

## DC Circ. May Clarify Carbon Capture Rules — Or Not

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Law360, New York (March 31, 2015, 12:08 PM ET) -- Climate change presents an array of complex challenges for the U.S. government. As the U.S. Environmental Protection Agency tries to loosen, if not untie, this Gordian Knot, some in the regulated community worry the EPA is replacing it with a noose. On March 26, in *Carbon Sequestration Council, et al. v. EPA, et al.*,<sup>[1]</sup> the D.C. Circuit heard oral argument on the most recent industry challenge to an EPA rulemaking related to climate change. The petitioners claim the EPA exceeded its authority when it interpreted “solid waste” under the Resource Conservation and Recovery Act to include carbon dioxide sequestered underground using geologic injection.

Both sides faced rigorous questioning from the three-judge panel, which hosted Chief Judge Merrick Garland together with Judges Janice Rogers Brown and Harry Edwards. On balance, the petitioners seem to face greater skepticism both on the merits and on their standing. Depending on the outcome, the court’s decision could have implications not just for carbon capture and sequestration operations, but also for other enterprises that rely on geologic injection, such as enhanced oil recovery operations and for the EPA’s RCRA program more broadly.

### Background

Coal power accounts for roughly 40 percent of U.S. electricity production.<sup>[2]</sup> Because burning coal produces large amounts of CO<sub>2</sub>, the primary culprit cited for global warming, many generators are searching for ways to reduce these emissions. One strategy is carbon capture and sequestration, whereby CO<sub>2</sub> from coal-fired power plants or other industrial operations is collected at the point of generation and stored underground to prevent its release into the atmosphere. To inject CO<sub>2</sub> underground, well operators apply immense pressure to compress the gas into an unusual physical form called a “supercritical fluid,” which has properties of both liquids and gases. Supercritical fluids are almost never found in nature outside of hydrothermal vents located deep on the ocean floor.

Though carbon capture and sequestration technology is still in its infancy, the EPA is seeking now to curb its potential environmental side effects, including the contamination of groundwater. While CO<sub>2</sub> is not itself a contaminant or hazardous waste, burning coal also produces more toxic chemicals such as mercury and hydrogen sulfide, which could be entrained in a CO<sub>2</sub> injection. To avoid this possibility, the EPA promulgated a rule in 2010 regulating carbon capture and sequestration injection wells, or so-called Class VI wells, under the Safe Drinking Water Act.<sup>[3]</sup> Among other things, the Class VI Rule prohibits well operators from injecting any RCRA “hazardous waste.”<sup>[4]</sup> This prompted calls from industry for the EPA to clarify when supercritical CO<sub>2</sub> streams could be deemed to constitute hazardous waste.

### Conditional Exclusion Rule

In January 2014, the EPA adopted a final rule to clarify the prohibition against injecting RCRA hazardous waste in a Class VI well.<sup>[5]</sup> The rule does two things.

First, it officially determines as a threshold matter that supercritical CO<sub>2</sub> streams injected through a Class VI well constitute “solid waste” and thus are subject to the RCRA’s jurisdiction.<sup>[6]</sup> The statute defines “solid waste” as “any garbage, refuse, sludge ... and other discarded material, including solid, liquid, semisolid or contained gaseous material.”<sup>[7]</sup> The EPA stated that the streams are a “discarded material” within the plain

meaning of the term.”[8] The EPA also explained its view that, while the definition “does not speak to materials such as supercritical fluids,” when supercritical CO<sub>2</sub> is injected into a Class VI well, it is “of a similar kind to the other types of wastes specifically referenced by the definition.”[9]

Second, the EPA also created a regulatory safe harbor — the “conditional exclusion” — which sets conditions under which supercritical CO<sub>2</sub> streams automatically can avoid being treated as a hazardous waste. Normally under the RCRA, a generator must determine by either “generator knowledge” or by analytical testing whether a particular solid waste constitutes a hazardous waste by reference to the EPA’s four criteria: (1) ignitability, (2) corrosivity, (3) reactivity or (4) toxicity.[10] The conditional exclusion, however, allows generators that inject supercritical CO<sub>2</sub> streams into Class VI wells to forego making a determination of whether the material exhibits one of the characteristics if they meet several conditions, including certifying that the stream has not been mixed with (some other) hazardous waste.[11]

Notwithstanding this regulatory off-ramp, the rule was challenged by the petitioners, which comprise two trade associations, the Carbon Sequestration Council and American Petroleum Institute, and Southern Company Services Inc., the services company for a public utility holding company. The petitioners take issue with the EPA’s determination that supercritical CO<sub>2</sub> streams injected into a Class VI well constitute solid waste under the RCRA. They contend that the RCRA’s definition of “solid waste” expressly excludes supercritical CO<sub>2</sub> or, in the alternative, that the EPA abused its discretion by unreasonably designating it as such. The EPA responds by challenging the petitioners’ standing and defending its interpretation of the RCRA.

