages of the administrative process, when the evidence may be firmer. For now, however, EPA's decision to distance weight the wells without consideration of ground water flow direction was rational under the APA and a reasonable interpretation of CERCLA.

III. CONCLUSION

For the foregoing reasons, we grant the petitions for review, vacate the rule to the extent that it places the West Vermont Drinking Water Contamination Site on the NPL, and remand to EPA for further proceedings consistent with this opinion.

All Citations

--- F.3d ----, 2018 WL 2271086

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