## **Standing**

To establish they have standing to challenge the EPA’s decision, the petitioners must meet the familiar tests of injury in fact, traceability and redressability.[12] The EPA’s briefing argues that the petitioners have failed to show any injury because: (i) they are prohibited from discharging hazardous waste regardless of the rule and (ii) the rule reduces the burden of RCRA compliance by creating a regulatory safe harbor with a minimal set of requirements.

But Judges Garland and Edwards focused at oral argument on an even more basic question: whether the petitioners had sufficiently definite plans to build a Class VI well, which would subject them to the rulemaking. The petitioners were forced to concede that, while they were experimenting with carbon sequestration, they had no current plans to apply for a Class VI permit. Instead, they were merely seeking to preserve the opportunity to do so free of RCRA regulation. While Chief Judge Garland seemed open to the possibility that the rule potentially could impose some costs on a Class VI permittee, he did not necessarily appear convinced that these are proper parties to bring this challenge.

The petitioners’ briefs emphasize that the focus of their challenge is not the conditional exclusion itself but rather the EPA’s determination — made for the first time in this rule — that supercritical CO<sub>2</sub> streams injected into Class VI wells are solid waste. This determination obligates Class VI well operators to assess whether their supercritical CO<sub>2</sub> streams are a RCRA hazardous waste. If the streams were not classified as solid waste, generators would be under no such obligation. But given that the EPA’s solid waste finding was technically limited to the scope of Class VI wells, that distinction may not matter if the court of appeals decides that the petitioners’ injury is too speculative.

## **Solid Waste**

The key merits issue is whether the EPA correctly determined that supercritical CO<sub>2</sub> is a RCRA “solid waste” when used for carbon capture and sequestration. As noted above, the RCRA defines “solid waste,” in relevant part, as any “discarded material, including solid, liquid, semisolid or contained gaseous material.”[13] The petitioners argue that supercritical CO<sub>2</sub> is not a solid waste because either: (i) it does not have one of the

physical forms specified in the statute or (ii) supercritical CO<sub>2</sub> is not being “discarded.”

Courts apply the Chevron test to assess challenges to an agency’s interpretation of the statutes it implements.[14] The first part of this test asks whether the statute definitively answers the legal question. The petitioners argue that the statute resolves the dispute on its face because the definition of “solid waste” does not expressly list supercritical fluid among the eligible physical forms — solid, liquid, semisolid or contained gas. That exclusion, they contend, ends the Chevron analysis because Congress specified each physical form of material and did not include supercritical fluids in the definition.

The EPA disagrees that the statutory definition conclusively resolves the matter and argues instead that the second part of the Chevron test controls the outcome (i.e., when a statute is ambiguous, Chevron instructs courts to defer to the agency’s interpretation if it was reasonable). The EPA argues that the significance of the statute’s silence on supercritical fluids is unclear. The EPA points to the RCRA’s use of the word “including” in the definition of “solid waste,” which indicates that the physical forms mentioned in the statute are illustrative, not exhaustive. Because the list is only illustrative, the EPA claims it has discretion under Chevron to interpret the RCRA and to find that a supercritical fluid “has properties intermediate between a liquid and gas, and, therefore, falls somewhere on the spectrum of the types of physical forms that can be ‘solid waste.’”[15]

At oral argument, the petitioners contended that the EPA’s defense is “a moving target.” They pointed to examples in the record where, the petitioners say, the EPA acted as if the definition was clear. In the petitioners’ view, the EPA was not deliberately resolving an ambiguity as contemplated by Chevron and so its interpretation is not entitled to deference from the court. But Judges Garland and Edwards were skeptical of this reading. Chief Judge Garland in particular characterized the EPA’s position as a “normal kind of Chevron II analysis.” The judges noted the EPA’s language in the final rule and its response to comments document where the agency addressed these precise questions. There, the EPA articulated its view that supercritical CO<sub>2</sub> injected into Class VI wells is “of a similar kind to the other types of wastes specifically referenced by the definition.”[16]

Nor did the petitioners appear to get traction with their argument that the rule’s treatment of supercritical CO<sub>2</sub> conflicts with the EPA’s longstanding position that uncontained gases are not subject to the RCRA. Chief Judge Garland was unconvinced that either the EPA’s prior positions on uncontained gases or the court’s previous cases on them had any relevance to determining whether supercritical fluids are solid wastes.

Judge Brown, in a question to the EPA, appeared potentially receptive to another of petitioners’ contentions: that CO<sub>2</sub> sequestered in a Class VI well is not “discarded” under the RCRA. The petitioners argue that carbon dioxide, which may be later withdrawn for a productive use such as enhanced oil recovery, beverage carbonation or some other commercial purpose, is not abandoned and thus not “discarded” under the term’s plain meaning. But the government’s counsel pointed to the EPA’s express conclusion in the record that any future productive use of CO<sub>2</sub> sequestered in a Class VI well remains wholly theoretical or speculative and that the issue could be revisited in a future rulemaking if reuse of the CO<sub>2</sub> became a reality.

### **Implications for the Regulated Community**

As the court’s inquiry on standing illustrates, carbon capture and sequestration technology is still young. Though the EPA predicts that carbon capture and sequestration could account for up to 10 percent of CO<sub>2</sub> emissions reduction by midcentury,[17] the parties’ briefs note that the EPA has yet to issue any permits for Class VI wells.[18] While, for now, the technology still faces engineering and economic obstacles, this case could bring some clarity to the regulatory landscape as companies consider a role for carbon capture and sequestration in reducing their greenhouse gas emissions. And depending on the time and resources needed to fully comply with the RCRA, this case may also inform whether companies are willing to make those

technological investments in the first place.

An EPA victory, on either standing or the merits, would leave the rule in place — though a decision on standing may simply delay this challenge until another day. But if the petitioners prevail, the court’s treatment of the issues will matter a great deal. If the court simply holds that, under *Chevron*, the EPA acted within its discretion but insufficiently explained the change from a prior position, the agency could presumably just reissue the rule with a more robust explanation of its solid waste determination. Under that scenario, the outcome of this case would have far less significance (absent the decision of a future administration not reissuing the rule).

But if the court decides that, by its plain meaning, the RCRA does not cover supercritical fluids, the case could have broader implications. Judge Garland at one point elicited a concession from the EPA that its reasoning regarding supercritical fluids could apply to other types of injection wells, even if the rule itself does not. While carbon capture and sequestration remains rare, supercritical CO<sub>2</sub> is commonly used in enhanced oil recovery. Depending on its reasoning, the decision in this case could conceivably insulate such activities from regulation under the RCRA. It could also discourage citizen suits under Section 7002 of the RCRA by depriving citizen plaintiffs of the ability to cite the EPA’s designation of supercritical CO<sub>2</sub> as a solid waste.[19]

But even a robust decision for the petitioners would not completely protect well operators from liability for contamination of underground aquifers. This ruling will not affect the EPA’s safe drinking water regulations.[20] And even if petitioners are protected from RCRA liability, they could still be liable for any releases of contaminants under the Comprehensive Environmental Response, Compensation, and Liability Act.[21]

For now, this case serves as a reminder of the different challenges and risks the regulated community faces as the federal government increasingly targets greenhouse gas emissions. Absent congressional action on climate change, the EPA is becoming increasingly creative about using its existing statutory authority in new and unexpected ways (e.g. using the RCRA to regulate waste streams that might historically have fallen outside its scope). Potentially affected companies should think carefully about where they might face new liabilities and costs. And they should also think carefully about how they can mitigate those costs through active participation in rulemaking and litigation where warranted.

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[1] Case No. 14-1046 (filed on Apr. 2, 2014)

[2] See Energy Information Administration, Net Generation by Energy Source, available at [http://www.eia.gov/electricity/monthly/epm\\_table\\_grapher.cfm?t=epmt\\_1\\_01](http://www.eia.gov/electricity/monthly/epm_table_grapher.cfm?t=epmt_1_01).

[3] See Federal Requirements Under the Underground Injection Control (UIC) Program for Carbon Dioxide (CO<sub>2</sub>) Geologic Sequestration (GS) Wells, 75 Fed. Reg. 77,230 (Dec. 10, 2010) (“Class VI Rule”).

[4] See 40 C.F.R. 146.81(d) (defining “carbon dioxide streams”).

[5] See Hazardous Waste Management System: Conditional Exclusion for Carbon Dioxide Streams in Geologic Sequestration Activities, 79 Fed. Reg. 350 (Jan. 3, 2014).

[6] 79 Fed. Reg. at 354-55.

[7] 42 U.S.C. § 6903(27).

[8] 79 Fed. Reg. at 355.

[9] 79 Fed. Reg. at 355.

[10] Solid wastes may also be hazardous waste if specifically listed as such by the EPA in 40 C.F.R. §§ 261.31-33.

[11] 79 Fed. reg. at 364.

[12] *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61 (1992).

[13] 42 U.S.C. § 6903(27).

[14] See generally *Chevron USA Inc. v. Natural Resources Defense Council*, 467 U.S. 837 (1984).

[15] EPA's brief, at 55.

[16] 79 Fed. Reg. at 355.

[17] See 75 Fed. Reg. at 77,234.

[18] Petitioners' brief, at 6.

[19] See B. DiCosmo, "Activists Say EPA Plan for CCS Waiver Leaves Door Open to Citizen Suits," *InsideEPA* (Aug. 10, 2011).

[20] See Federal Requirements Under the Underground Injection Control Program for Carbon Dioxide Geologic Sequestration Wells, 75 Fed. Reg. 77, 230 (Dec. 10, 2010).

[21] 42 U.S.C. § 9601 et seq.